

Vocational and Business Education and Training in Europe: Qualifications and the World of Work

bwp@ Issue 7

Editors of bwp@ Nr.7: **Franz Gramlinger, Geoff Hayward and Hubert Ertl**

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Reforming Vocational Learning: Frameworks, Pedagogy and school-work connectivity

The connection between education and qualification frameworks and the world of work is a widely discussed and investigated topic. The transfer of real-life challenges as they arise in work contexts into the teaching and learning arrangements of training contexts is one of the questions that have to be addressed in all systems of vocational education and training (VET). The transfer of changing challenges posed by an economic system that is more than ever characterised by processes of globalisation seems to be a challenge that affects all European countries (Green et al. 1999).

Therefore, this issue aims to collect papers from different national perspectives in order to generate a comprehensive picture for the ever-closer connected European countries. This is the reason for the first issue of bwp@ in English – we hope that our German speaking readers will see this as a challenge rather than an obstacle. In order to make papers accessible for readers without specialised knowledge about the qualification system in question we asked contributors to provide

- a short description of the vocational training and qualification system covered
- an outline of the main state of the art issues of the discussion on VET in the relevant country and
- a discussion of the connection between VET and its output on the one hand and the challenges of the world of work on the other hand from their specific national perspective
- comments and evaluations regarding issues of skill supply and demand

in their papers. Our aim was to have two papers per country, possibly covering different aspects of the school-work-connection and providing different views on the current debates in the country in question. It became clear that research in our topic is done in a variety of ways by researchers from different areas in different countries; the diversity regarding scope, foci and methodological approaches that can be found in the papers of this issue reflect these differences.

‘Practical’ notes

The papers in this issue are grouped according to their national origin, with the paper by LINDELL & STENSTRÖM comparing work-based learning approaches in Sweden and Finland. Apart from this national grouping, with countries ordered alphabetically, the papers appear in no particular order.

This issue will evolve in several stages. The first online version on this site covers one paper each on the following countries: Austria, Finland, France, Germany, Sweden, the United Kingdom and a draft paper from Switzerland. As indicated, one additional paper covers Sweden and Finland.

Moreover, we have planned four updates to this issue in January, February, March and April 2005. For an overview of forthcoming papers please refer to www.bwpat.de “Forthcoming Updates”. We will keep the readers of [bwp@](mailto:eds7@bwpat.de) updated by announcing the authors, their titles and abstracts as soon as possible.

There will be also space on this site for comments and reactions to the papers by the readers. For sending comments please contact the authors directly or write a mail to the editors (eds7@bwpat.de). With the last update there will be also an amendment to this editorial, outlining and summarising the ground covered by the papers and identifying overarching issues. It will also be interesting to comment on the differences between papers on the same national context. Further, areas and questions for a European research agenda on the various topics addressed in this issue will be posed.

We would like to express our gratitude to all contributors to this issue for their willingness to engage in a somewhat unusual publication process. We would also like to invite interested readers to contribute to the updates of this issue that will follow. There is ample space and opportunity to provide an alternative view on ‘your’ country, either by providing a paper of 3,500 to 5,500 words or a comment on the published papers (please send an email to eds7@bwpat.de). In particular, we are interested in covering countries we have not in our list yet.

As usual, www.bpwat.de wants to be an online-space for exchange of views, debate and interactive discussion in the area of vocational and business education. We invite a wider audience to participate and use our online journal as a tool and means for exchange, stimulating discussion using the innovative format provided by digital technology!

Hubert Ertl, Franz Gramlinger & Geoff Hayward

To match or mismatch? The Austrian VET system on struggle with diverse and changing demands

1 Background: A strong and complex VET system

1.1 Basic structures of the Austrian VET system

The Austrian VET system includes both a strong full-time school sector and a strong apprenticeship system, bringing about a very high share of VET qualifications at the upper secondary level. Figure 1 shows the proportion of the population which have completed at least upper secondary education. Austria ranks among the best three of EU 15 on this indicator.

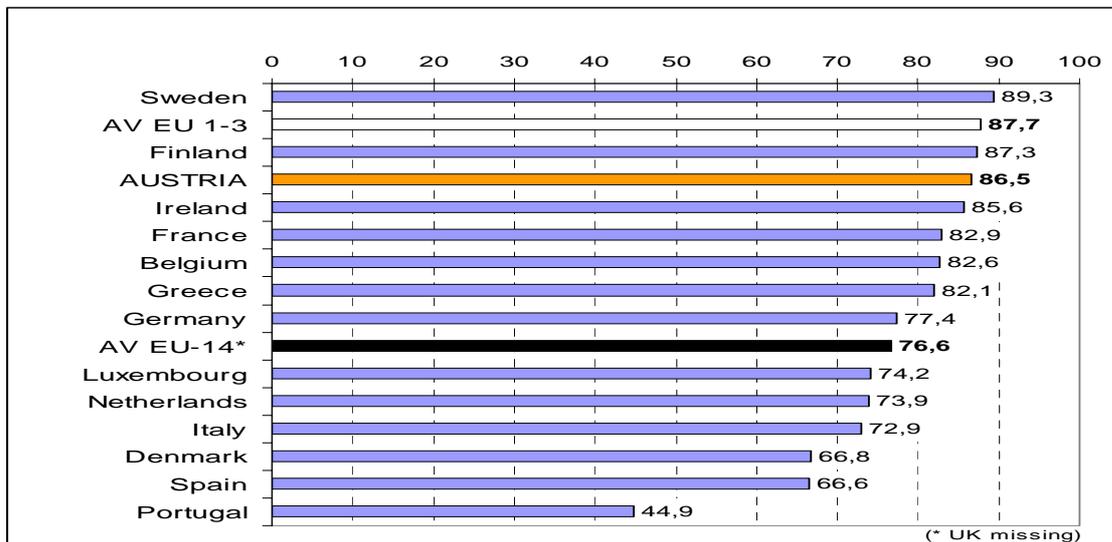


Figure 1: Percentage of those aged 22 who have successfully completed at least upper secondary education (ISCED 3), 2002 (Source: LFS)

The proportion of participants in VET or prevocational programmes is highest in Austria (Figure 2), and increased during the late 1990s as in France, Finland, less so in Denmark, whereas in most countries and also in the EU 15 this proportion decreased slightly. The rate of early school leaving, as measured by the structural indicator, is also low in Austria compared to the European level, and decreased in the late 1990s in line with the decrease at the European average (only two countries have shown an increase in that proportion: Portugal and Sweden). However, the contribution of a high proportion of VET participants at the upper secondary level to the completion rate and the proportion of early school leavers is not clear.

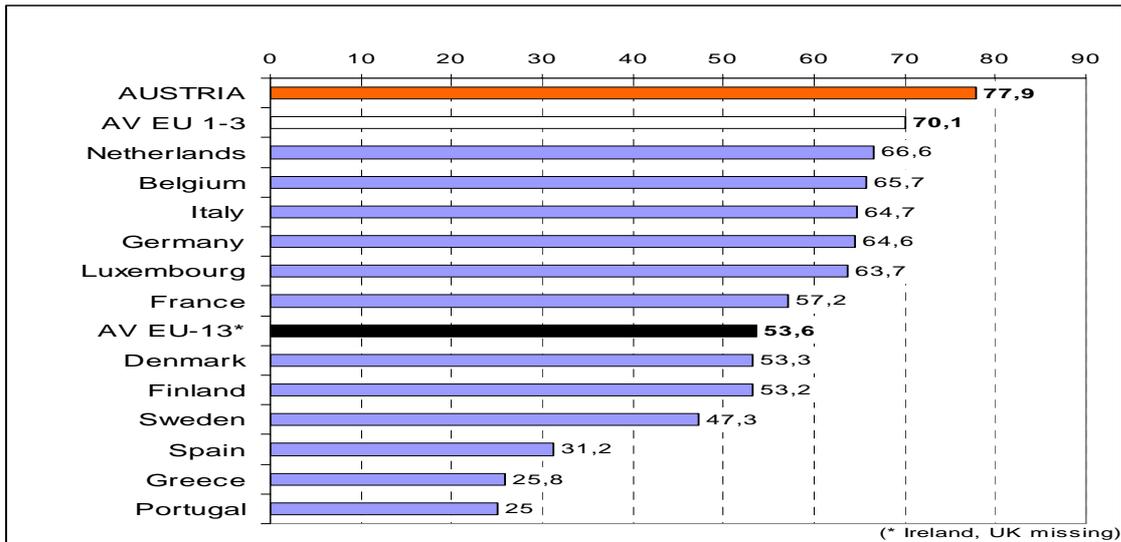


Figure 2: Per cent of enrolment of students in VET and pre-VET programmes at ISCED 3 level, 1999 (Source: Lisbon 2004, 321)

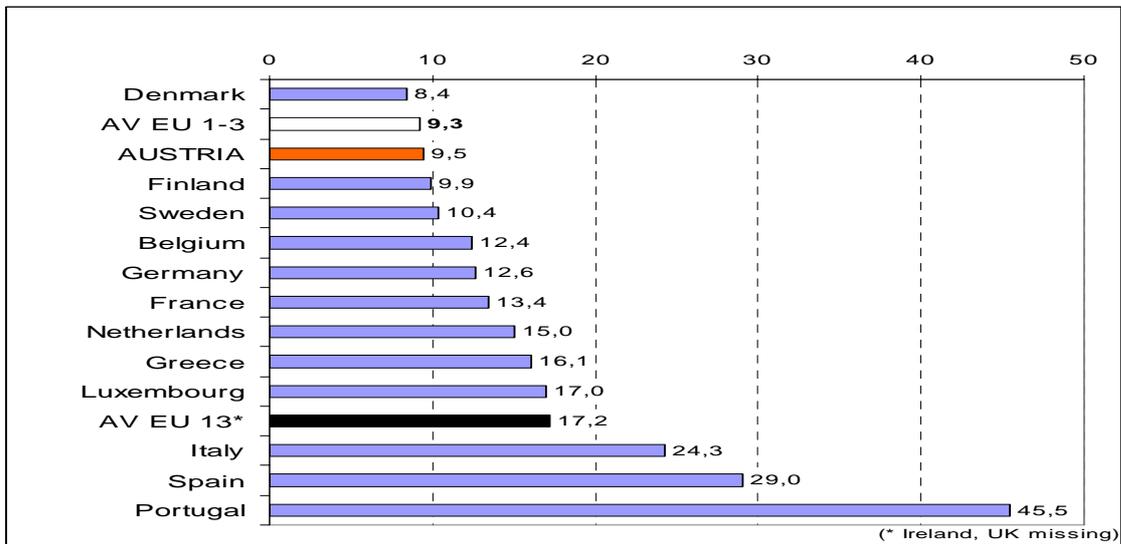


Figure 3: Early school leavers, share of population between 18-24 with only lower Secondary Education and not in Ed/Training, 2002 (Source: Lisbon 2004, 321)

The scatter plot of countries in Figure 4 shows an ambiguous picture. On the one hand there is a tendency for the completion rate to increase and the proportion of early school leavers to decrease with a rising enrolment in VET at the upper secondary level, however the correlation is weak, and there seem to be certain groups of countries amongst which this relationship is reversed. Thus, the three Mediterranean countries (Italy, Portugal and Spain) stand out with very low rates of VET enrolment and quite different completion and drop out indicators. Austria, with its outstanding proportion of VET enrolment, performs well on both output indicators. The remaining countries, however, with a medium level of VET enrolment between 50 per cent and 70 per cent show rather a reverse relationship: an increase of drop

out and a decrease of completion with rising VET enrolment. Other factors than the mere size of VET seem to be important also, and the Austrian systems seems to be particularly able to capitalise on its VET system.

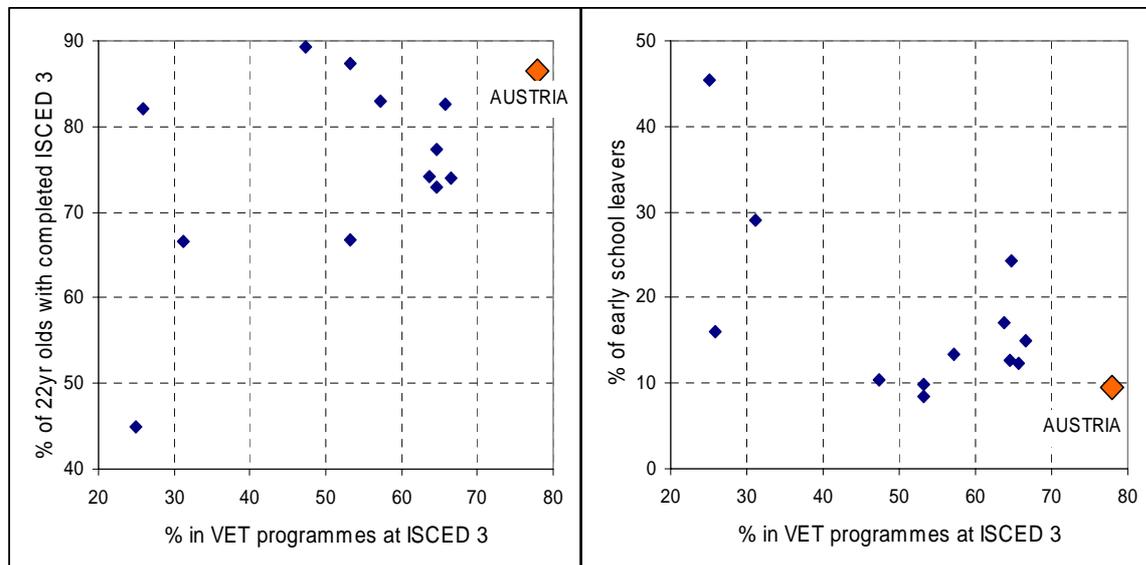


Figure 4: Per cent of enrolment of students in VET and pre-VET programmes (1999) compared to the upper secondary completion rate (1999) and to the proportion of early school leavers (2002)

The VET qualifications in Austria are rather specialised and are layered into three qualification levels: the 5-yrs Technical and Professional Colleges, the 1-to4-yrs Technical and Vocational Schools (both are full-time schools including certain amounts of workshop experience and enterprise practice), and apprenticeship training which is provided by enterprises with one to two days of part-time vocational school per week.

The Technical and Professional Colleges provide a double qualification, preparing graduates for access to professional areas and for access to higher education. The qualifications of the apprenticeship system are formally related to the structure of trades by providing qualifications required in the regulations for access to certain trades (additional qualifications are required for access to certain trades which are provided in the separate “Meister” education and training). Both types of full-time VET schools are also included in this comprehensive qualification framework in common with the apprenticeship system. Normally the full-time VET schools provide for a set of apprenticeship specialisations, that set being broader for Colleges than for Schools; thus the structure of these qualifications sets up a layered hierarchy between those tracks. This hierarchy is also reflected in the structure of the education of the VET teachers, as the higher the track of VET, the higher the qualification levels required from teachers (Higher education, VET qualification, practical training; some experience in working life is required for all VET teachers; see Lassnigg 2002a, Lassnigg, Stoeger 2000).

A study about the financial contributions of apprenticeship by the training enterprises has obtained a quite different profile compared to the German “dual system” (Lassnigg, Steiner 1997). The proportion of external teaching and learning in the part time VET school is about 20 per cent of the overall time of apprentices, the enterprise teaching time is between 20 per cent in the first year and 10 to 15 per cent in the third and fourth year, and the share of productive work increases from 40 per cent in the first year to 60 per cent in the fourth year, with a slight reduction of the proportion of simple tasks (from one third to one fourth) and an increase of more complex tasks (from 10 per cent to one third) during the training programme. As compared to Germany, the proportion of wage costs is substantially higher in Austria (70% of gross enterprise expenditure versus 50% in Germany), while the investment for training personnel and infrastructure is substantially higher in Germany (ibid. 16, 39). This profile corresponds to the estimate of the value of the productive work of apprentices, which lies markedly higher in Austria than in Germany (80 per cent of gross expenditure versus 64 per cent of gross expenditure), while the gross expenditure is at a similar level (ibid., 70). Overall, the intensity of explicit training inputs seems to be substantially higher in the German dual system than in Austria. The training is also very dispersed across small enterprises in Austria, with half of apprentices trained alone, and an additional third trained with only one or two colleagues in their training firm.

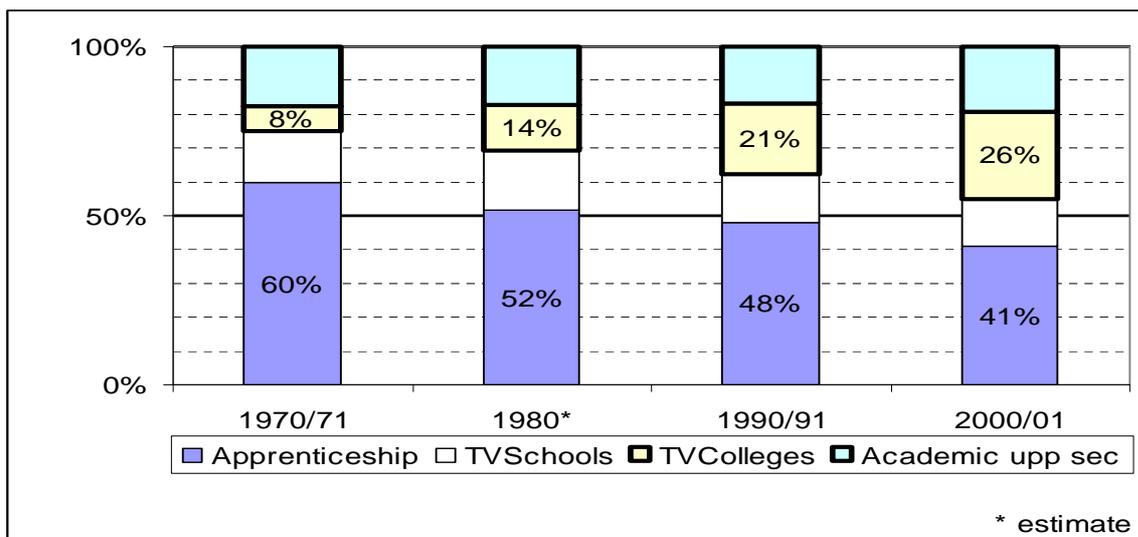


Figure 5: Proportion of learners in different educational tracks at upper secondary level (grade 10) 1970-1990 (Source: Schneeberger 2003, 15)

Figure 5 shows the changing proportion of young people in the four educational tracks at the upper secondary level since 1970. The academic track and the Technical and Vocational schools have remained rather stable (at below 20% respective around 15%), however, the Technical and Professional Colleges have won substantial enrolment (more than tripling its share from 8% to 26%) and apprenticeship has lost a substantial proportion of its students (one third from 60% to 40%). The estimate at the tenth grade represents the first year after the end of compulsory schooling, and subsequently some mobility from the Technical and

Professional Colleges to apprenticeships occurs, thus reducing the big difference in participation rates between these two tracks a little.

The evolution of the Technical and Professional Colleges was a policy priority in the 1970s, which aimed at the provision of professional qualifications. It also opened an additional pathway to higher education for students from lower social strata to overcome the early separation of secondary academic education from the mainstream at the lower secondary level. A result of this change of VET choices towards the Technical and Professional Colleges is that the upgrading of the supply of qualifications in the Austrian system is reached not within the different tracks but by the shift from the lower level tracks to the higher level tracks. Moreover, the choice of Technical and Professional Colleges by a substantial proportion of the age cohort reflects the aspiration to progress into higher education. That development is very much in line with the assessment given by the OECD about the broad trends in education and training demand.

Higher education is comparatively weak in Austria, and has been differentiated into two different layers – universities and polytechnics – during the last decade. The foundation of the VET oriented polytechnic sector (Fachhochschule) represents a turning point after the unifying process of higher education under the umbrella of the universities during the 1970s and 1980s. Some steps have also been made in the 1990s to strengthen the vocational and professional aspect of learning for university students (Mayer, Lassnigg, Unger 2000).

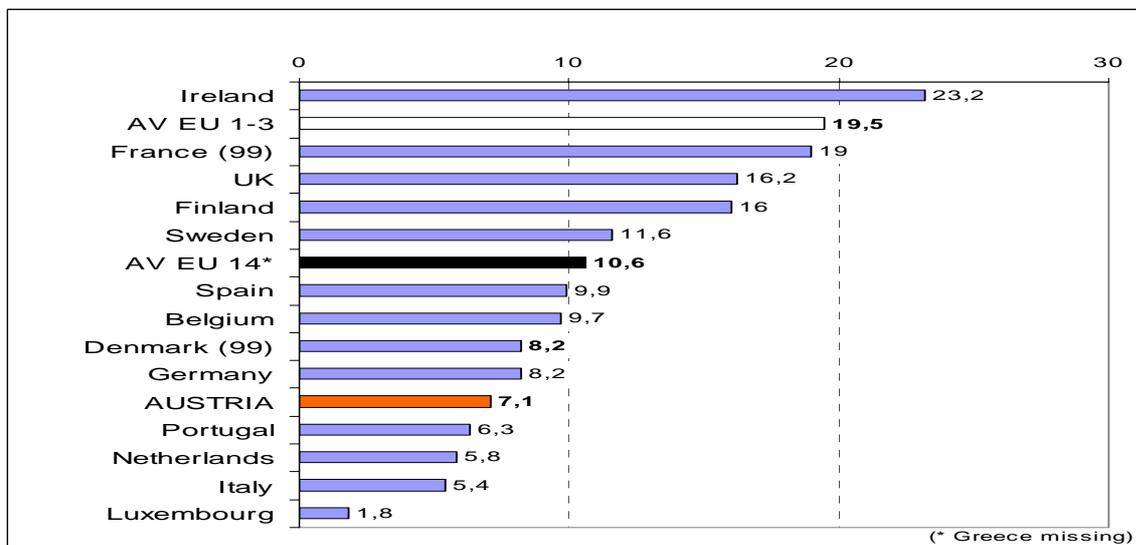


Figure 6: Science and technology graduates per 1.000 of 20-29yrs population, 2000 or 1999 (Source: EC 2002, 23)

The polytechnics have been established with a clear vocational and professional mission. An important element in the accreditation process for a study programme is a formal assessment of the demand for the qualifications of the planned studies (Lassnigg et al. 2003). Since the foundation year of 1993, the proportion of beginners at polytechnics has increased to about 15 to 20 per cent of beginners in higher education (depending on the figures taken), and this proportion is planned to increase further.

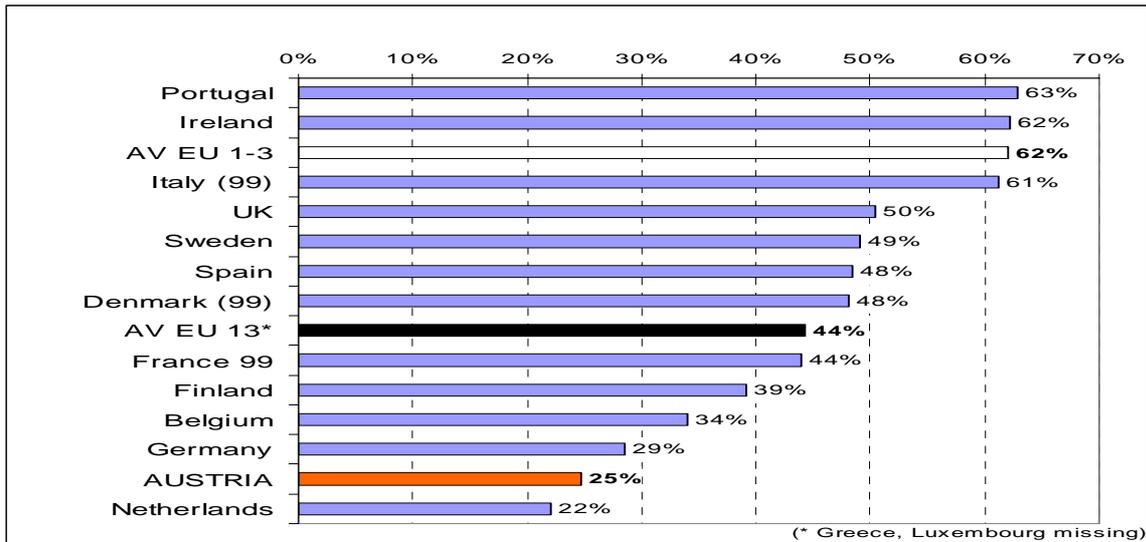


Figure 7: Proportion female to male science and technology graduates per 1.000 of 20-29yrs population, 2000 or 1999 (Source: EC 2002, 24-25)

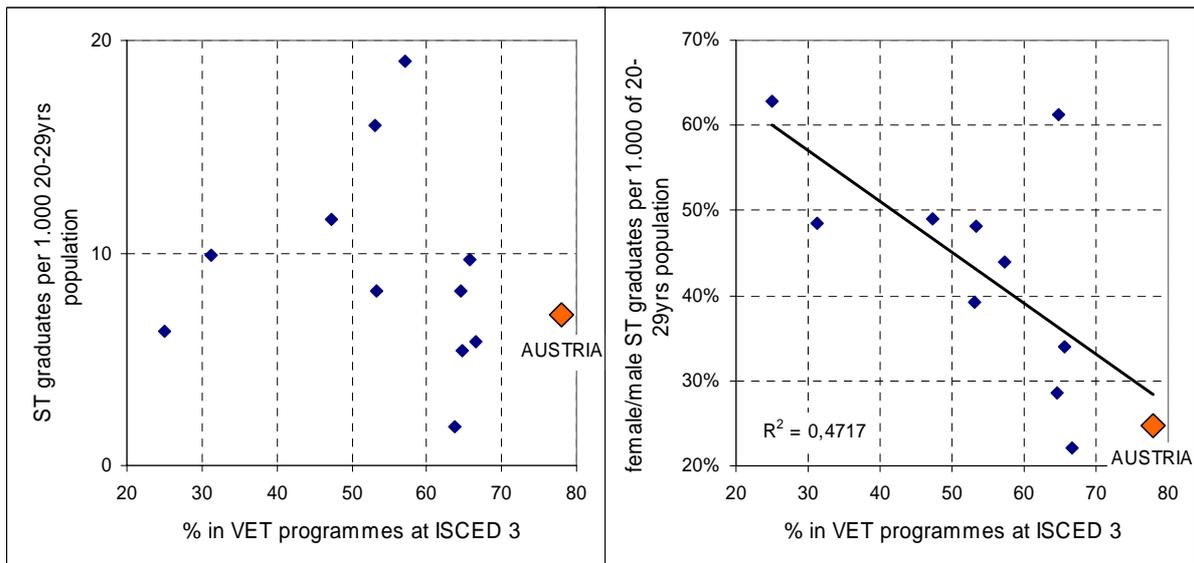


Figure 8: Proportion of VET at upper secondary level to the supply and gender imbalance of science technology graduates

The gender imbalance in science and technology graduates is also much bigger in Austria than in Europe as a whole, which reflects indirectly the prevalence of a segmented structure of VET by gender (Bauer, Lassnigg 1997). The scatter plots in Figure 8 show some correlations between the proportion of VET at upper secondary level and the supply of science and technology graduates. The proportion of VET shows a curvilinear relationship to the supply of science and technology graduates in the population, with all countries with a proportion above 60% having a medium or low supply of ST graduates. The gender imbalance among ST graduates seems to be clearly related to the strength of the VET system at the upper secondary level.

In summary the basic pattern of the VET supply structure indicates that the Austrian VET system is very strongly developed at the upper secondary level and comparatively weak at the higher education level. At the upper secondary level both a strong apprenticeship system and a strong system of full-time VET schools is provided, which is layered by level and complexity of qualifications, with participation in the full-time schools gaining impetus within VET and providing the increased supply of VET qualifications.

1.2 Medium and long term changes by education and training choices

The educational choices of young people show a tendency towards upgrading, with the Technical and Professional Colleges that provide a double-qualification for professional work and access to higher education constituting the most rapidly expanding part of the system. The apprenticeship system seems to be left behind to some degree by these changes, with both sides of the apprenticeship market playing their role in that process. On the one hand young people try to access the upper level VET programmes, on the other hand the demand for apprentices from enterprises in certain sectors is also shrinking. An increasing proportion of the inflow into apprenticeship is built up by young people who started in full time VET schools. From the enterprise side, particularly big companies from the manufacturing sector have reduced their training capacity, with the tendency that apprenticeship training is increasingly concentrated in the more traditional sectors of the economy with a high proportion of very small companies. Political reform measures are tending towards a reduction in the formal requirements for training rather than to upgrading the system and increasing quality.

The increasing inflow to the Technical and Professional Colleges has provided a second pathway to higher education alongside the traditional first road via the academic secondary schools. This second road starts at the common track of lower secondary schools, is continued in the VET Colleges, and finished at university and, during the last decade, increasingly at the polytechnics. The prognosis of higher education (Dell'mour, Landler 2002) provides the basic information about the education and training pipeline in Austria. At the fifth grade at age 10 about 30 per cent of pupils change to the lower secondary academic track, and about 70 per cent continue in the common track. At grade nine – that is the next point of choice – a similar proportion of one third of either track (this means 10 per cent plus 23 per cent, thus totally about one third of an age cohort) change to the first year of a VET college (two thirds of the academic track or 20 per cent of a cohort continue in the academic track, and two thirds of the common track or about half of a cohort continue at lower levels or drop out as early school leavers). At grade ten apprenticeship starts, and about one fifth of first year students (about 7 per cent of a cohort) leave VET colleges, most of them changing to apprenticeship. Thus roughly one fourth of an age cohort continue at VET colleges, and as a result about one fifth of a cohort complete VET colleges, a similar proportion to the upper secondary academic track. In total, then, about two fifth of a cohort acquire the entitlement to enrol in higher education, and one fourth actually do (roughly 20 per cent to university, 5 per cent to polytechnics). The progression rate to higher education from those who are entitled to

is about 60 per cent overall, and is greater from the academic track (80 per cent) than from VET colleges (40 percent). However, that rate signals that almost half of those young people who have acquired an upper level VET professional qualification continue their studies, and thus seem to feel that they need a further accumulation of qualifications. Looking at that process from the other side, half of the beginners of polytechnics have completed a VET college, more than half of them in a similar specialisation to that pursued in their polytechnic studies.

If we take into account demography we can foresee that in the longer term the interaction of the trends towards upgrading with the demographic decline of younger age cohorts might lead to a substantial change of the supply structure of VET towards upper level qualifications, particularly via the shift from apprenticeship to VET colleges. In combination with the high transition rate to higher education from VET colleges, a substantial shift in the structure of expenditure is implied in this development. First, the most expensive pathways are on the rise; second, the participation shifts from the mainly privately funded apprenticeship programmes to mainly publicly funded institutions. This development makes questions about the match of supply and demand increasingly important.

2 Basic patterns of match and mismatch

In this section some key aspects of measuring the relationship of VET supply and demands for qualification are discussed from different perspectives.

2.1 Supply and demand for VET in a cross-sectional perspective

As a first step, comparative and country specific evidence about the relationship between supply and demand is summarised in a cross-sectional perspective by education and training levels, and by broad occupational categories.

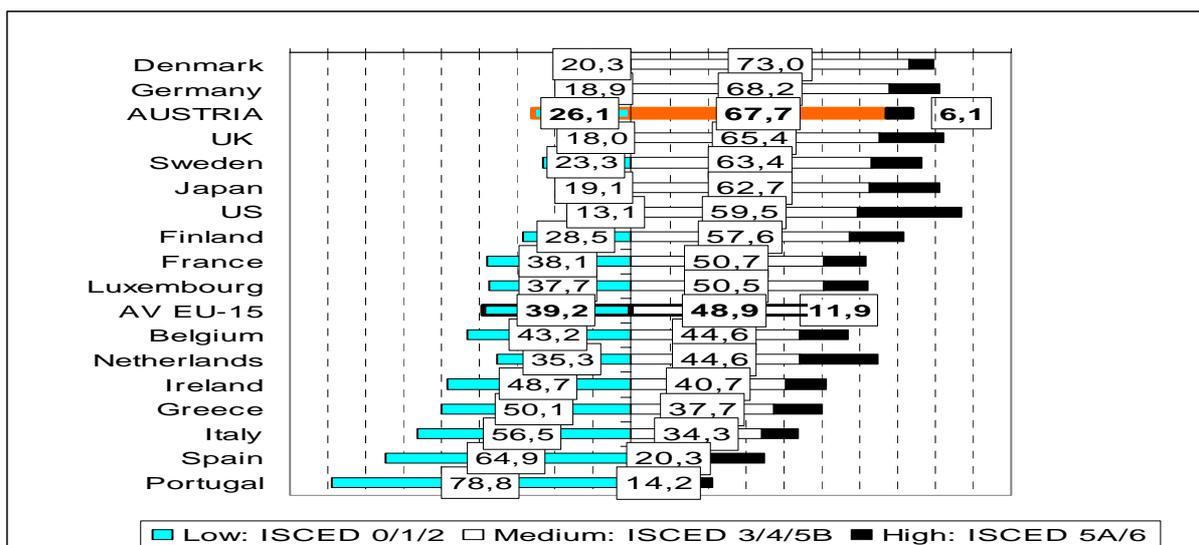


Figure 9: Educational attainment of the 25-64 yrs old population by levels, ordering by medium level, 1999 (Source: EC – Enterprise 2002, 33)

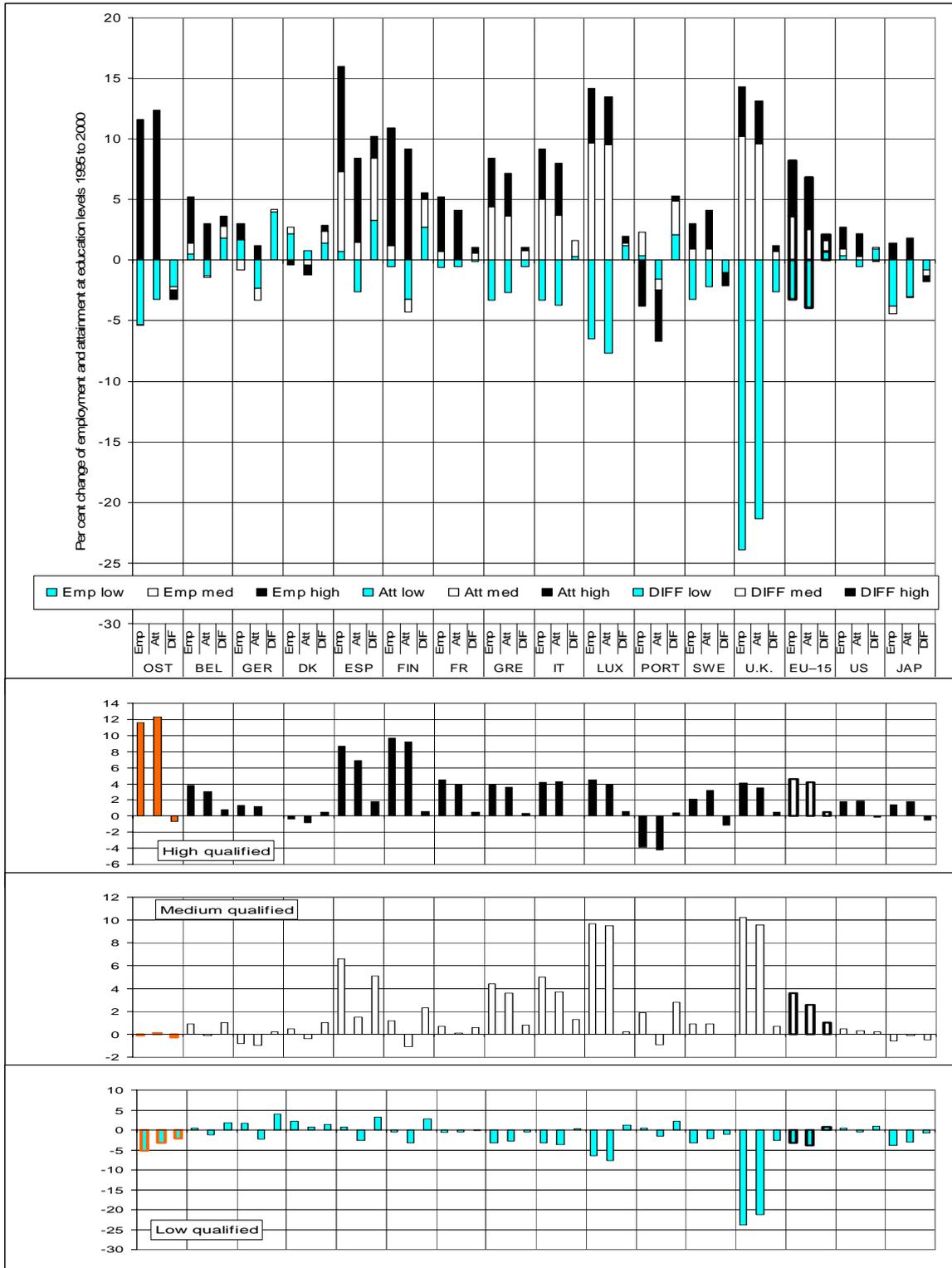


Figure 10: Growth rates of employment compared to growth rates of educational attainment by levels, 1995-2000 (Source: Source: EC – Enterprise 2002, 29)

The European competitiveness report (EC-Enterprise 2002, Ch. 2) has applied a simple methodology for the measurement of the matching of supply and demand by broad education levels: employment growth at the three levels low, medium and high education and training is compared to the growth of attainment at those levels in the 15-64 years old population for the period 1995 to 2000. The comparison of the growth rates by calculating the difference gives a rough indication whether supply and demand are in line to each other. Figure 8 gives the basic distribution, and Figure 9 shows the comparison of the growth rates in employment and educational attainment in the late 1990s.

The high proportion of medium level education, as well as the low proportion of high level and of low level education can be easily seen. The overall dynamic shown in the upper part of Figure 10 is above average in Austria, as in Spain and Finland. A positive difference between demand growth (employment) and supply growth (attainment) signals that demand is more dynamic than supply and vice versa. Most European countries, as well as the EU 15 average, show a positive difference though Austria and Sweden are exceptions to that trend. In Austria the strongest dynamic is at the level of *high qualifications* with a small negative difference between demand and supply, however, in most countries demand for high qualifications has grown more strongly than supply. The *medium level* is more dynamic in EU 15 than in Austria where there has been almost no change. At this level the variation is biggest, and there seems to be an inverse relationship: the higher the stock of medium level qualifications, the smaller is the positive difference which indicates a supply gap. At the *low level* the Austrian pattern is similar to Sweden, Greece and Italy with an average decline of demand and supply. However, Austria is one of the countries (among U.K., Sweden, and Greece) with a negative difference at this level which signals oversupply of low qualifications. Contrary to the medium level, the difference of demand and supply growth is very loosely related to the magnitude of the stock of those qualifications, and the tendency is rather polarising than equilibrating. Overall, the Austrian structure is quite unique, lying rather at extreme points of the distribution of the stocks, and showing gaps which are at variance with the average development.

At the country specific level, the cross-sectional pattern of supply and demand of Austrian VET was analysed for a similar period in a national study by the main tracks of education and training and by broad occupational groups (Lassnigg 2002b, Lassnigg, Prenner, Steiner 1999). The results show a similar pattern to the comparative picture from above.

The development of the sectoral, occupational and qualification structure was projected on the basis of an economic forecasting model. Then the interaction patterns between those structural variables were decomposed by a shift-share analysis. The estimates for the formal qualification levels have brought about clear results indicating the upgrading of the work force. Higher education graduates and those from the VET colleges show high growth rates (+4.40 per cent and +3.25 per cent p.a.), medium-level qualifications are estimated to grow slowly (+0.01 per cent to +0.57 per cent p.a.), and the unskilled are in marked decline (-3.56 per cent p.a.). The composition effects that are due to the change of occupational vs. qualification structures contribute to a better understanding of this development. The high-

level qualifications have strong positive effects on both sectoral and occupational variables (the employment field is expanding and the weight of these qualifications within the employment field is rising) while the unskilled category has strong negative effects on both variables. The medium-level qualifications show different patterns: in apprenticeship the employment field is shrinking, whereas this qualification level has a rising impact within that field – in medium-level VET schooling the opposite pattern is estimated, meaning that the qualification level is losing weight in an expanding employment field. This pattern might indicate substitution or displacement effects at this level. However, some simple comparisons have shown that occupational upgrading from given qualifications levels occurred much more frequently than occupational downgrading.

Another analysis tried to obtain the matching pattern between the supply of qualifications and the development of employment. That exercise projected the development of the future supply from the education and training system, and compared the results of that projection procedure to indicators from employment. The basic units for this comparison consisted of ten occupational categories (specialisations) for each of the four levels of specialised programmes at the upper secondary or higher education level. The results were based on a set of indicators, which have been calculated for the two periods 1991-1995 (past) and 1996-2000 (projection): (1) The proportion of the estimated yearly *absolute supply* (flow) from education and training to the *stock* of employment in each specialisation (ET-supply/EMPL-stock); (2) the proportion of (a) *the growth/decline of the estimated yearly supply to the stock of employment* in each specialisation as compared to *the overall growth/decline of employment* in this specialisation (b); (3) the cross-sectional *distribution of qualification levels* within occupational specialisations and vice versa.

The results have indicated some structural characteristics of the Austrian system. In terms of the overall *structural homology of education and training* as compared to employment, these indicators point to a low level of correspondence between the two systems, especially if the speed of change is the focus. In relation to the dynamics of shrinking employment in specialisations in the primary sector or in manufacturing, the decrease on the supply side was in most cases estimated at a considerably slower rate. The employment growth in service specialisations is not complemented by corresponding growth in education and training, but rather the supply is shrinking as well or remaining constant. Moreover, the indicator patterns point to a quite marked variability among the vocational specialisations, and also to quite marked discontinuities with respect to the comparison of the time periods. Thus the structure of the education and training system appears less stable than expected. However, the changes and discontinuities in both systems are diverging rather than corresponding.

Another structural phenomenon, which has been made visible by the results of the indicators, reflects the overall demographic development of an increasing relative scarcity of younger cohorts as compared to the medium-aged and higher-aged cohorts. Generally, positive signs of growth rates are markedly more frequent on the employment side, as compared to the education and training supply side. There are only two occupational categories which do not indicate at least small growth on the employment side in both time periods: occupations at all

levels in the textile field in both periods, and the projected development of occupations in the education and science field in the second half of the 1990s. On the supply side only one occupational category (occupations in the field of social and health services) shows growth in both periods, and two additional ones (electricity/electronics/chemicals and the miscellaneous category) show growth in the second time period. The most common pattern on the supply side indicates a decline (agriculture/forestry, tourism, retailing and office work, textile) or stasis (construction, metals, education/science) during the second (projected) time period, following an actual decline during the first half of the 1990s.

A third structural result – which, however, might be to some extent artificially reinforced by the classification procedure – is pointing to markedly different relations in magnitudes between the supply from education and training on the one hand, and the employment figures on the other hand. As very crude orders of magnitude for a 'normal' replacement rate, based on the (of course more or less unrealistic) assumptions of stable employment and an even age distribution, we might refer to figures between 2.5 per cent (40 years life-time employment) and 2.8 per cent (35 years life-time employment). The first indicator (supply as compared to the stock) is rather high in the overall field of electricity-electronics-chemicals (8.1 per cent), and very high especially on the upper qualification levels (technical colleges: 40.4 per cent; university: 41.8 per cent). In some other partly shrinking vocational fields, or at least at certain qualification levels within those fields, this indicator has also shown high supply figures as compared to stocks of employment, ranging from 10 per cent to 35 per cent (agriculture/forestry, metals, education/science, textiles). In some other vocational fields, partly those which are estimated to grow (the miscellaneous category, tourism, retail and office work), the magnitude of supply is small as compared to employment (ranging from 1.5 per cent to about 4 per cent).

At the more specific level of vocational specialisations the pattern of estimated indicators points to rather distorted structural relationships between the supply side as compared to the demand side. The fields of metalworking and electricity-electronics-chemicals show corresponding developments on both the supply and the employment side, the supply showing in part greater growth compared to the employment figures. As these fields are critical in terms of economic innovation, those figures point to a favourable relationship of qualification and employment. In the service-oriented vocational fields (retailing and transport, office work and administration; tourism, social and health services) the indicators suggest that the supply side is lagging behind the development of employment by a considerable amount. In the vocational fields of agriculture/forestry and textiles the opposite seems to be the case, as the education and training system produces a high volume of qualifications relative to the shrinking employment in these fields.

Table 1: Indicators for the comparison of education/training supply and employment

	(1) ET supply/EMPL stock			(2) ET/EMPL and EMPL growth		(3) CROSS- SECTIONAL distribution (col.=100%)	
	1991- 1995	1996- 2000		1991- 1995	1996- 2000	1991- 1995	1996- 2000
Agriculture and forestry	4.3	3.6	a.ET b.EMPL	-0.1 -0.6	-0.2 -0.5	4.4 3.8	3.7 3.4
Textiles 1)	4.1	2.8	a.ET b.EMPL	-0.7 -6.9	-0.5 -4.9	1.5 1.3	0.7 0.8
Metals, engineering	5.3	5.1	a.ET b.EMPL	-0.2 -2.6	0 0.1	14.3 10.0	13.6 8.9
Construction, wood processing	4	3.7	a.ET b.EMPL	0.1 -0.1	-0.1 0.9	11.3 10.5	11.6 10.5
Electricity, electronics, chemicals	8.1	9	a.ET b.EMPL	-0.2 -1.9	0.3 1.1	9.8 4.5	11.1 4.1
Retailing, transport, office work, administration	2.6	2.3	a.ET b.EMPL	0 1.6	0 1.3	32.9 46.4	32 47.3
Tourism	4.4	3.5	a.ET b.EMPL	-0.2 0.4	-0.2 1.3	7.5 6.3	6.4 6.2
Social and health services	6	5.3	a.ET b.EMPL	0 4.8	0.2 2.9	7.6 4.7	8.8 5.5
Education and Science	5.6	5.1	a.ET b.EMPL	-0.1 3.3	0.1 1.6	7.8 5.2	8.6 5.7
Miscellaneous (graphic arts, optics, arts and crafts, etc.)	1.5	1.6	a.ET b.EMPL	0 2.2	0.1 2.9	2.9 7.2	3.5 7.6
Total	3.7	3.4	a.ET b.EMPL	-0.1 0.8	0 1.3	100 100	100 100
ET = Figures for students; EMPL = Figures for the employed.							
1) not very reliable because of small sample size							
Source: Lassnigg 2002							

2.2 Projections of supply in the medium and longer term

Projections about the development of the different parts of the VET system have been developed in the 1990s for different analytic and planning purposes. A key question for future development is, how the long term demographic downturn of the young population will be absorbed by the education and training system.

In the past, the educational infrastructure has been developed for age cohorts which are markedly bigger than those expected for the future. To obtain a basic mapping of the scope of possible development paths two extreme scenarios were calculated by simple and easily understandable procedures for the different parts of the education and training system: (1) a status quo scenario applied the transition rates of the last year before the projection (1983) to the demographic forecast; (2) a trend scenario applied the linear increase of the change of transition rates between 1983 and 1993 to the demographic forecast. Figure 11 compares the

result of those scenarios to the actual development of student numbers. This exercise shows how the actual development fits into the scope between the extreme scenarios, and also how the actual decision making behaviour of young people might have changed in the 1990s as compared to the 1980s.

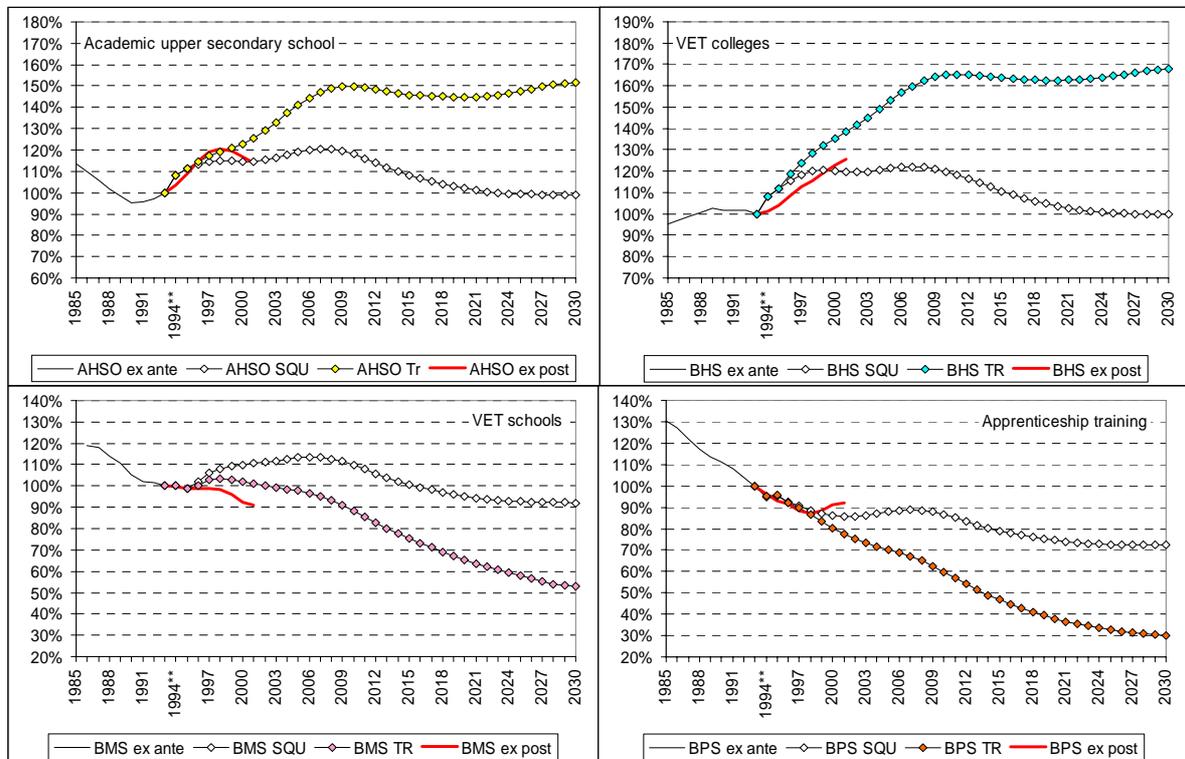


Figure 11: Long term projections of student numbers at upper secondary level, 1985-2030, relative, 1993 = 100 per cent (Source: equi-IHS)

The figure of the scenarios shows first that despite the demographic downturn the trend scenario gives quite a huge room for growth in the upper level schools; second that the continuation of the trend of the 1980s would lead to a very marked decline of apprenticeship training; and third that, from the point of view of planning, the beginning of the 1990s was a difficult period as the status quo scenario gives an increase at upper secondary level until 2005-10, followed by a long term decrease by 20 per cent.

The actual numbers signal a change in decision making behaviour very different from a continuation of the trend from the 1980s. Only the Technical and Professional Colleges follow almost the path of the trend scenario. The Technical and Vocational Schools decrease even more strongly than the trend scenario would have predicted. The two remaining tracks show marked breaks in the development. The upper secondary academic track has followed the trend scenario for some years and then turned down in the second half of the 1990s. Apprenticeship training has taken rather the path of the status quo scenario.

Thus the basic development of education and training choices is pretty much in line with the projection results about the demand from the employment system. The biggest challenge is

the rising demand from young people for places in the VET colleges. The apprenticeship system needs more or less to hold the status quo.

2.3 Measures of mismatch

Another measure of mismatch between supply of and demand for qualifications is the dissimilarity of the educational structure by the three levels between different sectors of the population. Figure 12 shows the Austrian position as compared to the countries of the EU 15 and also the USA and Japan. First the change of the mismatch between the employed and the population is plotted for 1995 and 2000. The figure indicates an increasing mismatch for Austria between the employed and the 15 to 65 years old population. The people not in employment have a different educational structure than those in employment. The comparison of the matching situation in the overall population to the younger age groups of the 25 to 35 years old shows overall a better matching among the young, with five countries in the reverse situation. In Austria the relative position of the young population is better than the overall matching situation in 2000. The educational structure of the unemployed differs in most countries much more from that of the employed than that of the young population, and the same is true for the people out of the labour force as compared to the unemployed.

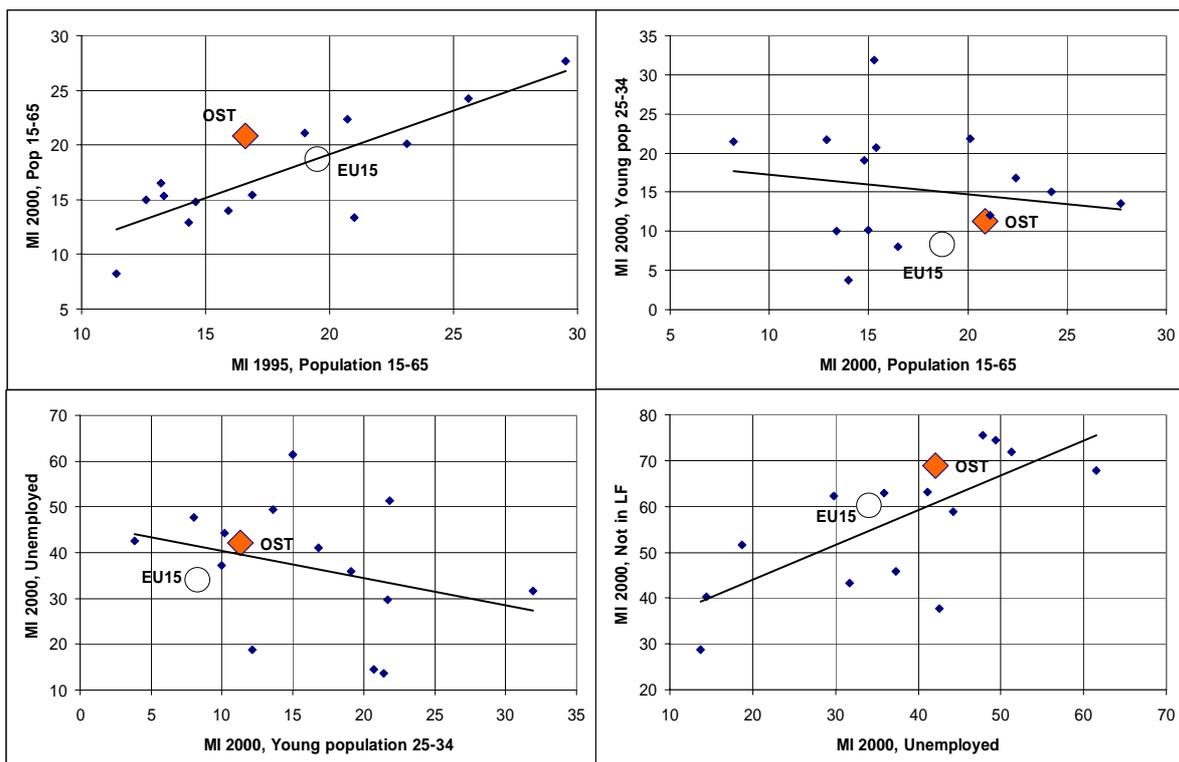


Figure 12: Mismatch indices: Dissimilarity of educational structure by levels of employed and different sectors of the population in the EU 15 countries and USA and Japan, 1995, 2000 (Source: EC – Enterprise 2002, 36)

The overall relationships between these population groups differ: The mismatch in time, and between the unemployed and the people out of the labour force, seems to be rather positively related – the more mismatch in a country on the one dimension, the more on the other. This indicates a difficulty to bring the matching in line at the overall level of the population, and a tendency of separation between the employed and the not employed parts of the population in terms of their educational structure. However, the relationship between the overall population and the younger population, and between the young population and the unemployed seems rather unrelated to each other, with a slight inverse tendency: the more mismatch on the first dimension, the less on the other. Thus the young population might improve the match in countries where the overall mismatch is big, but the incentives for improvement among the young might also be weak where the overall situation is relatively in line.

Layard, Nickell, and Jackman (1991, 310) have developed a mismatch indicator based on the variation of the unemployment rate due to the categories of structural variables on the labour market:

$$MM = 0.5 * \text{var}(u_i / u) = \log(u / u_{\min})$$

They interpret the index as an increase of the unemployment rate because of structural rigidities, as compared to a theoretical minimal unemployment rate (u_{\min}) which should be the same for all categories of a variable. The value is zero, if the unemployment rate of all categories of selected variables is the same, a value of 0.3 means that the unemployment rate is 30% above the minimal possible value. If the structural distortions of the measured variables (e.g., education, gender, age, economic sector, occupation, region) are independent from each other, the indices might be summarised to an overall mismatch index. Because this is probably not the case, the summarised index indicates a maximum value of mismatch, with the real value somewhere below that.

Figure 13 shows the change and the average of the mismatch indices for six variables in the period 1994 to 2002. The variation of unemployment rates is biggest for occupational groups, medium for the educational tracks and economic sectors, and lowest for regions, age and gender. Mismatch has strongly increased for regions, increased for education, occupation and age, and slightly decreased for economic sectors.

The summarised index has increased from 0.3 to 0.4 during that period. For the same period the Beveridge curve, which is another more descriptive measure for mismatch based on the relationship between unemployment and vacancies did not indicate an increase of structural unemployment.

Overall, two observations stand out. First, that the methodology for the measurement of mismatch is in a rather rudimentary state of development to date. The measures give some indications about structural problems on the labour market, however, the contribution of the VET system is not sufficiently covered by those measures. Second, there is a large knowledge gap concerning the economic use of the specialised qualifications which are supplied by the Austrian VET system. There is no formal monitoring of match or mismatch,

and the feasibility of the supply of qualifications is simply not known. The indicators presented here do not point to a very tight relationship between supply and demand in the Austrian VET system.

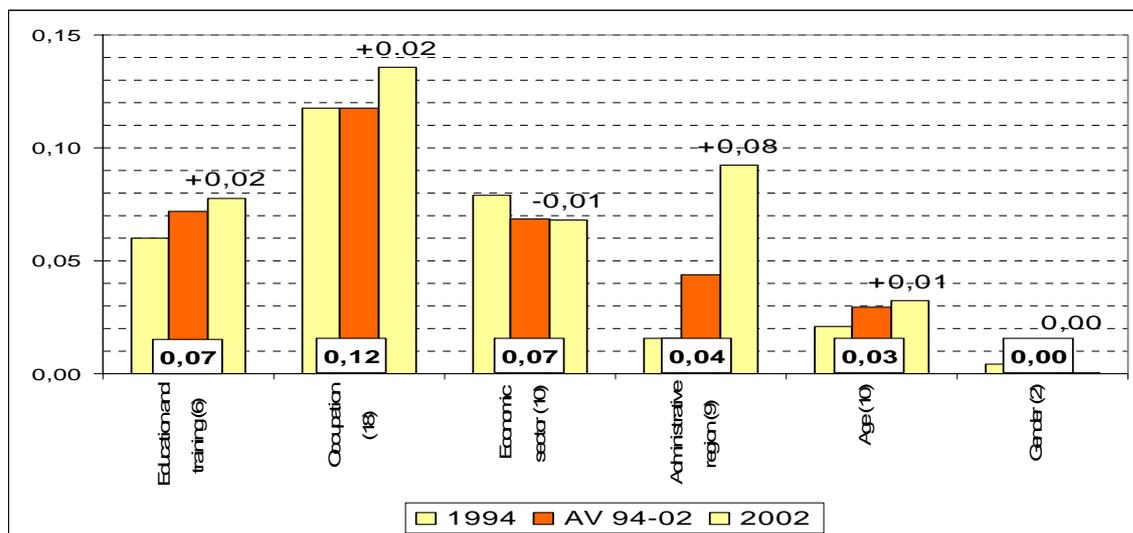


Figure 13: Mismatch indices for education, occupation, economic sectors, regions, age and gender, 1994, 2002, average 1994-2002 (Source: Lassnigg and Markowitsch 2004, 199-200)

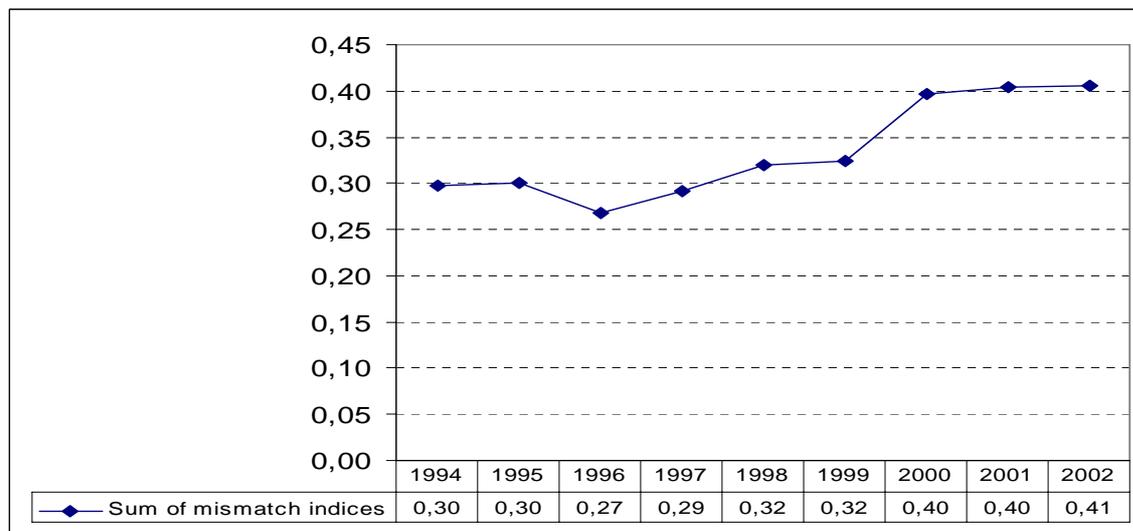


Figure 14: Summarised mismatch index in Austria, 1994 – 2002

2.4 Mechanisms for definition, selection, and anticipation of competences

Concerning the process of definition, selection, and anticipation of the demand for competences the Austrian VET system carries a remarkable tension: on the one hand the teaching and learning process is strongly related to the provision of specialised qualifications, on the

other hand there is an almost complete lack of formal mechanisms which would monitor the utilisation of those qualifications.

The adaptation of the programmes and curricula is based mainly on informal structures and performed in an incremental way, by adding new programmes and reforming curricula in medium term periods of five to ten years. Each of the different parts of the system – apprenticeship, full time VET schools, polytechnics, and universities – works very much on its own, unrelated and sometimes in a conflict driven and competitive relationship to the other parts of the system. This may be seen as a productive source of diversity, at least in some respects. As an example, it can be shown that in the periods of strong youth cohorts and slack economic demand, the different parts of the system did cope with the take up of young people in a distributed way, thus successfully preventing open unemployment of young people at the age of upper secondary education, and providing a medium level VET qualification for a high proportion of an age group.

However, the longer term sustainability of that system is not sufficiently known. There are periodical complaints about certain bottlenecks, and some endemic debates about the feasibility of the supply structure. A key question concerns whether the high weight of medium term qualifications in relation to the low proportion of higher education graduates, particularly in science and technology, does provide the right supply for the knowledge based economy. The advantage of a tight relationship to practice and of a focus on specialised VET competencies (*Fachkompetenz*) in this system, stands against a marked difference between practice and theory, and a difficulty to implement the new competences because of curricular overload and traditional work practices in training enterprises (Lassnigg and Mayer 2001). The programmes are geared to develop stable vocational or professional profiles and identities, where young people have to decide about their field rather early (at age fourteen), and the question how that structure might provide for a proper basis for flexibility is at stake.

At the upper secondary level, there is a quite marked difference in requirements and complexity between the different tracks (apprenticeship, VET schools, and VET colleges). Thus, the system does not include proper pathways, to build up future opportunities by a strong foundation function of earlier programmes. Rather the relative low academic requirements for access to wide areas of apprenticeship seem to provide a disincentive for compulsory school to bring a certain cohort of Austrian young people to a certain level of basic knowledge. These shortcomings are to some degree reflected in the failure of the polytechnic system to provide for new opportunities of non traditional access to higher education (Lassnigg and Markowitsch 2004). Graduates from polytechnics also have pointed to a lack of attention to the new key competencies during their studies. Those issues concern the supply side.

On the demand side, there is longstanding evidence that the Austrian economy is rather traditionally structured, with a weak and incremental innovation system. Despite political concerns over decades to strengthen R&D and innovation, the recent innovation scoreboard has classified Austria as one of the only four countries (with Estonia, Italy and the Czech

Republic) which are declining on the innovation index (EC 2004). In fact, the structure of the VET system with its strong emphasis on medium level qualifications might reinforce that traditional structure, or at least hold back against a more dynamic push towards innovation. Thus the propositions brought forward by Krueger and Kumar (2004), arguing that more general than vocational education would promote the knowledge based economy might apply to the Austrian system.

3 Conclusions: Evidence based choices for future development?

The basic structure of the Austrian VET system was depicted as a strong and complex system with its main focus on different tracks at the upper secondary level on the one hand, and a rather weak sector at the tertiary level which has developed some dynamics with the establishment of the polytechnics in the early 1990s. At the upper secondary level the apprenticeship system and the VET colleges are the main tracks which differ in their aspirations and complexity. The development on the supply side points to a high and increasing preference of young people for the VET colleges, which however are used as a foundation for higher education to a very high degree rather than as an initial preparation for working life. The upgrading of the qualification structure thus develops mainly by a shift from the lower level apprenticeship system to the VET colleges, and further access to higher education. An upgrading within apprenticeship as, for example, by the German “*Modellversuche*” is not being countenanced but rather quality requirements are being reduced in order to increase the incentives for enterprises to train apprentices. This shift also results in a shift of a substantial part of the investment in education from the private sector to the public sector, and partly to the most cost intensive institutions.

The review of how the supply of VET does match the demand from the economy shows first that rather weak and indirect evidence is available to answer that question. Looking at the development of employment compared to the qualification supply by broad levels of education and training, the upgrading of supply seems to proceed at a slower rate than the upgrading of the demand side. The matching of the VET supply structure to the development of employment by broad occupational groups is rather weak. The comparison of the educational structure of the different sectors of the population with the educational structure of the employed shows for Austria a rising divergence in the 1990s. However, within the younger population there are some signs of convergence. A more general mismatch index based on the variability of group specific unemployment rates signals rising mismatch between skill supply and demand.

However, those measures are far too loose and too indirect to derive conclusions about the direction in which the VET system should develop. Formal monitoring procedures about the match of supply and demand are so far lacking, so that the adaptation of VET programmes is based mainly on qualitative and informal procedures, and on the informal knowledge of actors from within the education and training system. Thus an evidence based way to take decisions about the future development of the VET system is not possible so far, and big

uncertainties of how the VET system might contribute to innovation and the development of the knowledge based economy remain. The main question on the quantitative dimension is how far the expansion of the VET colleges and the polytechnics should be supported. On the qualitative dimension, there are three issues that need to be addressed: first whether the level of basic academic competences developed in the apprenticeship pathway are sufficient for the working life of the future; second whether the academic upper secondary institutions would be a better and more cost efficient preparation for higher education than VET colleges; and third whether the current shape and structure of the polytechnics are sufficient for the support of a more innovative economy.

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Dynamic and Stability of Institutional Vocational Education in Bulgaria and Lithuania. An Empirically Verified Draft

1 Analytical Model

The main emphasis in the analysis of the conducted investigation lays in determining the cause and effect of changing processes within the system of vocational education in the sense of a hypothesis generating study. With regards to the analytical model, change processes can, corresponding to their moulding and intensity, be differentiated into four structural levels (see table 1); in accordance to the thesis those change processes express themselves in changes of formal and informal regulation (institutions). These institutional changes take place either formally (changes of laws, enforcements), informally (resulting from actions of agents out of the empirical regulation) or as a result of the combination of formal and informal processes (see Zlatkin-Troitschanskaia 2005).

Table 1: **Four Structural Levels (following Bronfenbrenner 1981)**

<i>Structural level</i>	<i>Features</i>
macro level	<i>Social meta - level:</i> social patterns of norms and values, customs, political and economical order
exo level	<i>Structural level:</i> structural design of social subsystems and their processes
meso level	<i>Institutional level:</i> concrete fields of action of the individual such as family, school, etc.
micro level	<i>Situational level:</i> concrete, specific context of action of the individual

The main focus of the theoretical concept of the investigation ¹ is the thesis that the transformation in systems of vocational education in eastern European post-socialist countries is a process which is, to a remarkable extent, marked by processes of institutions ² of the past and in which the institutions of the past have had a crucial influence on the development of

¹ Investigations have been conducted within the framework of the dissertation; which has been awarded the prize for remarkable research (Humboldt-Prize 2004) as well as the Europe-Prize 2004 of the VBKI.

² In the following institutions are considered as latent as well as partially documented schemes of interpretation, socialized subjects constitute their world with. Those include informal institutions in the sense of “unwritten” laws or rather regulations, which mark and rule the daily basis of every society and formal institutions – considered as institutionally written rules and organizations. According to the thesis about the features of informal institutions, they represent structures in the sense of definite regulations of a society.

new institutions. This investigation is based on the assumption that the influential powers of the post-socialist transformation are to be found overall in the institutional heritage of the investigated countries. Therefore institutional influences combined with interactions of (at least limited) rationally acting agents ³ cause the dimensions and forms of transforming processes within the vocational education system. The “historical heritage” is defined as one of the key factors influencing such transformation. Following the Bronfenbrenner-Model its moulding can be differentiated into four structural levels:

1. Soviet heritage on the *macro level*: A social basic consensus in the field of vocational education is the assumption that as many young people as possible should have a college or university degree. The esteem of non-academic vocational education is relatively low in the society, especially on the job market.
2. Soviet heritage on the *structural level*: The government is still in charge of non-academic vocational education. Vocational education mainly meets the demands of school as an institution and only to a limited extent the demands of the job market. Local and foreign companies are hardly ever integrated in vocational education. In the investigated countries the vocational education system can be called a school system.
3. Soviet heritage on the *institutional level*: Old bureaucratic (institutional) structures have hardly changed within the first decade after the breakdown of the socialist regime. The vocational college is still known as being the neglected school form in the educational system. In the field of trade and technology there is a high number of socially or learning handicapped young people who choose that type of fulltime school education. In those cases the vocational college can be regarded as a means of rescue for these young adults. However, in the field of administration and commerce the vocational colleges are often only an intermediate stop on the way to higher education.
4. Soviet heritage on the *micro level*: The low esteem of non-academic vocational education, which was established after the Second World War, also affects the judgement of young adults. Because of its low status, most young adults do not aim to gain a vocational college degree; it is rather considered as an alternative to general secondary education in order to meet entrance requirements to higher education.

The presented historical heritage in vocational education can especially be considered as an institutional heritage, which has a different moulding on different social levels (ideas, structures, organization and actions of agents). Consequently the question of the transformation of the vocational educational system implies the question of the *stability of institutions*. Institutional stability can be regarded, therefore, as a central key to the transformation of the vocational education system. Institutional stability depends – following the thesis – directly on decisions and actions of the relevant agents. Therefore one cannot

³ According to the thesis, the actions of players are to a high extent marked by trying to stabilize their own position in the context of transforming processes.

relinquish the perspective of individuals or groups of individuals when analysing the stability of institutions. ⁴ Figure 1 tries to illustrate what has been explained.

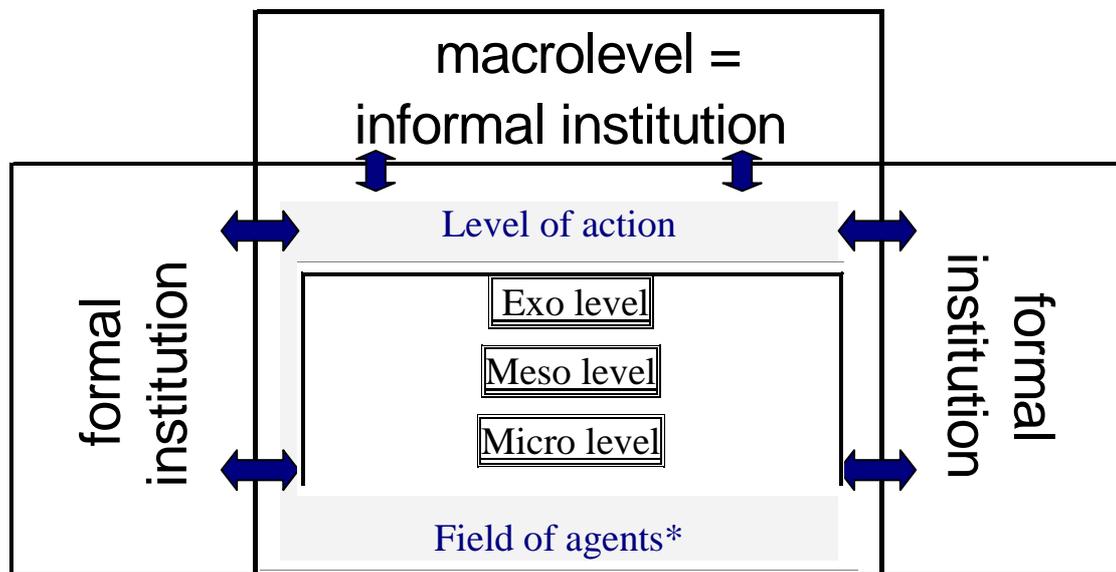


Figure 1: The Analytical Model

(* people in charge of educational policy, of governmental administration; companies, leaders of institutions of vocational education)

Simplified, yet sufficiently complex, a social system (here the educational system) is regarded and illustrated as a matrix. The vertical perspective shows the social – ecological model (following Bronfenbrenner 1981) as an analytical model. This illustrates a social system by the means of 4 levels (from macro to micro level) systematically and sufficiently differentiated. In horizontal perspective the system is to be regarded by combining the level of institution and action (level of agents) (following the concept of institutionalism focused on agents of Mayntz & Scharf 1995).

In this setting it is obvious: investigating, how change processes in the system of vocational education in different countries took place and still take place, or rather to what extent they have an influence (also if only partial), one must check whether the structures – which are considered as a combination of formal rules and latent regulations – in the social order have changed within the time between 1991 and 2003. At least three forms of changes have to be differentiated:

- in the field of formal institutions as the lawful rules;
- in the field of informal institutions as social norms and values;
- in the field of individual (subjective) interpretation and action (level of action).

⁴ First, the level of collective action rather than the level of individual action is focused on (e.g. agents of governmental administrative departments as a central group of agents).

The latter are – following the thesis – to a big extent marked by decisions depending on the functional position of the agents, as well as by the institution within which this functional position is put into practice.

With regard to the analytical model the following is true for both countries of investigation:

- the moulding of changes in informal institutions are to be expected on the social macro – level and
- the effects of formal institutions should mainly be recorded on the exo and meso level).

The progress, or rather the intensity, of the change processes can therefore be measured by analysing to what extent changes have forced their way through social levels. That means up to which structural level the formal and informal institutionalised effects have been accepted. Consequently the change processes can only be considered as finished when they have affected all four social levels.

2 Conducting the Studies

The investigation consists of 2 studies in Lithuania and Bulgaria. During the investigation four sets of empirical data were collected over different expenditure time periods⁵ using traditional qualitative and quantitative methods of empirical social science (see Lamneck 1995; Mayring 2002). The design of the investigation follows the method of triangulation as suggested by, for example, Denzin (1977). For this study three linked sets of data were collected and analysed in an integrated manner:

1. *Analysis of documents:* The documentation of relevant lawful enforcements as well as the secondarily gathered statistical data of both countries are evaluated analytically in terms of context.⁶ On the basis of this analysis first hypotheses about cause-and-effect were generated for the countries involved in the investigation (see Zlatkin-Troitschanskaia 2005).
2. *Qualitative studies:* In Lithuania and Bulgaria partial qualitative studies were conducted, which primarily served to explore the hypothesis concerning potential key factors influencing the transformation processes as well as the gathering of hints about cause-and-effect at the different social structural levels. These partial qualitative studies are made in a way that record the structures of perception of different groups of agents and link them together. These included agents of the state – principals and teachers of vocational colleges as well as persons responsible for vocational education in the Education Ministry - and representatives of employees (unions) and employers (chamber of commerce, employers' associations and companies). For the interviews the author created a specific instrument in the form of an interview guide (schedule) to collect data.

⁵ For an overview of all partial studies, see Zlatkin-Troitschanskaia (2005).

⁶ For results of the analysis of the documents, see Zlatkin-Troitschanskaia (2005).

The first qualitative study (Sofia, Bulgaria) was primarily used for exploratory purposes because the subject matter of the investigation had so far been neither theoretically nor empirically founded (for reasons, see Zlatkin-Troitschanskaia 2005). Consequently, the use of qualitative methods is considered as a mean of exploration in the framework of this partial study: The questioning tries to modify or rather to state the hypothesis more precisely by analysing secondary data material as well as developing further the thesis. A focused, partially standardized form of an interview was chosen in order to achieve maximum comparability regarding results. Overall the author conducted 19 interviews.

The second qualitative study (Kaunas and Vilnius, Lithuania) aimed – in addition to the targets which have already been mentioned – to identify in particular the specific aspects of the change processes in the Lithuanian system of vocational education and the reasons for such change against the setting of the results of the partial study in Bulgaria. Overall the author conducted 14 focused interviews by the means of standardized interview schedule.

3. *Quantitative studies*: In order to examine the thesis of effects of change processes a quantitative survey of students in vocational colleges was using a standardized questionnaire, specifically constructed for this study.

In the first phase of evaluation, the data from both studies was examined analytically in terms of text. The results give hints whether the agents who were questioned have the same understanding of central “everyday“ terms (see Lamneck 1995). The next phase of analysis involved identifying terms of themes or rather contexts, as well as how often and how intense they were mentioned by the groups of agents in the two countries. Based on these outcomes it was determined whether it was possible to draw cause-and-effect conclusions from these results. The empirical findings of the quantitative research served primarily to validate the results of the qualitative research methods.

By the means of this multi-methodical, multi-perspective analytical design of, *where qualitative and quantitative data are used simultaneously and results triangulated against each other*, it was determined how social transformation processes in general, and especially in the vocational education system, are perceived and evaluated by different institutional agents. This method makes it possible to identify country specific cause-and-effect-connections which will be described in detail in the following section.

3 Empirical Results

3.1 Bulgaria – a Governmental Controlled Change of the System

The quantitatively orientated research shows that the structures of the vocational education system are totally integrated into the governmental system of leadership (app. 90% of those questioned) and that the “old”, rigid, bureaucratic structures of control have hardly changed. Furthermore, two third of the controlling agents claim that historical traditions have had an influence on the institutional structures of the vocational education system. Those

comments make clear that they refer almost without exceptions to traditions from socialist times. Therefore, the data supports the results of the *document analysis* (see Zlatkin-Troitschanskaia 2005). *All* interviewees claimed:

- The Bulgarian vocational education system *de facto* still represents a “school system“.
- Companies are hardly integrated into vocational education.
- General education is still a dominant part of vocational education.

Disregarding one case, those questioned stated: The Bulgarian vocational education system is a “resort“ of governmental administration. Besides that, more than three quarters of the questioned agents criticize the following:

- The implementation of new ideas is difficult on the institutional and personnel level because of significant trends of rigidity.
- The didactical methods and means are “outdated“.
- Non-academic vocational education is “second choice“.

All of those questioned stress that this is still the “socialist heritage“. The current consensus of policy of education in Bulgaria in terms of “education“ is regarding to the questioned agents “general education“ (app. 50% of the answers).

With regard to changes in the system of vocational education the questioned agents state: A radical transformation has not yet started, hardly anything encouraging is going on, everything is going very slowly, not purposeful, very conservative and linked to private interests. The change can therefore not be considered as a positive one. Those questioned stress explicitly that this kind of slow adjustment *is wished for by society*.

The results of the *textual analysis* with regard to the four social structural levels give hints to a *decreasing number of processes* from the lower meso level to the upper exo level. Therefore, only little change in the structures of the macro level are, empirically verified, to be expected; the micro level is mentioned seldom.

The results of the textual analysis show, that with regard to the macro level, the following terms are mentioned the most frequently: “general education“, “*traditions*“, “conservatism“, “*socialist*“, “old“. By trying to link those findings with the results of the analysis of themes, it is obvious, that some terms are used in similar or rather identical contexts by those questioned:

- The key word “conservatism“ is generally used in contextual connection with “high conservatism of the vocational education system“. It is referred to the conservatism of the system’s comprehensive structures and single governmental vocational education institutions. In addition, the thematic courses (the sequence of the contexts of the interviews) support the thesis that strong conservatism is the informal institution in the society, which is present in all structural levels.

- The term “general education“ is used in two contextual connections: First, it is understood as “dominance of general education“ in the structures of vocational education. Second, there is a social consensus, that general education is “good“. Consequently, this can be understood as a further informal institution.

In conclusion, the following endogenous key factors for changing processes can be identified as independent variables, which were named by the majority of the questioned controlling agents. These factors refer to single variables as well as to the bundles of variables:

- Strong conservatism,
- High esteem of general education,
- Dominance of general education,
- “Academization” of the society,
- Lack of open dialog between government and corporate agents,
- Low esteem of practically orientated vocational education.

Against this setting, the relatively positive evaluation of vocational education policy on the part of the questioned controlling agents can also be explained: the previous thoughts can support a thesis that the informal institutions are on the part of the vocational education policy “taken care of” and made stronger because of political structures of power (elections). It is especially remarkable that many representatives of the economy “believe” in the competence of the national educational institutions. Some companies “realized” that the national school system cannot meet the demands of vocational education on the part of other social subsystems and use that insight as market niche for their own profit.

The multi methodical *analysis of themes* supports that finding and demonstrates: The problems of slow changing processes in vocational education systems are primarily founded in old sociological-cultural norms and values in the society (macro level). In particular, one can state:

1. The representatives of all groups of agents agree that the institutional changing processes have only partially reached the norms and values of the society in terms of vocational education. The findings of the thematic courses make clear that all those informal institutions listed remained from socialist times. Therefore, one can conclude that the changing processes have yet to reach the social meta level.
2. All these results suggest that the changing processes at the exo level are still in making: The questioned controlling agents hardly talked about changing processes on the structural level. Following the empirical findings they are rather partial changes, which seldom have a comprehensive character.
3. Most of the interviewees mentioned changes on the meso level, particularly in the vocational education organization, such as taking part in international projects, development of new programmes for schools, further education as well as structural-organizational changes. The results point to the assumption that changing processes

on the meso level take place in a very different moulding and general trends are hardly recognizable. The data gives many hints that there are big regional and sectional differences. Furthermore, it is possible to see that the controlling agents in the national vocational education organizations have particular (even if limited) room for manoeuvre and decision making. In connection to that, the role of the controlling agents is stressed by those questioned who stated that the success of such changes depends on the initiatives and competences of the leading personnel of the institutions of vocational education.

Conclusion: The actions of agents are still mainly regulated by “old“ informal institutions on the macro level as well as on the exo level. The “top-down“- implemented formal institutions are hardly put to use whereas on the institutional meso level the establishment of new formal and partially informal (e.g. in the sense of “culture of organizations”) institutions can be confirmed. Those processes do generally not have a comprehensive character.

3.2 Lithuania – Collapse of the Systems and New Founding of Structures of Vocational Education?

The specific aspects of change processes in the Lithuanian vocational education system primarily result from the particularities of the comprehensive social transformation process.⁷ In connection with the sociological-cultural norms “inherited” from socialist times and values from socialist times the particular mouldings at the systemic and institutional level are made even stronger. With regard to the question, in how far the change processes of the Lithuanian vocational education system have proceeded, one can establish on the basis of the data:

1. The representatives of all groups of agents evaluate social phenomena such as “academization“ of the society or “low participation of corporative agents“ with regard to the social meta level. Those questioned state implicitly or explicitly, that it is a structure of norms and values “inherited” from socialist times. These findings allow the conclusion that the institutional change processes in the Lithuanian vocational education system have yet to reach the social meta level.
2. According to the answers of the majority of the interviewees, the Lithuanian vocational education system was mainly been reconstructed after the breakdown of the Soviet Union: “*After the collapse of the socialist regime in Lithuania there was de facto no system of vocational education because it was to a big extent organized and controlled centrally via Moscow. The independent system of vocational education did not exist in the soviet republic Lithuania. Among others this was an expression of no confidence on the part of the Russian elite of the party against the ‘western’ Baltic republics*“ (interview no. 13). After the reconstruction of the Lithuanian nation state the vocational education system was reconstructed on the basis of existing general education structures. As the comments of the questioned agents in terms of current structures of institutionalised vocational education make clear, the current vocational

⁷ According to the answers of the majority of those questioned, the historical traditions (post World War II) are hardly reflected in the institutional structure of the Lithuanian vocational education system.

education system is constructed differently from the one of the soviet republic of Lithuania. Therefore the change processes at the systemic level are already completed.

3. Many interviewees also mention social phenomena, which according to their descriptions have a partial processuality. Themes like “Development of vocational colleges to local competence centres“, the “development of quality standards for institutions of vocational education“, and the formal institutionalisation of “external and internal evaluation of all organizations of vocational education“ are on the part of the questioned agents interesting as a part of development of quality in the system of vocational education. Everything points to the change processes remaining on the systemic level. In this setting one can assume that the change processes on the structural level have partially already started to reach the level but this process is not finished yet.
4. The answers of the questioned agents gave hints that change processes currently mainly take place on the organisational level: They claim that local administrative structures in the field of vocational education have a relatively high degree of freedom of manoeuvre and decision making. All interviewees agreed that particularly the freedom of leaders of administration were rather large. As a result of the strong decentralization, the single government vocational college plays a central role in each region. A lot of those questioned stressed that the quality of vocational education that meets the demands of the job market is the responsibility of the actual school. Some agents remark critically that autonomy in the government organizations of vocational education is not always used sufficiently and adequately. So the initiative and competence of the teachers in the institutions of vocational education are the key factors for success.

On the basis of the thematic sequences of selected interviews and in the setting of the results of the study in Bulgaria the following is obvious: The changing processes are, on the part of the questioned agents, generally regarded as resulting from a perceived interaction between the formal and informal institutions on the different social structural levels. Overall, one can state that new formal institutions can only be established on all levels of the social system if they go along with, to a large extent, existing informal institutions.

Furthermore the findings support the thesis that informal institutions in a social order represent definite regulations and are historically relatively stable. The data gives hints that informal institutions are on a short and long term historical perspective hardly or rather only under special circumstances changeable. The newly established controlling principle of local self-administration of the Lithuanian vocational education system has effects on formal as well as partially on informal institutions on the systemic and organizational structural level (such as autonomy in the single school, development of vocational colleges to local centres of competence etc.). The informal institutions which at least partially diverge with these newly created structures on the social meta level such as “academization“ or “low participation of corporative partners“ continue to exist.

Concluding the results of the partial study on “Lithuania“, a relatively precise chain of cause and effect can be constructed with regard to changing processes in the Lithuanian vocational education system. This leads to the following comparison (the number of naming is put in brackets):

Table 2: “Chain of Cause - and – Effect” of Changing Processes in the Lithuanian Vocational Education System

Macro level	Exo level	Meso level
<i>The following are regarded as part of the socialist heritage:</i>		
“Academization“ of the society (10)	Lack of experts in the field of vocational education (7)	Lack of teaching material for non-academic vocational education (10)
Low esteem of non-academic vocational education (11)		
<i>The following social phenomenon are regarded (partial implicitly) as effects:</i>		
Low participation of corporate agents in vocational education (6)	Government investments in vocational education (8)	Autonomy in the national institutions of vocational education (10)
	Lack of experts in some fields of business (10)	Competition between academic and non-academic vocational education (4)
	Leading role of single vocational colleges (10)	Development of new educational structures in local vocational colleges (9)
		Vocational colleges become local centres of competence (4)

The hypothetical chain of cause and effect (table 2) can be described as follows: The socialist heritage as a social consensus with regard to education, which is mainly represented in the dominance of academic vocational education and in the low esteem of non-academic vocational education, has its key effects on the structural level in the lack of experts (teachers, politicians, scientists) in the sector of non-academic vocational education. This again resulted in a poor development of teaching material for the sector of non-academic vocational education - in terms of quantity and quality. The following social phenomena of the vocational education system are regarded on the part of the questioned agents (even if rather indicated than in detail) as forms of the social heritage and therefore as deficits: On the social meta level it is mainly the low participation in vocational education of corporate agents named. *Government investments in institutional vocational education, the lack of experts in certain fields of business* as well as *the central role of the single vocational college* are in that context named as processes shaping on the systemic level. These result in issues such as the *autonomy in government institutions of vocational education, competition between academic*

and non-academic vocational education, the development of new structures in local vocational colleges“ and the development of vocational education system to local competence centres which are discussed with regard to the meso level.

4 Conclusion

The focus of investigation of this draft lays on the transformation processes in the national vocational education system of the post socialist eastern European countries Bulgaria and Lithuania. In the setting of the findings of self-created quality studies it is shown that the specific structural form of the vocational education system, as well as its functional task in a modern society, lead to strong “conservatism“ of the system which results in structural and institutional stability or rather continuity. The established change processes of the national systems of vocational education primarily take place by functional adjustment on the change conditions of other social systems such as economy and politics. These change processes take place rather reactively because of their functional connection between the institutional general education on the one hand and the structures and demand of the job market on the other hand. It is a retarded adaptation of changes in the neighbouring social systems.

The structures of the systemic and organizational level of the vocational education system are to a big extent marked by the “strong government centralization of Bulgaria“ and also the “strong local self-administration of Lithuania“. Those findings also support the thesis that the transformation processes of the vocational education systems in the post socialist countries are processes remarkably influenced by the institutions of the past. That means that the institutional heritage has a significant influence on the development of new institutions – some institutional arrangements from socialist times remained in both countries. The institutions of the “old“, mainly bureaucratic institutions are partially extremely resistant. Furthermore, one can state that the theoretically investigated features of informal institutions are also supported by the empirical data. So, for example, the “academization“ of all social segments as an informal institution (inherited from socialist times) is significant for both countries

The findings suggest that the structure of the local administration and the data of local structure are the key factors on changes in the professional actions of agents. Additionally, there can be seen a strong tendency of the vocational education systems of the countries of investigation to hold on to ‚previous‘ functions as well as norms, values and attitudes which were typical for the “old“ system. Consequently, actions and attitudes which are relevant for the solving of problems remain under changing conditions, so that fast and significant changes of ‚former‘ agents in important positions can be expected only conditionally and singularly.

Despite partially enormous differences in the evaluation of the questioned controlling agents two reactions of the agents on the meso level in the countries of investigation can be identified:

- “Rigid conservatism“: All of the controlling agents in Bulgaria state implicitly and explicitly that in order to secure their current positions they try to stabilize this status quo. One can stress that important positions in the Bulgarian structures of economy are still, at least when it comes to important key positions but also in terms of quantity, are taken by the “former“ elite of economic policy. That is why the interests of the controlling agents in terms of government organization and planning of the institutional vocational education are convergent or even identical.
- “Positive tendency towards a willingness to change in Lithuania“: The empirical findings point to that in case of decreasing institutional stability – e.g. by the means of establishing new formal institutions which again induces a partial instability of structures – the identified interpretations of the institutional controlling agents can be interpreted as progressive attitudes in terms of happiness towards change. According to those questioned space for autonomy is created on the organizational level by the comprehensive decentralization towards local self-administration. These again result in a significant increase in social effectiveness of institutional agents at the realising level and therefore support the positive tendency towards a willingness to change. Exemplary, on the part of those questioned, the increasing commitment and the initiative of the teachers in the government organizations of vocational education are named in the sense of “bottom-up“. Overall, one can expect increasing individual expectations of self – effectiveness when it comes to professional actions.

Findings from the qualitative interviews, in particular, indicate up to which level of the system a structural or rather functional adjustment in the bounds of the systemic changing process has effects. The empirical findings point to far-reaching, significant differences in terms of the *structural depth* or rather the intensity of changing processes in terms of quality and quantity in the countries of investigation despite an at least partially similar historical background (after the Second World War) and despite similar conditions of the social transformation processes.

The above-mentioned central findings lead to the assumption that the thesis, investigated in the framework of this draft, with regard to transformation processes, describes at least partially generalizable mechanisms of cause and effect of change processes which are also valid for other post socialist countries. This assumption requires testing by the means of the “typologically” different cases of social transformation processes of Hungary or Poland.

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Requirements of the Labour market for Education in Economics in the Czech Republic

1 Initial Vocational Qualification

Vocational education and training (VET) has a long and well established tradition in the Czech Republic. It plays a significant role, especially at the secondary school level. A majority of the population (92.5%) moves up to the secondary school level after completing basic school. Secondary education is provided by either general education schools or by secondary technical and secondary vocational schools. More than 80% of students study in secondary technical or secondary vocational schools, less than 20% in general education schools.

Those leaving from initial vocational educational programmes acquire initial vocational qualification. Equivalent qualifications can also be acquired in continuing education courses. The level of initial vocational qualification is linked with the qualification which can be acquired by completing the particular relevant educational programme. There are three qualification levels in secondary vocational education:

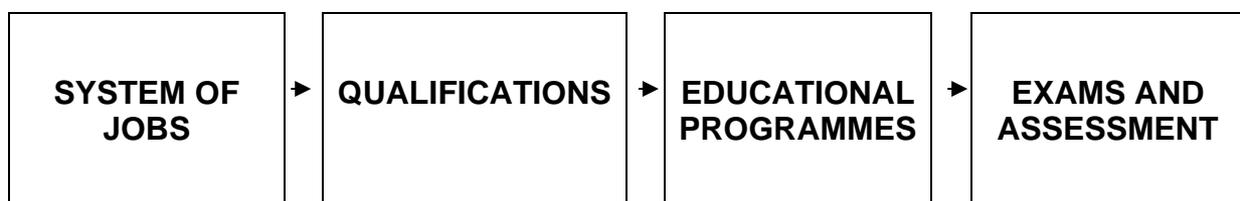
- one- or two-year programmes for apprentices (ISCED2C) entitling those who complete them to perform very simple auxiliary manual work in the field of services or production. These school leavers are employed as auxiliary workers in various sectors, such as chemistry, the food industry, wood processing or are employed as fishermen, gardeners, confectioners, health visitors and so on;
- three-year programmes for apprentices (ISCED3C) entitle those who complete them to perform crafts (e.g. shop assistants, locksmiths, motor-mechanics, bricklayers, roofers, cooks, tailors). The main aim of this type of vocational training is direct entry into the labour market. However, acquiring this level of vocational certificate enables students to progress to follow-up courses that lead to secondary education assessed by the Maturita examination (ISCED 3A and ISCED 4A);
- four-year study programmes (ISCED 3A) providing qualification for performing mid-level technical, business and other jobs (such as in health care, public administration, social welfare and the school sector). Educational qualifications at this level are a prerequisite for enrolment in post-secondary technical courses and higher education courses. The same qualification level can be acquired in follow-up courses (ISCED4A).

So, initial VET at secondary level is certified by:

- apprentice certificates (ICED 2C and ISCED3C); and
- Maturita certificates (ISCED 3A, ISCED 4A).

These certificates are issued by those schools which are approved as part of the school network by the Ministry of Education, Youth and Sports.

In the last few years there have been efforts in the Czech Republic to reflect labour market requirements in educational programmes. Initial VET is increasingly defined by a logic chain which is also valid in other European countries albeit variously modified. This logic chain can be represented schematically as follows:



At the beginning of the logic chain are jobs. The so called Integrated System of Typical Positions provides job characteristics, description and other important information (see <http://www.istp.cz/charlie/expert2/html/istp-eng/index-eng.html>). Generally, the description of qualification requirements should correspond to the qualifications which are recognised by the state. A “professional profile”, a Czech specific term, is very often used to determine the structure of a qualification. It is a certain standard which is intended to influence the aim and content of educational programmes at a nation-wide level. If professional profiles for particular fields of education can be viewed as a certain “order” from the sphere of labour, educational programmes can be perceived as a reaction to them. The system of assessment (examinations) leading to the award of vocational qualifications (competences), which assures the classification of achievements and their certification, is then the final step in the sequence set out above (see <http://www.nuov.cz/english/enindex.htm>).

The project “Development of the National System of Qualifications”, aiming at an intensive integration of the aforementioned elements and development of all these activities, was prepared in 2004. This project is intended to support the integration of initial and continuing education and will be co-funded by the European Social Fund between 2005 and 2008. The proposed project focuses on setting up a national system of qualifications and promoting its follow-up development. The proposed national system of qualifications will then provide a basic system framework both for initial and continuing education, and qualification recognition. In addition, it will provide assessment and verification of the results of non-formal and informal learning. It will specify both partial and complete qualifications as well as describe the mutual links between them. Moreover, it will also define qualification and

evaluation standards in a single and understandable format which will be made available, via an information system, to all stakeholders in lifelong learning.

2 Qualification requirements in economic and enterprise sector

The Integrated System of Typal Positions (ISTP) represents the new system of jobs and standard positions. It is based on the current situation in the labour market and contains descriptions of more than 1200 typal positions that are described by activities, examples of work and technical conditions necessary for performing a particular job. In addition, the normal requirements (suitable fields of education, required certificates and cross-sectional skills), necessary health condition and personal prerequisites for job performance are also presented. This extensive data base is available on the Internet (www.istp.cz) and can be used by both labour office staff and the unemployed, and by teachers and students. The designers of educational programmes, who analyse work positions from the viewpoint of required vocational competences, may use this data base as well.

The economics and enterprise sector comprises jobs and typal positions for economic activities such as banking, business administration, clerical work and trade. At ISCED 3A level (http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm) are the following jobs (boldface) and corresponding standard positions:

Economist

e.g. customs officer, tax officer, invoice clerk, financial clerk, wages clerk, planner, cashier, debt clerk, budget specialist, bookkeeper, etc

Controller

checks up economic activities of a company

Statistician

collects, classifies, processes data, including verification

Bank clerk

bank cashier, stockbroker assistant, bank services clerk, cash payment and foreign cheque clerk, etc.

Insurance clerk

insurance clerk, insurance and financial adviser, insurance sales agent, etc.

Administrative clerk

assistant, register office clerk, foreign relation clerk, etc.

Personnel officer

Administrator

e.g. economic and administrative affairs clerk, care of the corporate property clerk

Sales and Brokering activities

e.g. share trader auctioneer, estate agent, etc.

Marketing

e.g. marketing agent, claim agent, etc

Tourist industry clerk

prepares and organises package tours, provides information about package tours and sales them

The National Institute of Technical and Vocational Education (NÚOV), in cooperation with so called field groups (hereinafter referred to as FG), oversees the functioning of the vocational education and training system. Field groups are advisory bodies composed of representatives of the social partners and teachers. There are 25 field groups - such as electrical engineering, food and drink industry, civil engineering, textile and clothing, and agriculture - and they have about 270 co-workers. The members of field groups are experienced experts who represent the interests of particular social partner employer organisations, trade unions, professional organisations, businessmen's organisations and school associations, such as the Associations of Secondary Technical Schools, and the Associations of Business Academies.

One of the FG tasks is to undertake sectoral studies of the qualification requirements of related groups of jobs. Such information on the requirements of employers for particular qualification that should be held by employees in individual sectors, fields and occupations is very significant for a broad range of users. For example,

- ❖ Vocational and Technical schools, which train students in order to help them to be successful in the labour market, can use this information to monitor that the education and training that they are providing matches the real needs of the labour market.
- ❖ Parents and students deciding on future jobs, and so choosing their field of education, can take account of the available information regarding the prospects of the chosen job or whether there might be a decline in the number of job opportunities in the chosen field.

- ❖ Workers performing different jobs, and who want to keep their knowledge and skills up-to-date with progress in their occupational area, can also look for information on changes in the qualification requirements of those jobs.

The Field Group for the Economics and Enterprise sector comments upon and discusses current situations and changes in jobs listed in the new system of jobs and typical positions (ISTP), e.g. economists, bookkeepers, clerical workers, bank clerks, insurance clerks, post clerks and other suchlike jobs. In 1988, the first sectoral study “Development of Qualification Requirements in the Groups of Related Jobs –Economics and Enterprise” was drafted based on the views of field group members. Five years later, the field group experts were asked to comment again on trends in the development of jobs in this field. The field group presented the views of the Union of Bookkeepers, Bank Association, Czech Association of Insurance Companies, Czech Post Office, and University of Economics. These experts gave serious thought to the character of expected changes in clerical activities, paper work, bookkeeping, banking, insurance and postal services.

2.1 Office and administrative work

Hand in hand with the development of ICT, companies are increasingly interconnected by information, financial and cooperation networks; office work is more centralised. Mostly companies no longer require people to fill narrowly specified positions such as typists and correspondence clerks, but are increasingly looking to develop assistant positions. Such assistants should have a relatively broad spectrum of knowledge in economics, human resource management and law. Moreover, they are expected to be able to communicate in two foreign languages, manage information and communication technology (ICT), and cope independently and creatively with their tasks. Naturally, the increase in demand associated with the development of these new positions is associated with an increase in qualification requirements. The usual and very frequent drawback of this prospect is the stressful environment of our companies where critical situations very often occur. But assistants must cope with them.

2.2 Book-keeping

International book-keeping standards are expected to be adopted now that the Czech Republic has acceded to the European Union. Since 2005, these standards have been adopted by the EU within community law. In a follow-up to the adoption of these standards, the national bookkeeping standards for small and medium Czech companies will be amended. Besides technical standards for book-keeping, the EU will also adopt educational standards. In compliance with these standards, secondary vocational schools will then teach the basics of book-keeping, which will be further developed in continuing education with the aim of students attaining professional book-keeping qualifications. Setting up an association (e.g. a chamber) of professional bookkeepers is expected. This will assure further professional development of bookkeepers and the maintenance of ethical codex of bookkeepers.

2.3 Banking and Insurance

The banking and insurance sector has undergone radical changes in the structure of employment. The sections which have direct contact with clients are expanding; on the other hand administration, book-keeping, personnel or logistic activities are being centralised and down sized. Banks want to know their clients well and divide them into groups according to the size of their business, the scope of used services, their profession, age, and so on. The banks then address each of these groups in a specific way in order to produce “a tailor-made offer” for them.

Today, it is no longer the current practice that a client comes into a bank and a bank clerk waits for and attends his needs. Rather this is the role of the increasingly important position of the personal adviser, who looks for clients, knows precisely how to determine and meet their needs, in order to satisfy the particular needs of that client. It is evident that such personal advisers must have excellent communication skills and some knowledge of psychology. Financial advisers teach their clients to work with bank systems, for example the use of direct banking services, and that is why the personal advisers must have some “teaching” abilities as well as the other skills and knowledge mentioned earlier. Now that phone and Internet banking are being developed, communication skills arising from use of the Internet and the telephone are also stressed.

The barriers keeping strong financial foreign partners from performing ownership rights and developing business strategies are expected to be removed gradually now that the CR has accessed into the EU. This will result in organisational and personnel changes in companies linked with foreign owners, i.e. the activities, which are necessary for the running of a bank or insurance, will now be transferred to headquarters. The inner culture of banks and insurance companies will also be influenced significantly.

2.4 Postal services

Great changes are also expected in the postal services sector which is currently being equipped with ICT, commercialised and its market globalised. The share of letter post is decreasing and the share of financial affairs (giro, banking, insurance and exchange services), goods distribution and services (direct mail, order services, stock control, packing and dispatching) and information services (e-mail and the Internet) is increasing at traditional post offices. The role of post offices as a mediator between citizens and state administration is also increasing.

Naturally, the qualification requirements for post office staff are also being changed. Besides the standard knowledge and skills necessary for post office services, staff now need banking knowledge, better communication skills (counselling for citizens and business clients, communication with the state administration and municipalities etc.) and appropriate ICT skills. In the post office sector, as with the banking and insurance sectors, a new category of postal services jobs focused on business clients – advisers for post services – is beginning to develop.

The sectoral study “Development of Qualification Requirements in the Groups of Related Jobs – Economics and Enterprise” is available on NUOV’s web site (www.nuov.cz). Studies dealing with hospitality and tourism, building industry, leather industry and others will be published.

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Challenges for the Danish VET-system – on the path towards a future model

1 Some characteristics of the Danish VET-system

It is the aim of vocational education and training programmes to ensure the labour market has an intake of qualified skilled staff and at the same time give primarily young people (and secondarily adults) an education and training opportunity.

In addition to leading to employment, it is the aim of the vocational education and training programmes that they are to give the graduates access to, and an aspiration for, further education, and at the same time contribute to the students' personal and social development.

In Denmark, the duration of initial vocational education is a minimum of two years or longer for certain professions, the most common period being four years. The system of alternance is characterised by the separation of periods of time spent in the school periods and in the enterprises which may be as long as 20 weeks.

About one third of the content in the technical and commercial colleges, such as languages, and mathematics, is defined by general law on vocational education. The remaining parts – the technical oriented disciplines – are defined by the social partners. For each profession, a committee at the national level governs the content of the education. The social partners – trade unions and employer associations – form the committees. What they decide upon has to be confirmed by the Ministry of Education. These committees actually define the end goal of each profession. Each technical and commercial college has to make local educational plans that specify how to reach the goals that are set up by the committees. These plans have to be confirmed by the local social partners.

A reform with effect from 2001 has modified the technical vocational education and training programmes so that they now have a simplified structure and a more flexible organisation.

The programmes consist of a basic course, which is the introductory part of the programme, and a main course, which makes up the remainder of the programme.

The basic courses are school-based and completed with the award of a certificate documenting the nature of the completed basic course. The certificate lists the subjects and levels completed by the student and constitutes the basis for admission to the main course. The basic course normally consists of a total of 20 weeks of teaching for technical oriented, and 80 weeks for commercial oriented programmes.

The main course consists of both theoretical education at school and practical training. This requires that the student concludes a training agreement with a business enterprise or is admitted to the school-based practical training scheme. The main course begins with a practical training period.

With the reform, the introductory parts of the vocational education and training programmes are merged into a limited number of flexible common access routes. There are a total of seven access routes - six for the technical vocational education and training programmes and one for the commercial programmes. Each of the access routes leads the participant to the basic course of a number of related vocational education and training programmes, which are called:

- Technology and communication
- Building and construction
- Crafts and engineering trades
- From the farm to the fork – agriculture, food production, catering etc.
- Mechanical engineering, transport and logistics
- Service trades
- The commercial area – trade, office and finance.

The same reform of 2001 has introduced the following new principle: All students enrolled in vocational education and training, have their own personal education plan. It is the aim of the education plan to ensure concordance between the student's desires, interests and abilities and the actual course of education. The contents of the individual student's basic course and main course - including the practical training part of the programme - are thus defined in the personal education plan.

The drawing up of the personal education plan must be done in cooperation between the student and the college - and for students who have concluded a training agreement with a business enterprise also in cooperation with the practical training place. In this way, it is underlined that it is the student, who, within the framework of the provisions applying to the chosen programme, determines his or her own course of education. This will, on the one hand, make it possible to meet the student's individual learning needs, and, on the other hand, it will make it possible to develop the personal competency of the student.

In practice this principle of individual education plans has not led to large variety of paths. A typical day at a vocational college will still be characterized by theoretical and workshop based sessions organised in classes that are rather stable for the period of one school block, i.e. five weeks.

1.1 A rough attempt at comparison

When comparing VET-systems in different countries, you may roughly identify three principles according to which you can define the vocational education and training programmes: *market-driven* based in the enterprises; *state-controlled* building on the comprehensive public school; and *occupation-driven* based on high levels of influence from the social partners. In order to illustrate how these principles look like in real life, you can use England (market), France (state), and Germany (occupations) as examples – even though the principles in praxis are to some extent always mixed. The Danish model is closest to the German dual system which also builds on alternating training. The three models are formed by the specific historic conditions in these three countries.

Table 1: **Three VET-models**

	<i>a) Market-driven</i>	<i>b) State-controlled</i>	<i>c) Occupation-driven</i>
Rationale	Production logics	School logics	Occupational logics
Political culture	Liberalistic competitive oriented	Centralistic state-centred (étatist)	Neo-corporative Social consensus
The framework of the education programmes	Business and individuals	The subject of the education and the citizen	The vocational occupation
Content	The needs of the individual enterprise: - Utility-oriented - short term and specific skills	Politically determined with focus on: - Generalknowledge - Course-oriented - Academic school knowledge	Determined by the organisations: - Occupational relevance - Traditions
Labour markets VET relates to:	Internal labour markets	Occupational and internal labour markets	Occupational labour markets
Strengths	Flexible Cheap for the state Close to the needs of production	Strong linkage to the general educations No problems with lack of training places	Broad vocational educations With status equal to general education
Weaknesses	Under-investment in training and education	Weak linkage to the labour market	Inertia in the institutions

In Denmark and Germany, the traditional apprenticeship was modernized with the advent of industrialism, and the guilds' autonomy was carried on in the modern system with committees of the social partners and the dual system. In this model the state leaves part of the control of the vocational education programmes to the social partners. This implies that all three actors - the state, the enterprises, and the employees (via the organisations) – influence and share the responsibility for the vocational education being provided. Vocational education is the institutional framework within which the different interests can be part of the interplay

transcending the limits of these interests. With the alternance system, the school and the enterprise become closely linked because they enter into joint education and training efforts for which they are both responsible. This means that this system adequately bridges school and labour market and makes it easier for young people with a vocational education to get a job. The weakness of the model is that the organisations may cultivate their specific interests, e.g. in relation to protect demarcations and secure the monopoly of the profession.

The Danish system resembles the German system, even though there are differences. For instance, more young people in Germany receive a vocational education, and the unions have less influence than in Denmark. Furthermore, the Danish system is based on a mix of state control of specifically the school-based education, market-driven supply of practical training places, and the social partners' influence on the content of the vocational education and training programmes.

Each model has its strengths and its weaknesses. The issue is whether the Danish (and the German) model has a future in a world where, on the one hand, the need of enterprise specific training and, on the other hand, the need for more general education become still more important. In short, vocational education and training is drawn in two directions at the same time. On the one hand, vocational education and training programmes are drawn towards a modular structure, flexible intake and finalization, variable length and a free choice – a development more like the English model. On the other hand, vocational education and training is drawn towards general education, pursuing the increased emphasis on knowledge acquired at school and maintaining the possibility of continuing into higher education – a development more like the French model. But there is also a possibility of a reform which further develops the Danish model.

This short description and comparison tells about two main characteristics of the Danish VET-system that are important for the understanding of the following arguments in this paper:

- The Danish VET-system is a dual system building on the alternance between the two learning arenas: the vocational college and the enterprise.
- The social partners have a high degree of influence on the content and the end goals of each curriculum/ professional scheme – within the framework of the national law on vocational education. This has to be seen against the background of the fact that the Danish labour market is characterised by a very high degree of organisation, both for employers and employees.

2 The interests of the trade unions

Being one of the social partners, it is obvious that the trade unions have a strong interest in the question of the future model for vocational education and training. This is due not only to the fact that education and training is part of the organisations' fight for members and field of

action but, more importantly, is the mentioned implications of vocational education on the functioning of the labour market, the division of work and the social structure of society.

A market-driven model contributes to a more polarized labour market, which means that it becomes more difficult for the trade union to act as a representative for all employees. It becomes more difficult for the trade unions to combine the task of being a service organ for the strong members and a safety net for the weak groups. The high degree of unionization and the unitary trade union system in Denmark result from the relatively homogenous labour market and the trade unions' historical connection to the vocational education and training system. In the two other models, vocational training is closely linked to the enterprises which further company loyalty rather than professional solidarity. Thus, the education system is, in part, decisive to the possibility of trade unions acting as a unified movement and as a partner at societal level.

Furthermore, the organized labour market contributes to promote cooperation in the enterprises and fewer social tensions in society. The presence of a strong trade union tends to make the employers regard the labour force as an asset which has to be involved in decision-making, because the opposite solution – exclusively regarding the labour force as costs – is blocked. The institutional context on the labour market in Denmark furthers an organisational development at enterprise level characterized by mutual trust, responsibility and cooperation. The very fact that vocational education and training is defined as a task for the social partners makes the organisations more involved in the development of the professions, the technology and the enterprises, than it is the case in the market-model which furthers a more traditional conflict culture.

These circumstances indicate that the design of the vocational education and training has considerable impact on the labour market's way of functioning. The future development of vocational education and training has potentially far-reaching implications for both the relations of production, and the form of cooperation on the labour market.

3 On the path towards a new model

As just mentioned above, Danish trade unions have a huge interest in a well functioning VET-system. The Danish Confederation of Trade Unions, LO, has just launched a process aimed at the development of a new model for the Danish VET-system. Generally spoken LO seeks VET-solutions that in the long term are able to secure the demand for skilled employees in all public and private business sectors, and solutions that at the same time contribute to a good start for young people and re-entry possibilities for employees occupied in sectors undergoing structural change.

LO wants to develop a new VET-model regarding structure, content and educational principles. The model building process involves several trade unions, researchers and consultants and, of course, LO itself.

We think that the process of development as such could be interesting for the audience at www.bwpat.de.

The actors are as follows:

- LO itself as both initiator and participant in the process
- Representatives from about ten trade unions collected in the so-called Development Forum 2014
- Researchers from Roskilde University and the Danish University of Education
- Consultants from the Danish Technological Institute, New Insight and Kubix

The process was launched as a joint seminar, a 'workshop on problems', where representatives from trade unions pointed out what they considered the main problems and challenges for the Danish VET-system.

A couple of research projects, initiated by LO and linked to the process, presented their main themes as well:

- A study of two emerging service sectors: wellness and media
- A study on specific IT-related issues
- A study on professional identity
- A study on educational aspects of alternance in two specific sectors
- A study on the Danish VET-model in a comparative perspective

All these studies have their own value, and at the same time they are expected to reveal general insights that can contribute to the model building process.

At the seminar, the problems new VET-models are expected to solve were listed. More specifically questions that have to be answered during this model building process are as follows: Shall all curricula have the same structure of alternance? How shall new business areas, i.e. the growing wellbeing sector, be covered by initial vocational education – how can it be avoided that different trade unions fight each other regarding these new areas? How can future VET-models cover both youngsters leaving public school and adults who want to or are forced to change occupational field? Are there better principles of alternance than the existing ones facing the fact that fewer and fewer enterprises are able to cover the whole spectrum of a profession? How can the principle of alternance become real for the learners?

The still ongoing process has included a series of meetings between the actors mentioned earlier. At present we are in the phase of turning from the listing of problems and inputs from the research studies towards pointing at solutions. Researchers and consultants will have working sessions that will result in a debating paper describing future VET-models. After that a more political process will follow, involving all trade unions that are members of LO, and

time will show how the other two main actors, employers and the state, will participate in the discussion of the presented models.

In this paper we will concentrate on two main issues that the VET-model building will address:

- How to secure the practical training part of the dual system?
- How shall new emerging industry sectors be covered in a VET-system with high degree of influence by the social partners?

4 How to secure the practical training part of the dual system?

Apparently there is a major problem in all the countries with dual systems. There is a lack of adequate training places. Philip Gonon mentions this in his paper on the Swiss VET-system. German debates are discussing it as well. Without enough training places of sufficient quality the principle of alternance will turn out to be meaningless. In the following a number of causative factors are pointed out: Specializing, technologizing, increased demands on quality, increased speed of change, and efficiency improvement based on a more short-sighted bottom-line thinking.

1. With a simplified description you can say that historically the private enterprises have developed from being part of the local community to increasingly becoming integrated in a global market. This is typically the case for the sectors that are rooted in a specific craft and have developed into an industrial production which is now more and more characterised by specialized knowledge work. This also applies to the many enterprises which via acquisition and mergers become part of transnational corporations. This development influences enterprises' capacity to contribute to vocational education and training. In order to train young people an enterprise has to encompass a number of a trade's common work tasks. The tendency has been to split up the production chain from raw material to end product, implying that the enterprises *specialize* in exactly that part of the value chain where they have most expertise and the best return. This means that the single enterprise has a reduced capacity to offer the professional breadth that a vocational education demands.
2. Especially the enterprises within the manufacturing sector are becoming increasingly more *technology intensive*. Every single workplace costs ever more to establish, and the investments have to be recouped through round-the-clock-production. The production must not come to a standstill, and there is little room for mistakes and experiments as part of the training of young people. In addition, the automation implies that there are fewer possibilities for direct hands on experience in the production process. As work becomes more abstract the contact with the production takes place indirectly through symbols, displays and keyboard and offers reduced possibilities for learning, if you do not have considerable preceding theoretical knowledge.

3. The increasing demands for *quality* and *on-time delivery* imply less possibilities for trainees to participate directly in production. The customers expect that the product meets the agreed demands and is delivered on time – and this may be difficult when trainees take part in the production. Similarly in service sector jobs customers, citizens and clients are increasingly unwilling to be the guinea pigs for trainees' attempts to learn how to do the job correctly.
4. The still increasing *speed of change* questions the role of the enterprises in vocational education, because the education will lag behind the demands of production. The speed of change can make it difficult for the enterprises to sign up for a 3-year contract with a trainee. Many things may have changed within just one year. In addition, the rapidly changing tasks in the enterprise do not necessarily match the educational content that the schools and the social partners' joint committees have defined. The traditional lines of demarcations and work areas are removed in many enterprises and the tasks are performed in inter-disciplinary work groups. The tendency is therefore that the enterprises are both demanding more specific and customized competences – while at the same time they want broad and flexible education profiles.
5. Finally, the production is subject to a still increasing *efficiency improvement* based on new management concepts and market economy calculations. The shareholder economy where the enterprises are constantly weighed and evaluated on the stock market, imply a tendency towards a more short-term, bottom-line thinking in many enterprises. Over a period of years it has grown in popularity to work with lean production that eliminates what is unnecessary and which does not contribute to increasing the surplus of the enterprise. This does limit the enterprises' interest in contributing to the education of the future generations of employees.

It seems clear – due to the tendencies mentioned above - that there will be a continuing lack of adequate training places. That is why we in the on-going model building process are trying to find alternative solutions of how to organize the practical part of the vocational education. Without a practical part of high standard, the principle of alternance will turn out to be obsolete. We are in search of solutions that resemble real workplaces as much as possible. They must not be school-like, but need to have the characteristics of a normal workplace, e.g. that there are not teachers but managers and colleagues of different age groups etc, or, in broader terms, the alternative solutions also have to contribute to the workplace socialisation as one of the important ingredients of practical training. We stress this aspect because of experiences from recent years when vocational colleges have organised the practical training for those apprentices who did not find a practical training place in an enterprise. These compensating initiatives actually had rather good results regarding the development of technical skills, but failed in the end because the employers regarded it as an absolute second rate solution because it was too much like school and not like real life.

5 How shall new emerging industry sectors be covered in a VET-system with high degree of influence by the social partners?

As mentioned earlier, the influence of the social partners is a pillar of the Danish System. And there is actually nobody who really questions this principle. Of course there will always be minor struggles between the national authorities and the social partners, and among the social partners themselves about how much the different parties should have to say, but at a level of principle there is consensus on that.

The social partners' influence is much more questioned when new business sectors emerge, especially sectors where there is a low degree of organisation, both on the employees' side and on the employers' side. The study on the well-being industry – conducted by New Insight - has pointed at this problem very clearly.

The enterprises in this emerging business sectors are normally not organised in employers' associations, and only a few of the employees are members of trade unions. There is not really a legitimate voice which can talk for both the interests of employers and employees. Consequently it will be difficult to define adequate VET-schemes for both sides of the alternance arrangement.

At the same time the study concludes that this emerging sector really needs people with certified vocational knowledge and skills. It cannot continue to develop only on the basis of enthusiasm and private initiative. And customers in the sector demand professional service. Finally, also here there is a need of nationally recognised vocational education in order to secure mobility in the labour market. But who takes the responsibility for defining national VET-schemes - either nobody or everybody? In a country where the membership of unions is defined by trades implying that there are several trade unions in the same 'play-ground', there is considerable risk of a struggle between the trade unions regarding the question who will take possession of this new area?

If there is a solution to this question there is a still unsolved and even bigger problem: that the employers in those emerging sectors are not organised at all. Consequently there is a big risk for not having any counterpart from the employers' side to join the social partners' joint committees.

Most important, however, is the risk that the existing joint committees do not discover emerging sectors at all, resulting in no provision of any vocational education for the employees in these new sectors.

A preliminary option could be to establish monitoring fora that are able to discover new business sectors, or to point at the necessity of merging or combining existing professions/VET-schemes. If insight from these monitoring activities is made available for the social partners there should be a fair chance that action regarding the development of new VET-schemes will be taken.

6 Epilogue

While this contribution is written, the process of model building is still on-going. We hope and are confident that we will be able to find some interesting answers to the mentioned challenges. An update early summer might present stage two of this story.

Towards Life-long Learning – Vocational Business Education for Adults in Finland

1 Introduction

In this article, the Finnish vocational adult education system and business education for adults are discussed. Today, the vocational adult education system in Finland is based on competence based qualifications whilst the newest pedagogical solutions (e.g. eLearning and blended learning), as well as a flexible financing system, provide adults and their employers with possibilities for life-long learning. At the end of the article, three case studies are presented to provide the reader with a chance to observe more closely Finnish business education for adults in practice. The author of this article works as director of the business training sector in the Edupoli adult education centre and is finalising his doctoral dissertation regarding strategic human resource development, especially in the context of the SME-sector. The close interaction between working life and vocational adult education is highlighted throughout the article.

2 The Vocational Education System in Finland

The education system in Finland consists of three levels: compulsory, secondary and high-school. In these levels, the main educational institutions are comprehensive schools, upper secondary schools, vocational institutes, polytechnics and universities (Figure 1). Today, the Government's goal is to develop the system in accordance with the principle of lifelong learning and to make it internationally compatible. Thus, special attention is being paid to the content of education and the methods of instruction, as well as to educational standards and equality (Ministry of Education 2004a; National Board of Education 2004).

Vocational education is provided by institutes or providers of vocational adult education. Initial vocational education is provided in vocational institutions as well as in the form of apprenticeship training in virtually all fields. The purpose of vocational education is to give students the vocational skills that they will need in working life as well as the skills required for entrepreneurship. Initial vocational education qualifications take three years to complete. In addition to developing vocational competence they also qualify the student for further studies in higher education. Today, on-the-job training at actual workplaces has become an important learning method in addition to theoretical and practical studies in the vocational institute (Ministry of Education 2004a; National Board of Education 2004).

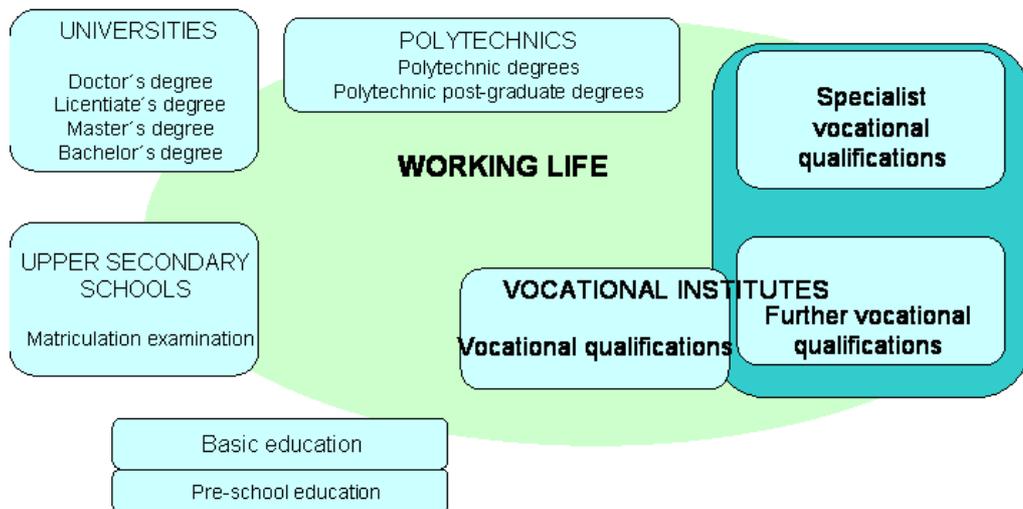


Figure 1: The education system in Finland (Huhtala, Hypponen, Koukku, Nordstrom 2004, modified)

Since 1994 adults have been able to gain vocational, further vocational or specialist qualifications by demonstrating their skills within a framework of a competence-based qualification system (Ministry of Education 2004b). As we will discuss more fully later, the system has been revolutionary for enabling adults to gain formal vocational qualification. As the requirements of the qualification are derived from working life, employers have been active in providing their employees with opportunities to gain official recognition of their competencies. Moreover, as we will see in the case studies, the system has provided both public and private organisations with new opportunities for their human resource development.

With regard to financing, the majority of vocational education is publicly funded or partly publicly funded (including partial payment of fees) (see Ministry of Education 2004b and National Board of Education 2004). The multiple financing structures, though complex and somewhat bureaucratic at the level of the training organisation, have enabled the development of a flexible and future oriented vocational education system. The financiers of adult vocational education are the ministry of education (self-motivated and apprenticeship training), employment authorities (employment training), employers (personnel training) or the student him/herself (e.g. partial payment for self-motivated training or short-course fees) (see Ministry of Education 2004b and National Board of Education 2004).

A special feature in Finnish adult vocational education is the possibility for adults to participate in apprenticeship training. An apprenticeship is a fixed term contract between an employer and a trainee. In this, students acquire professional skills through practical work. A choice can be made between vocational, further vocational and specialist vocational qualifications; for example a person working as a supervisor in a firm can train him/herself by combining on-the-job learning and contact learning in a training organisation and gain specialist vocational qualification in management. The employer provides the apprenticeship trainee with mentoring whereas the training organisation is responsible for the arrangement of the contact learning as well as the skills tests. Today, apprenticeship training is seen as one of the most appropriate ways of learning and gaining official accreditation of skills for adults during their working life (see Ministry of Education 2004b and National Board of Education 2004).

3 Competence Based Qualifications for Adults

As already mentioned, the adult vocational education system in Finland is based on competence based qualifications, the acquisition of which are independent of the way vocational skills have been acquired. In other words, preparatory training and the demonstration of skills for purposes of certification are considered to be separate processes. This separation enables the training organisation to tailor-make the training according to the needs of the target group (e.g. company personnel, self-motivated learners or unemployed persons) whilst the competencies are evaluated according to the national requirements. Moreover, the personalisation of learning has been one of the main principles of the system. For the adult learner this personalisation is ensured through an individual study plan for preparatory training and an individual plan for the competence test. The result is a system that is flexible and more suitable to the needs of adult learners (see Ministry of Education 2004b).

Today there are about 360 different competence based qualifications on all the three levels: vocational qualification, further vocational qualification and specialist vocational qualification. Annually, over 40,000 adults participate in the competence tests and the preparatory training. The business and administration sector has been the most popular sector together with the technology and transfer sector. In total, there are 22 qualifications in the business and administration sector such as vocational qualification in business and administration, further qualification in sales, and specialist qualification in foreign trade (see Huhtala, Hypponen, Kuoppa, Nordstrom 2004).

The quality of the system is ensured by the tripartite cooperation between employers, employees and education. These parties form the qualifications committees set by the National Board of Education. The qualification committee is the organisation which licences the educational institute to provide the competence tests. Tripartite cooperation is also compulsory for the teams assessing each competence test (National Board of Education 2004).

For education institutions, this system requires the continuous development of preparatory training and competence tests and, especially, close cooperation with partners from working life. For individual trainers, the competence based qualifications provide excellent opportunities to develop the modules for preparatory training and the plans for competence tests. In all, the system is challenging: the role of the teacher changes towards network developer (i.e. closer cooperation with partners from working life), training planner (i.e. new forms of courses and training methods) and perhaps the most dramatic change, the change towards training counsellor (i.e. the counselling needed to develop the individual study and competence test plans).

3.1 Preparatory Training – Towards eLearning and Learning Networks

The preparatory training for competence based qualifications is arranged primarily through open and distance learning. Today, eLearning, or rather ‘blended learning’, is integrated into preparatory training. The use of eLearning consists of (1) the use of eLearning platforms to complement the contact learning (e.g. the exercises are made and evaluated on the platforms in order to facilitate the sharing of the knowledge); (2) eLearning study materials; and (3) competence tests for several qualifications. During formal classes the possibilities of ‘blended learning’ are used. For example, the eLearning platform is used as an on-line opportunity for group or paired exercises during lessons.

Because most of the students participating in preparatory training are working and studying at the same time (e.g. in apprenticeship training, self-motivated training or personnel training), on-the-job learning has become one of the most important methods to develop vocational skills. Thus, the development of mentoring systems has been one of the most successful ways to integrate the processes of learning and working. Educational authorities (such as apprenticeship offices, qualification committees, employment offices, and so on) are close partners with training organisations and these networks are important in the quality of the learning processes.

3.2 The Skills Tests and Assessment

National qualification requirements set the framework for the individual plans for competence tests. As mentioned previously, the role of the trainer is to individually discuss with each participant how the competencies will be demonstrated and how the assessment will be made. As a result, a written plan for the competence demonstration is made. Today, multiple methods are used such as: demonstration discussions, project processes and reports, real-life situations in the working life, written analyses and presentations. Thus, the demonstration of competencies is an ongoing process in its own right – not the collection of separate samples of skills.

The involvement of each social partner in the tripartite assessment process ensures that all aspects are taken into an account during the assessment. All assessors - employer, employee and the representative of education – make assessments using knowledge drawn from their

respective professional backgrounds. Finally, if all the modules of the qualification are judged as having been satisfactorily completed by the assessment team the person is awarded the certificate. If the participant has also taken part in the preparatory training, she/he receives a separate certificate provided by the training organisation.

4 Case studies of Business Education for Adults

The following cases provide the reader with the opportunity to take a look at today's adult education in practice in Finland. The real-life cases are derived from the Edupoli adult education centre. Edupoli operates in Helsinki metropolitan area and there are annually over 4000 students who take part in the training programmes. The vision of Edupoli is stated as follows: 'We have the overwhelming competence on adult education and we are a reliable partner'. The vision is cascaded to the business sector as a slogan: 'Overwhelming business competence – from Edupoli'. Thus, the vision strongly expresses the way in which the daily work is targeted. Moreover, the values of Edupoli are the base for the daily work of the over 100 experts who work there. The values are: (1) customer closeness, (2) the well-being and the development of employees and (3) social responsibility. The leading principle of Edupoli's strategy is that it has to be concretely seen in everyday life. Thus, in addition, the cases provide the reader with the possibility of seeing how Edupoli achieves its vision.

The business training sector in Edupoli consists of six expert teams: two business training teams, a management and entrepreneurship team, computing competencies, international language competencies and a project team. Altogether there are almost 40 experts working as team managers, trainers or training planners. The decision making power is delegated for all the team managers in order to provide fast and flexible working arrangements. The nationally and internationally financed projects are an integral part of the continuous development of the learning processes. An example of the projects is 'Urbanet - women entrepreneur's network' financed by European Union Urban II –programme which targets the development of regional women entrepreneurs in the eastern Helsinki region. Other examples of the continuous development process include the several eLearning projects through which the newest knowledge on eLearning and blended learning are gained.

The practical cases include: (1) management skills developed by company personnel in apprenticeship training; (2) business competency learning in an open learning environment in employment training; and (3) gaining vocational qualifications in business and administration through self-motivated training.

4.1 Case 1: Management Skills and Apprenticeship Training for Adults

One of the success stories of Finnish qualification system has been the development of specialist qualifications in management. Edupoli was one of the first training organisations to obtain the licence to award these qualifications in 1998. Since then, hundreds of managers or supervisors, from both from public and private organisations, have taken the competence tests. The explanation for this success is the huge need for organisations to develop leaders

and managers in order to adapt to the turbulent business environment, and to educate a new generation of managers to meet the growing replacement demand generated by the retirement of the current generation of managers.

In Edupoli the preparatory training for the qualification is arranged mainly for groups of managers from the same firm or organisation. Apprenticeship training has been the most suitable form of arrangement to provide this training as, particularly in management training, close connections to the persons own work is essential. Therefore, the principles of on-the-job learning and mentoring have been the most prominent ways of organising the apprenticeship training. Moreover, as time is a scarce resource for managers, the contact time needed to support learning is organised so that it occupies only one or two days in a month. This arrangement enables the student to get the newest knowledge from contact days and to apply it immediately in his/her job with the help of a mentor. As there is a network of people assuring the learning process (Edupoli, apprenticeship office, student, mentor and human resource departments), eLearning provides the most effective means for all parties to follow the learning process.

The modules of the preparatory training cover the following subjects: strategic planning, operational and financial planning, knowledge leadership, project management, time management and so on. The modules are actually built using the framework modules provided by the national requirements of the qualification. However, the content of the modules are tailor-made according to the needs of the organisation. In the specialist qualification for management there are only two parts: (1) planning of operations and management and (2) operational management and leadership. These two modules have to be passed in order to obtain the certificate. In practice the demonstration tests form a chronological sequence. For example, a person demonstrates his/her plan for a development project during a discussion with assessors and secondly, executes the plan with his/her own team, and then reports and reflects on the outcomes in a second discussion with assessors and team members. Thus, the demonstrations of competencies are an integral part of the person's everyday working life.

For the training organisation, knowledge of the impact of both preparatory training and competence-based qualification is important. Thus, on evaluation, the real changes in the work of a participant are made approximately six months after the demonstration tests. This information regarding the impact of the training and assessment process supports the continuous development of learning processes. As the work of an individual manager is quite lonely, in most cases the groups of management students will form an open 'club' for the sharing of knowledge and, especially, for the sharing of experiences. In other words, the abstract principle of life-long learning has found its tangible form in the context of management development.

4.2 Case 2: Business Competencies in the Open Learning Environment

The second case will provide an insight into employment training. For the past ten years, Edupoli has developed its practice enterprise as an open learning environment for adults in

business education. The integration of open learning environments and the competence qualification system has been one of the greatest challenges we have faced. Today, the European (European Practice Enterprise Network) practice enterprise is used as a learning environment for adults participating in the modular and roll-on-roll-off training course entitled the 'Multi-skilled Business Expert'.

The practice enterprise is a simulated company which is used as a learning environment for business practices. Thus, the students form the organisation in which there are for example, the managing director, secretary and the teams for marketing, accounting and production. The teacher's role is to act as consultant in business issues and to provide the students with counselling on learning matters (e.g. planning of personal study and competence demonstration plans). The facilities of the practice enterprise are intended to provide the student with, in particular, the opportunity to learn how firms operate today and in the future. To achieve this Edupoli have built completely new facilities for their open learning environments. The practice enterprise consists of the modern computing systems which include, for example, wireless networks to enable flexible working methods. The lay out is designed by taking into account the need for flexible team and pair work. The facilities also provide quiet spaces and areas for individual guidance and self-study possibilities with eLearning platforms.

The training is financed by employment authorities and is targeted at unemployed adults. The use of open learning environments has been the tool used to personalise the training. Altogether there are 64 modules of preparatory training for seven different competence-based qualifications. In practice, the preparation of the individual study and demonstration plans means that the trainer works with the student to create a description of the path through which the learning goals are achieved.

For example, a person seeking employment as a secretary is guided by the trainer to pick all the courses from the modular 'tray' providing the newest knowledge and skills for secretarial work (e.g. arrangement of meetings, computing and communication skills, and so on). Of course, prior knowledge and experience are taken into account and accredited. Moreover, as the target is the secretarial competence, it is natural that the person works as a secretary in the practice enterprise in order to apply the newest knowledge and to learn 'on-the-job'. In this sense, the practice enterprise integrates business training and working life. However, it is essential for the person to practice the secretarial work in 'real' firms at the end of his/her learning process (approximately six to nine months). Thus, the demonstrations of secretarial competencies can also be organised in working life in employment training.

In sum, practice enterprises, as an open learning environment for adults in business training, provide an excellent method for the personalisation of studies as well as learning future oriented competencies for working life. Employment outcomes for adults during or after the learning period have been excellent: over 60 per cent of the participants have found their new job in shortly after completing their programmes.

4.3 Case 3: Vocational Qualification in Business and Administration and Self-motivated Training

In Edupoli, vocational qualification in Business and Administration can be achieved through both self-motivated and apprenticeship training. As in apprenticeship training, the students already work in the field of business and administration; in self-motivated training the participants do not necessarily work in the field yet. In this case, we will concentrate on self-motivated training. The usual clients are persons who have decided to change their jobs and focus on a totally new field. Thus, they don't have any experience in the field of business and administration. Some participants also wish to progress to higher education as the vocational qualification provides the adult with the eligibility to study in the polytechnics or universities. Thus, the groups of students are generally more heterogeneous than those participating in apprenticeship training. Consequently, the structure of the student groups undertaking self-motivated training (as with the students in employment training) produce particular challenges for the trainers.

Moreover, the students are mainly working during the day and, consequently, the contact time for learning is in the afternoon, evening or, in some cases, at weekends. For example, the schedule may consist of one to three evenings per week plus distance learning (exercises, project work etc.). The learning process lasts approximately two and a half years and it can be difficult for a trainer to maintain the momentum of the training process over such a long period. The personal guidance during the process, especially the competence demonstrations, in addition to the preparatory training are a practical means to provide the students with short-term targets during the training programme.

The vocational qualification in business and administration covers all the main knowledge and skills needed in working life. It consists of common modules (e.g. business, languages, computing) as well as modules in three specialist study programmes: (1) customer service and marketing; (2) information and library services; and (3) business administration. The structure of the vocational qualification is challenging for a participant with regard to the demonstration of skills. As the vocational qualification does not target an exact profession, but rather a range of professions in the field, the competence tests and demonstrations have to be holistic entities (e.g. projects, documents demonstrating the competencies etc.).

In sum, the learning process and the broad business qualification are positive challenges for a training organisation. But the outcome can be the desire or even passion for life-long learning. As a student stated after her qualification was completed: "The most important part during the training programme and competence tests was the support I received from the trainers, from my group and my family. That gave me strength to continue even though I had my daily work and children at home. Today, I am so happy! Now I will rest for a while and during autumn I will start looking at new learning opportunities [laughing]!"

5 Summary

In this article, the Finnish vocational education structure was presented with a particular emphasis on the adult vocational education system. The main emphasis was to present the state of art in vocational business education for adults. The aim was to provide the reader with the opportunity to see the practice of adult business education by presenting three real-life case studies drawn from the work of the Edupoli adult education centre.

The competence-based qualification system has provided the vocational adult education organisations with an opportunity to develop adults as well as public and private organisations. The challenges for the training organisations are multiple, but two main questions are raised: (1) How to build learning networks and partnerships?; and (2) How is the new and changing role of a trainer to be supported?

First, the question of learning networks is currently very important. The qualifications and the demonstration tests are developed and assessed through tripartite cooperation between social partners. Moreover, the learning network during the training processes is even wider consisting of trainers, students, mentors, HR-specialists and authorities. In order to provide the customer organisations with the possibility to develop as a learning organisation a long-lasting partnership is needed. Second, the new role of a trainer is complex. A trainer is traditionally an expert in his/her own substance and pedagogic methods. Today, the role is extended by the necessity of developing and using networking skills and, in particular, the guidance skills needed to produce the individual study and demonstration plans.

In all, these two questions set a strategic challenge for Finnish adult education organisations. The challenge is to create strategies which provide the training organisations with the possibility to be at least two steps ahead of current working life. This means building a system through which to understand the weak signals providing information regarding the changing nature of working life and, in particular, the strategic leadership skills of managers in order to lead the organisation towards the vision. In sum, the competence based qualification system has been a means to renew the vocational adult education system totally and to build a system which is continuously developing.

The challenge for European adult education and especially for business education is how to provide the working life with continuous and future oriented opportunities to train and educate their human resources. In reality, vocational business education for adults is one of the main means to develop competitiveness in Europe. Thus, cooperation and development activities with all European parties are needed. The close cooperation in the field of adult education provides all the actors with possibilities to benchmark, share expertise and to develop the education structures and training programmes needed to provide the individual adult with the possibility for life-long learning.

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Workplaces as Learning Environments: Assessments by Young People after Transition from School to Work

1 Introduction

The school reforms implemented in Finland during the last ten years have attempted to anticipate trends in the labour market and in the organisation of work. The reforms were responses to views that the knowledge and skills that young people bring to the labour market are in need of qualitative revisions. Changes in the content of work, the introduction of new technologies, current forms of occupational mobility, and the rate of change in itself require employees who are more adaptable and able to acquire, in the future, new and applied skills and knowledge.

There has been a search for the means of improving cooperation between education and working life. Today, networking with local enterprises, formal representation of business and industry in bodies that design curricula and qualifications, and giving educational establishments more latitude in responding to local needs are popular development targets. How vocational education systems react to changes on the labour market depend on whether these changes represent a response to problems internal to vocational education and if they do, in what ways.

The status of vocational education is closely linked with improvements in the quality of education and training provision at the system, programme and curriculum levels. Unless there are qualitative improvements in vocational education, particularly as regards work-based training, it will be impossible to attract high achievers, incorporate work-based qualifications into an integrated education and training system and establish overarching qualifications across educational tracks. Giving vocational and particularly work-based education higher status depends above all on qualitative improvements in educational contents and pedagogy (Lasonen & Manning, 2000). The purpose of this article is to assess what young people had learnt best during the workplace training period of their studies, and what things during their first year in working life.

2 About Learning at Work

In addition to pressures from working life, today's school reforms have stemmed from new conceptions of learning and educating the character and whole personality. It is believed that enriching traditional approaches favoured in education with modern conceptions and alternative forms of learning will produce citizens who adjust flexibly to changes and are independent but cooperative and solve problems. Young employees working in complex work communities need planning skills, resourcefulness, a positive attitude to continuous studying and learning, cooperation and communication skills, and reflective judgment.

The theoretical foundations of learning at work are grounded on constructivist, contextual and experiential learning, collaborative learning and problem-centred learning. These schools differ among other things in their emphasis on either largely epistemological starting points or on the practical problems of organising learning.

According to the constructivist conception of knowledge, knowledge is not an objective reflection of reality transferable as such. Instead, it is always something constructed by an individual and a social community in interaction (Bruner, 1990; Miettinen, 2000). Learning is the active cognitive and social activity of the learner where they engage in the continuous construction of their picture of the world and its phenomena, interpreting new information on the basis of their previous knowledge, conceptions and beliefs. Learning reshapes an individual's conceptions. The constructivist theories emphasize experiences, collaboration, problem solving and the contextual aspect of learning.

The model of experiential learning as put forward by Kolb (1984) is based on constructivism, linked to it through the concepts of experience and reflection. Among his predecessors as developers of experiential learning are John Dewey, Kurt Lewin and Jean Piaget. Kolb's model of learning starts from concrete experience, which links observation with reflection; reflection generates solutions that are then tested in new situations, and the whole process ends with new, possibly altered experience. In Kolb's model each stage represents a distinctive type of adjustment to reality that presupposes distinct abilities and competencies. Learners need at least four kinds of competency: capabilities required for concrete experience, reflective observation, abstract conceptualisation and active experimenting. Learning through experience includes the ways and processes of metacognition and collaboration.

Researchers of learning, such as Schön (1983), Boud (1985) and Mezirow (1996) consider reflection a central element of the learning process. According to them, in the context of learning reflectivity can be defined as an overarching concept covering those intellectual and affective activities where the individual examines their experiences as they seek to reach a new area of understanding. The development of reflection skills presupposes metacognitive knowledge.

Metacognitions are linked with self-regulation, needed in lifelong learning. People can set themselves aims, select appropriate strategies and assess their own learning by possessing metacognitive skills. Metacognitions are knowledge about cognition and regulation of cognition (Flavell, 1987). Metacognitive knowledge involves the individual's conscious conception of themselves as a learner, being aware of one's own schemes, strategies and processes. One aspect of this is a consideration of how the amount and quality of one's knowledge affect one's performance and mastery of a task.

Metacognitions are developed through self-evaluation. Self-evaluation is a part of self-regulated learning where the learners themselves assume responsibilities for consciously setting the goals on which the assessment of their learning will be based. This, again, presupposes mastery of reflective thinking and a functioning inner system of controls. The

conscious and critical examination of one's own thinking and actions is linked with metacognitive and reflective skills. Self-regulated learning is most successful when it is implemented in the work community together with and supported by various facilitators, such as mentors and tutors.

Studies of collaborative learning consider the process of constructing knowledge in terms of the solution of concrete problems. Collaborative learning is not seen as merely a tool of individual knowledge construction but as an independent working method in itself. At workplaces it may be manifested in teamwork. Collaborative learning is about constructing shared meanings and shared understanding through collaboration and interaction with other people. Collaborative learning represents a culture of knowledge construction and development where learning means a growing ability to take part in the activities of a community of learners more extensive than a small group (Dillenbourg, 1999; Feuerstein, 2000). Learning situations are collaborative if peers are about at the same level and can perform the same actions, have a common goal, and work together. Collaboration refers to "... a coordinated synchronous activity that is the result of a continued attempt to construct and maintain a shared conception of a problem" (Roschelle & Teasley, 1995, p.70).

Wenger (1998) has described the learning process as appropriate participation that enables the individual to acquire knowledge and skills, and increase their understanding through contact with experienced people. He approaches work-based learning from a socio-cultural perspective. Learning in any form changes our view of who we are through transforming our ability to participate, to belong and to negotiate meaning. Learning occurs in groups and communities through interaction, talk, participation and negotiations. Components of the social theory of learning according to Wenger consist of

- learning as belonging - community
- learning as doing – practice
- learning as becoming – identity
- learning as experience – meaning

Individuals are members and participants of communities and organisations. Joint participation contributes to shared knowledge construction involving norms and values of communities. Each member of a work team shapes the cultural dimensions of professional community and sector.

3 The Study

The framework of workplace learning policy was created in the plans for developing education and research for 1995-2000 and for 1999-2004 by the Finnish Council of State, including reforms of vocational qualifications. The development plan for 2004-2008 of the Ministry of Education stressed monitoring the reform of vocational qualifications, students' transition from education to working life, and the implementation of routes to further and higher education and to skilled work. Learning at the workplace has been established as a

central element of vocational education; to ensure this, there will be continued support to enable cooperation between education providers and labour-market organisations. A permanent system has been also created to train workplace trainers.

The *Bridge From Education to Working Life* pilot project was underway in various parts of Finland in 1998-2001. The education and training provided catered for people under 25 at risk of unemployment who were upgrading their 2- or 2.5-year initial vocational qualifications to a qualification of 3-year upper secondary education (120 credits or study weeks). The 12- or 6-month supplementary education programmes combined school-based and workplace training.

The purpose of the study was to find answers to the following questions:

- (1) Which competences did the students, in their own estimation, learn best during the workplace training period organised by their school, and
- (2) which ones during their first year in working life after graduation?

The students who answered the research survey were representative of the total population. The 1999 data was collected and analysed using the survey method (Lasonen, 2001). The materials were gathered with a structured questionnaire. The 2000 materials included the same students, who had completed their qualifications in 1999. The 2000 materials were gathered with a structured questionnaire complemented by open-ended questions that explored the subject in more depth.

In spring 1999 the response rate among the students was 72.4 per cent (n=426). The students received their vocational qualifications the same spring. The group was sent a second questionnaire in spring 2000, when the response rate was 69.3 per cent (n=295). Men and women were fairly equally represented. The number of people who answered both the 1999 and the 2000 questionnaire was 218. The respondents were mainly young people aged between 18 and 25.

As regards training sectors, most of the subjects represented technology and transport (n=136; 46.1%), followed by tourism and the catering industry (n=58; 19.7%) and social and health services (n=40; 13.6%). There were smaller groups representing business and administration (n=29; 9.8%), natural resources (n=15; 5.1%), culture (n=10; 3.4%) and leisure-time and sports-related activities (n=7; 2.4%). The sizes of these sector-specific groups reflect the size of the training sectors. Of the workplaces where the young people had found themselves a job a fourth had 1-10 employees and a fifth 11-50 employees. As a rule, most Finnish companies are what are known as micro enterprises. As for study fields, most of the students represented technology and transport, with business and administration coming second.

The 2000 research materials on the young people under 25 were analysed using statistical methods, mainly computation of frequency distributions, averages, correlation coefficients

and tests of statistical significance. The quantitative materials have been supplemented through responses to open-ended questions.

4 Results: Learning During Workplace Training Period and on the Job

This section discusses the background data on the students. The students studied in a total of 40 enterprises. They completed 28 different qualifications in their educational establishments.

4.1 The Students and Young Workers Studied

Among the young people who returned the questionnaire in spring 2000 (n=295), girls (58%) predominated slightly over boys (42%). Most respondents were aged 17-19 (34.3%) while 33.1 per cent were between 20 and 21, 24.2 per cent between 22 and 25 years of age and 8.2 per cent were over 26. More than half the students said that they had joined the Bridge experiment to improve their employment prospects. Interest in one's study field came next as the most common reason for taking up supplementary studies.

In 2000 the young people were asked what they had done after their graduations. It was found that immediately after completing their studies 25 per cent had become unemployed. Half a year after gaining their qualifications, 18 per cent of the young people were still out of work. In comparison, the corresponding unemployment rate among adult Finns was 10 per cent. Some two out of ten young people continued their studies while the same proportion either began their military service or were on maternity leave and so on. After graduation, 63.4 per cent of the young found a summer job, and less than half of them had a job after the beginning of autumn. Of those who had a job, 36 per cent had been engaged by the enterprise where their school had found them a training place. A further 21.5 per cent had found employment by contacting employers on their own initiative, 12.7 per cent through the employment office, 6.1 per cent by responding to an employer's job advertisement, while 7.5 per cent found a job in an enterprise they knew before. In their answers, the young people attributed their success in finding a job variously to their training, knowing the employer through their workplace training, earlier employment or their family, field-specific labour shortage or personal qualities.

In 2000, the young people's performance at vocational school was assessed on a scale from satisfactory to excellent; according to their answers, their school performance was as follows: satisfactory 6.2 per cent, good 77 per cent, excellent 14.1 per cent. Their own assessment in 1999 of how they were doing in their studies paralleled the grades they received in their school-leaving certificate.

4.2 Some Prerequisites for Learning at Work

Today employment can be short-term and part-time and one person can have several employers. Experience from more than one workplace during one's vocational studies can train young people to adjust flexibly to being employed by several enterprises. The length of

the workplace learning period is an important issue particularly to the learners and the employers. When they were asked about the suitable length of a learning period spent in the same workplace, 199 students (46.7%) mentioned 1-2 months while 2 out of 10 considered 3-4 months appropriate. Some students (79 in number) would like to stay even longer (5 months or more) at the same workplace.

During their vocational studies, a good quarter (27.2%) of the students thought that one week was enough to become familiar with a workplace while a third (35.2%) considered two weeks a suitable period. According to 105 students (24.6%), learning how things work at the workplace takes 3-4 weeks while 33 students judged that it would take more than a month. In the more service-intensive fields two weeks are mentioned more often than one week as the time required for finding out how things work. After they had entered working life, most (86.2%) young employees said that they had learnt to understand their workplace in one to two months.

Workplace orientation during studies seems to be a particularly important factor because during their workplace training the students became aware what it was that they would later have to learn on their own. During the workplace training period of their studies they were given orientation to the enterprise; later, when they were engaged by an enterprise there was much less orientation. According to what the students said in school, orientation was most often provided by employees and workplace trainers. Of all the answers only 6.1 per cent indicated that no workplace orientation had been given, while after entering working life half the same young people considered that they had received no orientation to the operational principles of the enterprise. After their transition to working life, well over half the young employees reported that they had been given no orientation to the line of business and objectives of the workplace, its strengths and future plans, industrial safety instructions and regulations, the collective agreement regulating the field, confidentiality, rights and responsibilities at the workplace, the planning of assignments or employees' duties towards the employer. As the young people saw it, becoming familiar with a workplace took between one and two months. According to 70.7 per cent of the respondents, their work experience had not helped them much or had helped them somewhat to learn to know the labour market. It seems that after entering working life the young people had forgotten how to use information sources independently.

As a rule 73.5% of the young people were able to select their workplace from several alternatives. In most cases they had looked for a job through the employment office, with the places where they had trained and studied coming second, and people they knew third as sources of employment. Seven out of ten considered that their vocational training was useful or very useful in carrying out their assignments. A majority of the respondents thought that they were working in the field that they had been trained for. Only one respondent in ten judged that difficulties that they had encountered at work were caused by shortcomings in their own competence. In their own opinion, 82.4 per cent of the young workers were able to perform their duties independently.

When the students were asked in school about the strengths they used in marketing themselves to an employer, those mentioned most often were sociability, reliability, competence or occupational skills and hard work. Next came initiative and the ability to learn. In 2000, after their entry to working life, the young people mentioned most often reliability, honesty and friendliness, cheerfulness and a positive attitude. The next group comprised initiative, occupational skill, willingness to learn, cooperativeness and customer service.

After gaining work experience and a job the young people expressed their opinion about how they wanted to develop in their work. Their answers foregrounded deepening, diversifying and broadening one's competence. The young people wished to develop into good workers in their field. Below are examples of their answers:

“I want to acquire solid occupational skills based on experience and training in all areas of my work.”

“My aim is to learn new working methods in order to realise that your own working method is not the only way to act and work, increasing your know-how.”

“I want to become a better employee: effortless, active, resourceful.”

A minority of the respondents specified customer service or a particular technique, method or task as the area where they wanted to develop. About one in ten was thinking about continuing their studies or specialisation or advancing to more demanding tasks.

About half the respondents (49.8%) said that they liked their work, and seven out of ten were satisfied with their present job. Happiness and satisfaction were linked with factors such as how much one is able to shape one's own work and occupational environment, how much encouraging feedback one is given on one's work, and how much one's duties develop one's thinking. About half of the young people answered the statements covering these issues in the affirmative (Table 1).

Table 1: Respondents' opinions about the opportunities offered by the occupational environment as relative distributions (%)

Item	Strongly Disagree	Disagree	Do not know	Agree	Strongly Agree
I get satisfaction from my work.	5.3	6.7	31.4	45.1	11.5
I am able to use my abilities and skills.	3.5	7.5	11.1	53.1	24.8
My work includes a variety of assignments.	4.4	12.9	8.9	44.0	29.8
I am able to have a say in decisions about my work and work environment.	7.5	14.1	26.4	38.3	13.7
I am given responsibility.	1.0	4.4	8.8	43.8	42.0
The permanent employees value me.	2.7	4.0	22.7	47.9	22.7

I am given encouraging feedback on my work.	3.2	8.4	25.2	48.2	15.0
My assignments develop my thinking.	4.9	8.4	27.0	46.9	12.8
I feel an equal member of the team.	0.9	6.6	22.6	46.0	23.9

Most of the young workers considered that they were being given responsibility (85.8%), as they had also wished while still studying, were able to use their abilities and skills (77.9%), carried out varying assignments (73.8%), were valued by the older employees (70.7%) and felt equal members of the team (69.9%).

More than half the young people (54%) had never entertained the idea of setting up an enterprise of their own. Two out of ten have sometimes thought about doing so. The same proportion (22.8%) of them had considered a private enterprise as a makeshift solution. A substantial number of the respondents (66.5%) judged that their work experience had done little to improve the skills needed in establishing an enterprise. Three informants (1%) had already worked as entrepreneurs.

The young people were asked about their best and worst experiences from work. Best experiences were reported considerably more often than worst experiences. Human contacts at the workplace, first with one's fellow workers and later succeeding with customers, were mentioned as by far the best experience. One's tasks, learning by performing them, and the opportunities they provided were also perceived as the best experiences. Low salaries in comparison with a demanding job, fixed-term employment, and the atmosphere at the workplace were the three most negative things mentioned by the young people.

The young participants were asked what work means to them. Their answers indicated that work meant above all economic security, but additionally most of their answers included also other factors. Apart from being a means of livelihood, work provided also human relationships and opportunities to develop and realise oneself, gave life a rhythm and helped one to pass time, and brought well-being and joy.

4.3 Learning at Work

In the vocational schools. The goals that the young people set for their workplace training period, during their vocational studies, emphasised factors related to democracy at the workplace and doing one's work and succeeding in it. The students' expectations revealed that they valued working independently and being given responsibility. The areas where their workplace learning period had affected them most were social skills, the growth of their occupational skills, enhanced self-esteem, and self-confidence. The self-evaluation aspect of work-based learning was implemented through learning diaries, portfolios, self-evaluation forms, reflection and discussion with peers, teachers and workplace trainers. The students wished that during their work-based learning period their teachers would provide them with individualised guidance, and that the contact teaching periods at school would be effective and give them opportunities to exchange and analyse their experiences.

Work-based learning period at workplaces taught the students particularly internal entrepreneurship and the technical and social skills linked with the given future occupation; at the same time it also promoted their growth towards adulthood. According to the students, the areas where they had learnt most were practical occupation-specific skills, initiative, cooperation skills, self-confidence, independent thinking, willingness to change and to develop, independent problem-solving skills, and using information sources.

The learning opportunities offered by the students' training jobs were most scarce as regards handling things in foreign languages and developing the skills needed to set up an enterprise of one's own and writing skills, which promote occupational mobility. It is to be hoped that competencies in these areas are reinforced during the school-based contact teaching periods. At school it was domain-specific theory and basics and concepts, and the rationale of skilled work that the students considered they learnt best. The students thought that their experiences from the workplace complemented the instruction that they received at school in the sense that their experiences taught them to master the situation specific dimensions of their work, developed their thinking skills and helped them to gain a command of the various broad aspects of their occupation.

On the jobs. Students who had entered working life were asked what the three most important things were that they had learnt on the job. Many answers mentioned particular domain-specific skills. Among things mentioned most often across the whole range of occupations were the following:

- (a) *Cheerful appearance, time management, the harsh world of entrepreneurship.*
- (b) *Patience, the importance of life experience, ability to cooperate.*
- (c) *Initiative, cooperativeness, getting along with one's fellow workers.*
- (d) *Working fast, the many-sided maintenance of equipment and setting it up.*
- (e) *Using language, meeting customers, putting the Internet to use.*
- (f) *Organisation skills, initiative, social relationships.*
- (g) *Good customer contacts, willingness to serve the customers, interaction skills within the work community and cooperation.*
- (h) *"I learned that an employee must be all the time prepared to develop herself / himself, learn new things. You must be flexible and prepared to adjust rapidly to new situations."*

The answers reveal two dimensions: teamwork skills and paying attention to the community on the one hand and individual qualifications and qualities, such as independence and initiative, on the other.

The young people were asked also what skills were needed to cope with the life that they had learnt at their places of work. Their answers can be classified into four types:

- things involving the organisation, the enterprise;

- coping in one’s occupational sector;
- getting along in the community; and
- developing one’s own qualities, and one’s personal responsibility.

Things belonging to the two last categories were mentioned most often. Below are some examples of the young people’s answers:

“How you should apply for a job? What kind of training you need in various jobs? I learned a lot about how different work communities function. I learned to act as a member of a work group.”

“Teamwork, initiative, profit responsibility, learning to see to it that the wheels will keep turning in the longer term too. (Even if some people might not be doing their share), I learned to bring the “idlers” into line by using humour - it worked.”

“You must see that you get what you deserve and learn to respect both your own and other people’s contribution.”

“There are many different people and in a way you must understand everyone and in customer service you must learn to listen.”

The young employees were presented a series of statements about how working had developed their skills and qualities, rated on a scale from very badly (1) to very well (5) (Table 2).

Table 2: Respondents’ opinions about skills and qualities developed by working as relative distributions (%)

Item	Very Badly	Fairly Badly	Some-what	Fairly Well	Very Well
Domain-specific skills	0.5	2.3	19.8	54.9	22.5
Desire to contribute to new ideas	6.5	14.9	43.4	27.1	8.1
Applying one’s knowledge in practice	3.2	5.9	40.2	40.3	10.4
Problem-solving skills	1.4	7.3	34.5	45.4	11.4
A desire to develop one’s occupational skills	1.8	10.0	18.6	42.3	27.3
Familiarity with the labour market conditions	6.0	26.9	37.9	22.4	6.8
Skills needed to set up an enterprise of one’s own	36.2	30.3	21.1	9.2	3.2
Collaboration skills	0.0	1.8	20.4	47.5	30.3
Initiative	0.5	1.4	14.0	41.6	42.5
Self-confidence	0.9	3.6	22.2	40.7	32.6
Presentation and negotiation skills	7.3	19.1	30.5	32.2	10.9
Job orientation skills	6.0	15.5	39.7	27.4	11.4
Independent thinking	0.9	3.2	23.2	48.2	24.5
Using information sources	9.1	17.3	34.1	32.7	6.8
Skills needed to handle things using a foreign language	40.3	28.9	18.8	8.3	3.7

Written communication skills	23.7	32.4	28.3	12.8	2.8
Confidence in one's ability to cope with one's job	1.4	4.5	27.6	44.3	22.2
Desire to engage in further studies	16.4	17.4	31.9	17.4	16.9
Evaluating one's own work	3.7	7.8	36.5	42.0	10.0
Planning skills	6.4	13.6	35.0	33.2	11.8
Desire to change and develop	2.3	5.0	32.3	36.3	24.1
A basis for valuing one's own occupational develop	4.6	10.5	45.7	30.1	9.1
Life management skills	9.7	14.2	39.4	26.6	10.1
Computer skills	39.2	11.7	25.8	14.7	8.6

As a conclusion, more than 70 per cent of them answered that they had developed fairly well (4) or very well (5) as regards the following skills and qualities:

- initiative (84.1%)
- collaboration skills (77.8%)
- domain-specific practices (77.5%)
- self-confidence (73.3%)
- independent thinking (72.7%)

A further comparison with the positive pole of the scale revealed that working had had less effect on the following skills:

- problem-solving skills (56.9%)
- evaluating one's own work (52%)
- applying one's knowledge to practice (50.7%)
- planning skills (45%)
- presentation and negotiation skills (43.2%)
- using information sources (39.5%)
- job orientation skills (38.8%)
- life management skills (36.7%)
- computer skills (23.3%)
- written communication skills (15.5%)
- handling things using a foreign language (12%)

Work experience had given most of the young confidence that they would be able to cope with their job. Only 6 per cent thought the opposite.

Four out of ten young respondents (40.3%) had clear future plans concerning further studies. Some 60 per cent of them were uncertain about the matter or had not decided anything yet. Three out of ten were either unwilling to engage in any further studies or willing to consider minor additional studies after finding a job. By contrast, seven out of ten young employees

(69.6%) wanted to develop their occupational skills through work, while six out of ten (60.5%) were ready for changes and development.

5 Conclusions

Irrespective of the given national context, lifelong learning is universally considered an important educational policy goal. Young citizen's perception of their occupational assignments and environments after they have made the transition from education to working life remains a problem: do young people still see the workplace and their tasks as learning situations and contexts. As regards work-based learning, it is useful to distinguish between its organisation and the learning process itself. It may be said that the basic unit of the process of organising work-based learning is the young employee's action context where the purpose, idea and implementation of work-based learning come together and where the young person works for a shorter or a longer period on a specific task to produce a concrete outcome. Work gives learning its meaning and vice versa. Working intended to generate innovative, contextual, collaborative and problem-based learning that requires the young employee to be self-regulating, committed, reflective, and prepared to address new tasks and situations is ideal.

The article took a look at educational reform where the aim is improving the quality of instruction and curricula from the perspective of learning at work. Conscious learning at work involves the nature of the goals that the young employees set for the development of their competence, what they think they have learned and how they assess their ability to reflect on it. Self-regulated reflective learning within a community and with the help and support of its members presupposes continuous development. The research attempted to operationalise a part of this process by asking young employees how they thought they had learned at work such key competencies and cooperation skills, independent thinking, communication skills, technical skills, problem-solving skills, initiative, self-evaluation, using information sources and planning skills.

Most of the young employers were between 20 and 24 years of age. The study covers all vocational training programmes offered in Finland. After completing their vocational education, 63.4 per cent of the young found employment of varying length, 36 per cent of them in the workplaces where the educational establishments had arranged their students workplace training placements. The young people saw work above all as a way to ensure one's financial security and provide for one's basic needs, but also as a means of self-realisation and self-development and as a social network.

The young people seemed to consider a job simply as a job, no longer a place where they consciously thought about or pursued purposeful learning. Most of them failed to search for information sources on their own or recognise as a challenge the development of versatile communication skills, such as training themselves to use foreign languages, or of negotiation skills, competencies that promote occupational mobility. Starting at a new workplace seemed to represent a particularly critical stage because it is possible that the young people were

expected to orient themselves independently to their work environment. However, most of the young wanted to develop their occupational skills and displayed a positive attitude towards addressing change. They perceived human relationships at work and succeeding in customer service as the best experiences they had gained through work. Working had developed their initiative, cooperation skills, familiarity with domain-specific practices, self-confidence and independent thinking considerably more than their problem-solving skills, skills to evaluate one's own work, and planning skills. In the young people's opinion, the skills belonging to the latter group had developed less after their transition to working life than during the supervised work-based learning period included in their studies.

The context where learning takes place at the workplace is the work community as a whole, which can include learning networks and a learning organisation. During their vocational studies the young employees had taken part in networks among workplaces and educational establishments that have cooperated to ensure the success of the students' work-based learning. The degree of the young people's participation in learning networks has depended on the nature of the networking strategy implemented by the training providers and workplaces.

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**Decentralising vocational training: More than just a shift in scale.
Lessons drawn from the French experience**

Since 1983 France has engaged in a slow process of decentralisation of vocational training. A significant stage was reached in 1994 when the regions were tasked with the responsibility of “ensuring coherence in the supply of vocational training”. Ten years later, a new stage has further extended the powers of regional councils. This article proposes a reflection on the notion and meaning of this decentralisation process.

The change in scale (from the State to the Region) in the conduct of vocational training policies and the devolution of powers to a new actor (from central government to the elected regional authority, the Regional Council) are often interpreted as a transfer aiming to improve the governance of the system or, in a more economic sense, to improve the coordination between actors and therefore the efficiency and effectiveness of the system. The change in scale is seen as expressing the limitations of a state management of vocational training (in the sense of Commaille, Jobert, 1998). This is why, in France, it is combined with forms of neo-corporatism in which social partners, within occupational branches, play an important role (Giraud, Meriaux, 2003). But this change in scale might only be a shift, reproducing the main characteristics of the system at regional level. In this case, it would only represent a minor institutional innovation dependent on these great societal characteristics (state management combined with neo corporatism).

The adopted mode of decentralisation and the fact that the transfer of powers to the regional authorities has been limited and in continuity with the traditional French mode of regulation of the vocational training system, would tend to validate this hypothesis (section 1).

However, decentralisation represents a break from the traditional modes of definition and implementation of education policies and a shift in the boundaries of public action (section 2).

These changes also concern the systems of actors: decentralising implies that relevant systems of actors exist or are developed at regional level (section 3). This question emerges in most cases of decentralisation (see how the West German model was imposed on the Lander in former East Germany for example, Giraud and Meriaux, 2003). The slow emergence of a new system of actors, significantly different from the one that exists at national level, can contribute to a more radical innovation.

Finally (section 4), decentralisation, in an “administered” mode of regulation, calls for the development of new knowledge and public action tools.

1 A decentralisation process dependent on societal characteristics

Many European countries have chosen to decentralise their vocational training policies. However, there are significant differences between countries as to the nature of the powers transferred to the local systems of actors and as to the level at which these actors operate. The choices made by each country reflect the specificity in which these local systems of actors are developed and combine with central government: autonomous regions in Spain, Lander in Germany, regional councils in France. They also reflect the status and the mode of regulation of vocational training adopted in each country: a dominant apprenticeship training system and a strong and attractive vocational training system in Germany (Giraud, Meriaux, 2003); a vocational training system dominated by traditional academic education and essentially in the form of full-time school training, in France; an almost non-existent, but developing vocational training system in Spain.

1.1 Choosing to decentralise vocational training

France has engaged in this process by gradually entrusting certain aspects of vocational training to the regional authorities (see box number 1). The arguments of public policy that are the most often used to justify decentralisation are those related to the growing efficiency and effectiveness of proximity governance (Gerard Varet, 1995). Proximity governance is supposed to better take into account the demands of families and young people and makes it possible to better adjust the supply of training to the needs of enterprises.

Decentralisation reflects the gradual obsolescence of the different systems of public regulation of vocational training. In the 1970s, initial vocational training was for the most part governed by the state. The objective was to quantitatively and qualitatively monitor and control vocational training. From the quantitative point of view, this control consisted in adjusting the flows of students according to the needs of the labour market. Qualitatively, the curricula and national diplomas were designed and adjusted to the nation's demand for skills. This planification policy has been the object of much discussion and scientific criticism (Méhaut, 2001) particularly as the instruments of public policy supposed to help implement it proved inefficient. Thus the industrial advisory committees comprised of trade union and employer representatives and the State Administration were often the place where ideological debates took place but few concrete proposals were actually made (Fourcade, Ourliac, Ourtau, 1992). The Administration and the teachers most often controlled the qualitative aspect of the supply. As for the quantitative dimension, no provisional model made it possible to assess the needs sufficiently precisely. Furthermore, the 1970s were marked by the expansion of education (general education essentially) and the orientation of the students was essentially determined by an academic and meritocratic logic (Verdier, 2001). The 1980s marked the progressive weakening of this model, particularly as a result of increasing unemployment among young people. New instruments of public intervention (training courses for young unemployed workers, development of work-linked training) were developed. The idea of a decentralised implementation emerged with the possibility of proximity management of training for unemployed youth. In the 1990s this trend was

accentuated. From the qualitative point of view (content of the diplomas and training courses), the national joint committees regained importance, but in a wider approach: their task was to identify large target occupational areas (and the associated skills) while anticipating the needs for skills related to future mobilities. The scope of knowledge that the students must acquire is no longer strictly limited to the skills required for a given occupation. But the pre-eminence of national diplomas has been reinforced. In terms of flow management, the deconcentration/ decentralisation process was strengthened but with an administered mode of regulation “à la française” (Bel, 2003).

1.2 The maintenance of an administered mode regulation of proximity

The most significant progress in terms of decentralisation was made in the field of vocational training. And one can suppose that this is not only due to the fact that vocational training is explicitly related to employment and the labour market, but also to the fact that it represents a “dominated” segment of the education and training system. Gradually, the powers transferred to the regions have theoretically given them a central role in the governance of the system. But the nature of these transfers and of the modes of intervention, maintains a degree of continuity with the characteristics of the traditional national system.

The regions have gained more power in the field of vocational training for young people, firstly in the field of further training for unemployed youth (progressive transfer of financing, action on the supply of training), apprenticeship (they have authority in the field of the supply of training and they finance the apprenticeship schools), and finally in the field of full-time school training (coordination of the offer of placement in schools, equipment; but the financing, as well as everything related to teachers, is essentially in the hands of the State). The State still creates and awards diplomas (there are no regional curricula or diplomas). The regions have little control in terms of vocational orientation (except in the case of training for unemployed youth) and have no explicit powers in matters concerning higher education. The process is therefore one of gradual decentralisation of sections of policies, essentially concerning the governance of the supply of training (choice of the occupational specialities that will be proposed or eliminated from initial education; training courses open to young unemployed workers). The direct financial power of regions in the system remains limited. Regions essentially have a “power of influence”. This power of influence was reinforced in 1994 when the regions were tasked with the responsibility of establishing a regional programme of training for young people, of ensuring coherence in the local supply of vocational training, both between the different types of initial education (full-time school training or apprenticeship) and between training within the school system and training for unemployed youth.

Thus, one could consider the decentralisation process as a form of transfer of an administered regulation. The latter is characterised by low financial incentives (financial resources are distributed according to predefined administrative criteria), by coordination between state administrations, regional councils and social partners for decisions concerning the supply of education, by the development of the contractualisation of agreed objectives with education

suppliers (Bel, 2003). One could say that the decentralisation process rests on the dominant mode of regulation of the French vocational training system (little commercial regulation, little direct weight of firms and families in decision making), while developing it and amplifying it at a territorial level.

2 Decentralisation is not a mere shift in the decision making level

However, this interpretation underestimates the extent of the changes. Examining the evolutions resulting from this mode of decentralisation raises two key questions concerning the definition and implementation of public action.

2.1 Decentralisation and recomposition of the referents of public action

As with all public policies, vocational training policy rests on a certain number of referents (Muller, Sorel, 1998). These referents, which are more or less shared by actors, define the main objectives of the policy. They form a frame of references common to all actors, guiding and legitimising their actions. In the French tradition, for example, equality of access to education, which is considered as a non-commercial good, is a strong referent (which extends to the principle of non-selective entry to university, for example). The postulated positive role of vocational training in facilitating access to employment and in fighting unemployment is another referent. Applicable to both general education and vocational education, the explicit goal of leading 80% of an age group to the Baccalauréat level is another strong and structuring national referent.

Decentralisation transfers to new actors a responsibility to conduct policy. Thus, in order to legitimise their action, these new actors must define and display their own referents. The regional councils have chosen this path, often making very different choices. Some have, at least initially, privileged national referents (i.e. leading 80% of an age group to the Baccalauréat level, and therefore expanding and diversifying the supply of vocational training by privileging the principle of freedom of choice for the students rather than by taking into account the actual needs for skills). Others define a priority policy area (the development of training through apprenticeship). Others have focused on employment (reduction of unemployment among young people). Thus, a two-fold process of diversification (according to the regions) and of intermingling of referents (combination of national and local referents) is at play. This has resulted in an evolution in the justifications for public intervention that guide the various regional policies. In order to generate new referents, many regions rely on what has been analysed as new modes of legitimisation of public action. “Forums”, where debate and multi-actor exchange can take place, are emerging. The debates can take place within employment and education sectors of a region, for example, or by large groups of occupational branches. One can suppose that these new forms of consultation are related to the fact that the regulation is both administered and involves many different actors and to the fact that the Regions do not yet have full legitimacy in this new field. In order to exercise their “power of influence” they must be able to base their actions on shared – if not

consensual – referents and derive part of their legitimacy from the organisation and conduct of debates involving a wide range of actors.

2.2 Decentralisation and de-segmentation/re-segmentation

Public policies are generally organised around “segments” defining relevant and supposedly homogeneous areas of public intervention: health, housing, education and vocational education policies. Within vocational education, sub-segments can be identified: full-time school training, apprenticeship, initial education, continuing education. And when specific institutions and instruments are given full authority over the governance and management of these sub-segments, the partitioning between these segments often becomes more pronounced. We know the traditional separations between matters that are the responsibility of one ministry and those that are the responsibility of another (In France for example, the apprenticeship system comes under the Ministry of Labour). And one of the hypotheses used to characterise the tensions to which the public policies are subjected, is that of the inadequacy of these segments in the face of new problems. For example, some authors have highlighted the relations between the health, housing and vocational training dimensions in youth unemployment, or they have shown that it is difficult to separate secondary education policy from university education policy since most high school graduates pursue their studies at university.

Decentralisation leads to a de-segmentation. Thus, in order to “ensure coherence” – at regional level – in the supply of vocational training it is necessary to overcome the partitioning between the national education administration and that dealing with employment matters, or the partitioning between agricultural training (governed by the Ministry of Agriculture) and other fields of training. Thus, the decentralisation process does not consist in the mere transfer of the same segmentation from one level of organisation to another.

In some cases, the transfer of power to the Regions has dramatically revealed the limits of the national segmentation, for example the case of the contradictions between policies of training for young unemployed workers (under the responsibility of the regions) and other instruments of employment policy (still governed by the State, theoretically so as to avoid phenomena of social dumping). Similarly the policies of vocational guidance of young people fall in a kind of “trap”: they are stuck between the national level and the regional level, and will be disorganised rather than improved by the decentralisation process. (Berthet, Gayraud, 2003).

New and unexpected effects of de-segmentation can also emerge. Thus, certain regions have started to link their regional transport policy (which they are in charge of) with their education and training policies. Others have significantly “departitioned” the logics of “population” (defined for example by the age of the beneficiaries) by proposing the same instruments to young and adult populations. Others, although they have no power in the field of higher education, have started to link their policies of secondary vocational education to the map of higher education. It is too early to draw conclusions about the results of this de-segmentation/ re-segmentation. But, just as decentralisation is not the mere transfer of the

level of the referents, it is not a mere transfer of segmented identical policies. It calls into question the very definition of policies and of their segments.

3 The slow reconfiguration of the systems of actors

Similarly, if one examines the evolution of the systems of actors, one finds that decentralisation is not a mere transfer.

3.1 A diversified and complex system of actors

In the case of France, the system of actors involved in vocational training policy is complex and heterogeneous. In the field of initial vocational education for young people (full-time school training), the Ministry of National Education is dominant in so far as it controls the flows of trainees, it has authority in terms of diploma policy and it distributes financial resources. However, it must share this responsibility with other ministries responsible for training (health, agriculture...) and must consult the representatives of the economic sector (employers, trade unions, generally divided into occupational branches) for the definition of training specialities and diplomas. In the field of training through apprenticeship, its role remains important for curricula and diplomas. But the occupational branches have a more direct power on the training mechanism (training centres for apprentices) and the offer of apprenticeship placements are decided by firms. In the area of vocational training for the unemployed, the Ministry of Labour has progressively lost the power it used to possess (in terms of implementation and financing of mechanisms of training for the unemployed), and has had to share it with occupational branches and the regions.

This system of powers and of decision-making distribution also reflects the existence of conflicts of interests between the different actors. Employers (and their representatives) seek to produce a work force that can adapt better (qualitatively) to the needs of the different jobs and seek to do so at the lowest possible cost to themselves. This supply of “adaptable workers” should preferably be abundant enough – or even over-abundant as long as it has been produced with public funds – so as to avoid upward pressure on salary levels. The public authorities seek to minimise costs while ensuring a degree of equality of access to education. They also have to take into account the demands of families, young people and trainees who put pressure on the government to provide a wide access - and preferably close access (Bel, 1996) - to training. As for trade union organisations, they plead in favour of a diversified and abundant supply, while trying to protect the value of diplomas and certificates (and therefore the salaries of their holders), particularly through the job classification systems and the collective labour agreements.

The process of decentralisation has significantly modified this system of actors, by shifting the power asymmetries, but also by revealing once again that decentralisation is not a duplication at a different territorial level.

3.2 The emergence of the key actor

Decentralising a public policy implies the existence (or the creation/ reinforcement) of a competent and legitimate actor in the territory. In the case of France, the Regional Council derives its legitimacy from the fact that it has been elected by direct universal suffrage. However, vocational training does not, a priori, fall within its competence, and its potential power does not exist in advance. Thus, a two-fold problem arises.

The first problem is that of its legitimacy in a complex system of actors and in a context of power struggles. Indeed, the delegation of authority through the legislative process is supposed to solve this problem: legitimacy is derived from legislation. But the powers transferred to the regions are actually limited and many levers (financial in particular) remain in the hands of the Central State. The “progressive” transfer of powers also generates conflicts of borders. Gaining political legitimacy (in other words being recognised as the leader by other actors) is therefore a key element in the policy of regional councils. Some regional councils choose to exercise their authority on only one selected segment of vocational training (apprenticeship for example) and neglect the other segments. Others rest on the fact that they have obtained their powers through the legislative process to reproduce, at regional level, the model of national “governance”. However, their powers being limited and because they are “weak actors” in the system, they run the risk of facing the oppositions of other actors. Other regions play the card of the “power of influence” and accept the fact that their means of intervention are limited; thus, they seek to legitimise their actions through mechanisms of consultation with all players and through the elaboration of regional programmes that are defined in consultation with a large number of actors and likely to meet with their approval (Romani, Méhaut, Richard, 1999).

In time, and more generally, a new situation has emerged. Most regional councils seek to legitimise their leadership and to compensate, through the approval of the different parties, the lack of effective power transferred to them. They develop a kind of power of agency without possessing the means of imposing this power on the other actors. This power of agency is expressed - in the two evaluations related to decentralisation (Romani et al, 1999) - by the term “key” actor. This term expresses the slow process of re-organisation around a central leader of the system of actors of vocational training at regional level. The process is slow because it must take into account the learning processes (of all actors, including of the Regional Council) on the one hand, and because of the power and territorial conflicts generated by uncertainties concerning the definition of the segments of policy and the decentralised instruments. In some regions, for example, there were strong oppositions, at least initially, between the national education administration in the regions and the Regional Council.

In the long term, however, the landscape has been modified, both in terms of national/territorial balance (the State has yielded many of its prerogatives and has had to reconsider the foundations and limits of its authority), and in terms of balance between the other actors.

3.3 The absence of certain actors

The transfer at regional level also reveals the incompleteness of the process of decentralisation and sometimes the fact that certain actors, supposedly present in the regions, are actually absent.

The process is incomplete in so far as some actors do not participate to it, at least in its first stages. In some regions, for example, the Health Ministry is in charge of health and social care training and takes little or no part in regional discussion and coordination. Similarly, the AFPA - the main supplier of training for unemployed adults – did not participate in the first stages of the decentralisation process. Thus, adopting a segmentation such as the traditional national segmentation is incompatible with the objective of “ensuring coherence” in vocational training inasmuch as certain actors “exclude themselves” from regional coordination because of their national prerogatives.

Furthermore, for historical reasons related to the institutional configurations, some actors supposed to be present, are actually absent or poorly organised regionally. It is mainly the case of economic actors (Casella, Freyssinet, 1999). In the history of industrial relations in France, and of their expression in the field of vocational training, the representatives of occupational branches have played a central role in the consultation processes at national level. An occupational branch is indeed the “natural” place for discussion in so far as its representatives are organised, and in so far as institutions can put the agreements into practice (for example, by listing the diplomas recognised by the collective industrial agreements or through the classification of jobs and workers); moreover, an occupational branch derives part of its identity and boundaries from its ability to have branch-specific occupational diplomas and certificates recognised. In France, the institutionalisation of the different partners that comprise an occupational branch also rests, partly, on their ability to produce rules of access and of classification into the different job categories included in the branch.

The way in which economic and industrial relations are structured in France is an obstacle to the reproduction by the regional authorities of the national model (with the hypothesis of a greater proximity of “economic needs”). Either the branches (i.e. the employers organisations in branches) are poorly organised at the territorial level (which is not compatible with their economic and social logic, for example in the field of electronics, banking and insurance), or, when they do exist at territorial level (because the productive fabric is made of small enterprises, as in the case of building industry, the catering and hotel industry, or the sectors of retail and automobile repairs), they tend to duplicate the national analyses and propositions without being able to capture the specificities of the territories. And this lack of regional organisation on the employer side can also be found on the trade union side. (Casella, Freyssinet, 1999).

But it is combined with the central question of the control of vocational training funds. The management of funds for vocational training (apprenticeship, training for young unemployed people, continuing training for workers) are for the most part managed by joint management organisations linked to specific occupational branches, and when these organisations

distribute these funds they tend to privilege the training centres that are related to those occupational branches. Thus there exists a kind of “captive” distribution of funds. The regional councils have little direct control over these funds or institutions and must consult with the latter. The history of decentralisation is, as a result, marked by tensions between the branch logic and territorial logic, related to the control of the funds for vocational training (Meriaux, 1999).

This leads us to the previously mentioned hypothesis of societal dependency and of “institutional inertia”. But here again, the facts and analyses must be put in perspective. By revealing the “void” of actors in the regions, the process of decentralisation has had at least three consequences.

First of all, it has forced certain players of the national game to question the efficiency of their territorial structure and has encouraged them to regionalise their organisation. Thus, the MEDEF (the leading employer organisation in France) which is mainly structured around occupational branches, has taken steps towards the territorialisation of its organisation, in particular by forming a network of territorial delegates conveying employers’ opinions at regional level. Similarly, the CFDT, a trade union that is mostly present in the sectors of activities where the organisation into occupational branches is less pronounced (trade for example) has played the card of regional structures.

Secondly, the Regional councils, seeking to achieve economic legitimacy, will seek to promote the emergence of actors that are “representative” of the economic world, so as to fill the void mentioned above. Some, for example, have taken steps to expand the traditional boundaries of occupational branches, by encouraging the development of groups around certain sectors of activity (tourism and aeronautics for example). Other regions have defined entities that are smaller than occupational branches in order to take into account regional specificities (pleasure boats’ engines, as opposed to mechanics in which automobile mechanics is dominant).

Finally, some regional councils attempt to shift from an organisation into occupational branches to a territorial organisation. Discussions then occur mainly at the level of employment sectors sometimes in direct relations with the firms present in this basin, or with representatives of employers (associations of local employers).

Thus, decentralisation, by revealing the weakness or the absence of certain actors pushes towards other forms of organisation. “Emerging” actors have progressively entered the game, thus modifying (at least marginally) the old forms of consultation and the system of actors of the centrally administered regulation.

4 Decentralisation and the conduct of public action: instruments and evaluation

The shift in scales, from the nation to the region, also generates new tools of public intervention.

4.1 Decentralisation and information

In a multi-actor system, information has become a resource of utmost importance for the actors (Cuelpepper, 2003). This information can be public or private (generated by branches or firms for example). It can be related to the state of the supply of training, the flows of trainees and students, their access to employment, the state of the labour market for such and such an occupation or an evaluation of the possible evolution of an occupation. Part of this information already existed in the context of national procedures. But it must be reconstructed at the level of each region, or even at a finer level (an employment basin for example). It must be assimilated, shared and recognised as legitimate by all actors.

This renewed need for information has led to the development of regional “observatories” of employment and training. Certain occupational branches have developed their own tools in the regions, and the regional councils are progressively acquiring data and information reports that help them define policies.

Almost paradoxically, the transfer of decision-making from national to territorial level leads to an increasing need for information. The refinement of knowledge and statistics tools, especially if they are shared, eventually has an impact on political orientations: it has become more difficult for an actor to defend a unilateral opinion exclusively based on the information he possesses.

Thus decentralisation reveals new needs for information as well as for new information tools. Mastering information has become a more strategic element in the interactions between actors (Bertrand, Hillau, Richard, 2003).

4.2 Decentralisation and the tools of public action

Similarly, the role of certain tools used to conduct and implement policies in the regions has become more significant. We have highlighted that the logic of a centrally-administered supply of training has been maintained. Unlike in other countries, the financial tool (for example the direct distribution of resources according to the flow of students and trainees, or according to the rate of success at the exams or of placement in the labour market or even the system of vouchers for students and families) is not the most important tool. For the most part the regulation of the system is done through contracts or quasi-contracts between the administrative authorities (in this case, the Regional Council and its partners) and the training institutions. This type of governance – proximity governance - has led to a significant evolution in the tools used.

The regional councils have developed analysis reports on the demands of training institutions and refer to them before authorising the creation of new sections of training. Justifications for the creation or expansion of a training section must be supplied; these justifications consist of increasingly precise information such as data on the expected flows of students and trainees, data related to the needs of the labour market, or forecasts on the students' professional future.

In the field of training for adults, procedures of quality certification have been already implemented and have now been adopted in the field of initial education (in the apprenticeship system for example).

Finally, because they increasingly need to justify, *ex-post*, the relevance of their political choices, some regional councils now implement these procedures more systematically.

These three tendencies are, admittedly, not specific to decentralised policies. They already existed in Central State policies; and this movement now seems to affect all public policies. But the phenomenon of decentralisation has most definitely given it impetus.

5 Conclusion

Applied to the field of vocational training, decentralisation, especially when the traditional mode of governance is maintained (in this case the administered mode of regulation), can be initially interpreted as nothing more than a scale transfer. Localised actors are supposed to be better able to understand what the needs (of students, trainees, firms) are. The system is then supposed to gain - through proximity - efficiency (particularly in the adjustment of training to the needs of the economy), even though fears are sometimes expressed that this might occur at the expense of equality and social justice.

The processes of decentralisation actually raise other questions. Even when decentralisation is positioned in continuity with a dominant mode of regulation, it implies a process of reconstruction of the foundations of policies. It reveals the deficiencies of the segmentation of national policies and redefines the boundaries of what we call vocational training. It rests on a number of actors, some of whom modify their position (power asymmetries) while pushing for the emergence of other actors. Finally it modifies the "tool box" of public policies. All these processes are necessarily slow. They imply a learning process by the actors, their repositioning in relation to others and the construction of new tools. Ten years after the process started, it is still difficult to say that the new landscape is stabilised. And in spite of the existence of systems of national evaluation (Richard, Verdier, 2004), it is still difficult to make a precise assessment of the impact of this process. But it is through its related effects on the overall architecture of the education system as a whole (from the definition of policies to the tools used to implement them) that its long-term impact will probably be revealed.

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Box number 1: The main components of the vocational training system and the stages of their decentralisation

Initial vocational training of young people takes place in the form of full-time school training (the dominant form of training; mostly in public vocational training schools) or through apprenticeship (alternating training in training centres and training at work). The apprenticeship system was decentralised in 1983 (financing by the regions of the centres of apprenticeship). As for full-time school training, the regions were given the power, in 1993, to ensure coherence in the supply of training. They also have the responsibility of financing the schools (buildings). But the staff is recruited and remunerated by the relevant ministries who also allocate staff to schools.

“Continuing” education for young people (essentially for young unemployed people after they leave school or the apprenticeship system) essentially takes place through training courses that vary in duration (they can be alternating training courses or other types of courses).

Continuing education for adults falls under the competency of employers and of branch joint funds for matters concerning human resources. The region finances training courses for unemployed people and plays a role in the supply of training (but until 2004 had no power over the leading supplier of training - the AFPA, which used to fall under the competency of the Ministry of Labour).

The Regional councils have also implemented (or reinforced) measures that were progressively abandoned by the State: for example, evening classes or courses of “social promotion” for adults wishing to start studying again.

Box number 2: The regional authorities

The Regional Council is an assembly elected by direct universal suffrage. It derives its resources from taxes - the rates of which it determines – and from funds allocated by the State on account of the authorities transferred to the regions and which the Central State no longer possesses. Metropolitan France is divided into 22 regions that vary in size from 700 000 inhabitants to over 10 000 000 (but most regions have between 1 and 3 millions inhabitants).

The national administrations have at their disposal deconcentrated services (“Rectorat” for national education, regional and *départementales* directions for the Ministry of Labour) that implement the national policies in the regions. These deconcentrated administrations have progressively lost part of their authority in favour of the regional councils and they must collaborate with the latter.

Various official committees of consultation between the state and the regions or between the regions and the social partners exist at regional level.

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The German Training System and the World of Work: The Transfer Potential of the *Lernfeldkonzept*

1 Introduction

The German system of vocational education has been characterised as a ‘high skills society’ with national competitiveness primarily based on high productivity - manufacturing a wide range of high-quality goods, relying predominantly on scientific elites and on high-quality intermediate skills. The system of skill formation that serves the ‘high skills society’ generates wide skills distribution and high levels of social trust and produces high incomes and relatively high wage equality (Green 2001, 67-89 and 142f.).

At the heart of the German model of skill formation lies the dual system of vocational education and training. Comparativists have extensively discussed this system for some decades now. The main reasons for the prolonged foreign interest in the dual system are the constantly high participation rates (it prepares about two-thirds of German youth for working life) and the comparatively low youth unemployment rates associated with it (the system provides a comparatively smooth transition of young people from initial training to continuous employment). In fact, the German Economic Institute (*Institut der deutschen Wirtschaft*) has pointed out that the dual system has produced ‘harmonious results’ in the training market recently, balancing supply and demand for training places (IDW 2002, 2).

However, there are increasingly clear indications that the German model of the high skills society and with it the dual system are at risk (cf. for instance, Green 2001, 148-151 and Culpepper 1999, 44-48). In fact, the re-occurring discussions surrounding the ‘crisis of the dual system’ in the inner-German debate of academics and researchers are almost as old as the system itself (cf. Wüstenbecker 1997, 14-19 and Baethge 1999, 127-136). The future prospects of the system are the subject of great controversy (cf. Deissinger 2001b and Greinert 2001). Irrespective of the position one supports in this debate, the need to modernise the dual system seems widely acknowledged by researchers and educationists.¹

¹ An indication for this observation is the substantial number of edited books in which leading educationists describe the changes the dual system is facing and the ways in which reform and modernisation should lead. The titles of these publications are indicative: Beck & Achtenhagen (eds.) (1996): *Berufserziehung im Umbruch* (Vocational Education in Upheaval); Schlaffke & Weiss (1996): *Das Duale System ... Qualität und Reformbedarf* (The Dual System ... Quality and Need for Reform); Schmidt et al. (1997): *Das Duale System der Berufsausbildung – ein ‚Exportschlager‘ in der Krise?* (The Dual System of Vocational Training – an Export Best-seller in Crisis?); Euler & Sloane (1997): *Duales System im Umbruch. Eine Bestandsaufnahme der Modernisierungsdebatte* (Dual System in Upheaval. A Stock-taking of the Debate on Modernisation); Euler (1998a): *Berufliches Lernen im Wandel* (Vocational Learning in Transition); Flitner et al. (1999): *Wege aus der Ausbildungskrise*. (Solutions for the Training Crisis); Arnold (2003): *Berufspädagogik ohne Beruf* (Vocational Education without the Vocation).

One particular aim of current modernisation processes is to make vocational training more relevant for the world of work. This aim specifically refers to the demands for a reform of the school-based part of the dual system. The debate on the role of vocational colleges (*Berufsschulen*) in Germany is ongoing and is part of a comprehensive discussion on the crisis of the dual system and its institutions (Schmidt 1996, 2). The main areas of debate regarding the *Berufsschule* seem to be its didactic shortcomings and the ‘identity crises’ caused by improving in-company training in the larger training enterprises and by the increasing importance of external training centres. Training in larger enterprises is often conducted in classroom-situations. Therefore, the distinct role of vocational colleges is not clear anymore. The same point can be made for external training centres which are often run by the relevant chambers. Often training at these centres is very similar to school-based training, making it harder for colleges to justify their role in the dual system. These problems of vocational colleges were already identified by Kloss (1985) in the mid-1980s.

The transfer of real-life challenges in work contexts into the teaching and learning arrangements of school-based contexts is one of the questions that has to be addressed in all systems of vocational training. The transfer of changing challenges posed by an economic system that is more than ever characterised by processes of globalisation seems to be a challenge that affects all Western European countries. For most European countries it can be said that the ‘[...] development of close links between school-based education/training and the workplace [represents a major] concern of both government policy makers and the social partners’ (Green et al. 1999, 179).

While the qualitative importance of school-based training contexts increases throughout Europe (Green et al. 1999, 199), it appears that different national training systems have found diverging answers to the question of how the interplay between the world of work and vocational education can be organised. From an institutional point of view, the different roles school contexts play within training systems are an indicator of this diversity.

The way in which the transfer of work-related challenges into school-based training contexts takes place seems to be a key element in the development of what Brown, Green & Lauder (2001) have described as a system of ‘high skills formation’. However, there seems to be a lack of systematic investigation into how this transfer takes place and how it can be improved in order to accommodate the challenges of the dynamic economic world. In order to start such an investigation in the German context it seems necessary to outline the main features and principles of the dual system.

2 Some key features and principles of the German training system

The traditions, legal foundations and structures of the German dual system have been the matter of an extensive amount of international literature (cf., for instance, Raggatt 1988, HMI 1995 and CEDEFOP 1995). However, what has been neglected too often in the past is that it

is not the structure of the system itself that secures its perceived success and hence its attraction to foreign observers, but a set of underlying, interdependent principles that make the system work (cf. Kutscha, 1999).

2.1 Principle of duality

Vocational training requirements in Germany consist of two basic parts. Learning processes in training companies focus on learning at the workplace or instruction in company training departments with an emphasis on practical elements of the training occupation. The vocational college provides general and vocational education in order to deepen and supplement on-the-job training.

Trainees spend about three or four days a week on in-company training and up to two days a week at vocational colleges. Whereas federal law regulates the former, the latter falls under the legislation of the *Länder* (for instance skeleton curricula – *Rahmenlehrpläne*). Harmonisation processes are in place to integrate both parts of the training and to ensure the comparability of the provisions in the 16 *Länder*. The term ‘dual’ refers primarily to the division of training into two separate training environments, each regulated by its own distinct legislators.

However, the principle of duality goes beyond the division of training into two training venues. The duality of the structure is also reflected in systematic features such as the role and status of training personnel, the funding regime and the supervision of training processes (cf. Ertl 2002).

2.2 Principle of corporatism

In terms of its regulative structure, the dual system may be best described as a state-controlled market model (cf. Greinert 1995, chapter 2) in which the state sets the guidelines for the co-operation of employers and trade unions. This model is regarded as an efficient way of limiting the risks of ‘market failure’ on the one hand and ‘state failure’ on the other (Kutscha 1995, 10).

In this model the state delegates regulatory competence for the training system to corporatist bodies. The most important of these bodies are the local, self-governing Chambers of Industry and Commerce, the Crafts Chambers, the Chambers of Agriculture and the Associations of Professions. They have the status of ‘competent bodies’ (*zuständige Stellen*) and play a crucial role in the organisation, administration and examination of vocational training. More precisely, these bodies act as intermediate organisations between state and companies and put training laws and regulations into practice. The Chambers have the status of public autonomous agencies that oversee the legal and regulatory norms of vocational education and training within their sphere of responsibility according to the legal guidelines set by the state.

Following the ‘principle of voluntariness’, no employer is obliged to take on trainees. However, all firms have to register with a Chamber and those wishing to provide training must be approved by the Chamber as a training company. The approval depends on the equipment and resources of the company as well as the qualifications and experience of the trainers working for the company. Furthermore, the local Chamber supervises the organisation and assessment of intermediate and final examinations and acts as an awarding body for vocational qualifications.

A further example reflecting the principle of corporatism in the training sector is the composition of regulating and executive bodies of the dual system. For instance, supervising and examining bodies are set up by the Chambers and consist of equal numbers of employers’ representatives, employees’ representatives and vocational college teachers. The most important of these bodies at the executive level of the training system are the vocational training committee and the board of examiners.

2.3 ‘Concept of the vocation’

The concept of ‘education by and in work’ of training in dual structures is closely bound to the ‘concept of the vocation’ (*Berufskonzept*). The translation of the German term *Beruf* poses difficulties. Neither ‘vocation’ nor ‘profession’ is congruent with the German term, but the former is used in this paper because the latter is too closely bound to academic occupations (such as lawyers and doctors).

Most importantly however, the concept of the vocation places the individual’s capability to work and act competently in a vocational environment (*berufliche Handlungsfähigkeit*) as the overarching aim of vocational education and training. Education as part of the learner’s personal development has been a constant feature of vocational education in Germany. Further, this concept reflects the need to prepare young people not only for a small number of specific tasks at one company, but to provide a qualification applicable in many employment contexts and responsive to the changing economic and social environments of a whole occupational field.

The ‘concept of the vocation’ and underlying social standards are reflected in the Vocational Training Act (*BBiG*) of 1969 and other training regulations. For instance, paragraph 1 (2) of the *BBiG* prescribes a broad basis of vocational education, a well-ordered course of training and the acquisition of sufficient vocational experience for training in a state-recognised training occupation. Furthermore, the attainment of a skilled worker qualification within a recognised occupation and subsequent employment in a related vocational sector are the basis for classification in the wage system (for instance, minimum wages and salaries) and for measures of social security (for instance unemployment benefit) in Germany.

The following categorisation of the key features of the ‘concept of the vocation’ comprises the major elements for what is regarded – in the German context – as the necessary framework for a comprehensive course of training:

Table 1: **Key features of the ‘concept of the vocation’ in Germany** (cf. Kloas 1997)

<p>➤ Qualified work: Professional, methodical and social competences for planning, executing and controlling vocational tasks</p> <p>➤ Broad vocational basis: Multi-layered, marketable pattern of competences relevant not only to the training company through a broad knowledge basis <i>and</i> skills specifically related to the occupation</p> <p>➤ Adaptable skills: Skills are responsive to a changing vocational environment and represent an appropriate basis for further training and lifelong learning</p> <p>➤ Mobility: National, state-recognised occupations decrease workers' dependence on one employer; labour mobility is enhanced</p> <p>➤ Transparency: Recognised occupations and their value in the educational system are accepted and well-known by employers and employees</p> <p>➤ Social Security: Qualification in a recognised occupation ensures a high degree of social security and determines to a large extent the social status</p>
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2.4 Societal consensus

The past success of the dual system is due to the effective functioning of these underlying principles and – to the same degree – to the broad societal consensus on these principles (Green 2001). The principle of consensus in Germany on the value of education and training and strong commitment to it was expressed by British observers through the term ‘training culture’ (Brown & Evans 1994, 5). In more general terms, the consensus on the concepts and principles of vocational training at all levels of society is regarded as an expression of a living democracy and of a high commitment to training within society (Schmidt 1996, 2).

However, the broad acceptance of these principles by all influential social groups in Germany makes the reform of the training system difficult. It seems much easier to preserve an existing consensus than to reach a new one. The complexity of decision-making procedures, in which all the stakeholders have their say, tends to underpin the status quo. The federalist structure of the German state contributes to this tendency. Furthermore, it appears that the current ‘training crisis’ endangers the future of the culture of consensus that all major stakeholders have (formally and informally) subscribed to hitherto (cf. Ertl & Sloane 2003). Most importantly, the employer’s complain about the lack of flexibility in training provisions. Flexibility in this context means primarily:

- the responsiveness of training provision to the changing work environment. This responsiveness is necessary in order to meet the latest skill demands which emphasise comprehensive skills and knowledge structures.
- the responsiveness of training provisions to the varying degrees of personal potential of trainees in the form of individualised training pathways. This individualisation is also concerned with increasingly individualised pedagogical approaches and assessment procedures (Sloane 1997, 231 and 1999, 103).

The basis of these complaints is the conviction – shared not merely among employers – that training processes need to take work processes more than systematically into account. In other words the connection between the challenges faced at the workplace and training need to be strengthened. As we have seen, duality and corporatism constitute important principles that determine training processes in the dual system. However, the regulative structure of the system implies that the direct influence of the world of work is restricted to the in-company part of the training. Therefore, the demand for a closer link to the challenges of the workplace is primarily relevant for school-based training.

Since this connection needs to take into account the rationales, structures and practices in both work and school contexts, and due to the assumption that the connection needs to change over time, the term transfer processes is applied. In the following section, the nature of these transfer processes is analysed with reference to the German context. Also, actual and potential improvements of the transfer processes as a consequence of a school-based reform are discussed.

3 Transfer processes and the concept of areas of learning

3.1 Elements of transfer processes

In order to conceptualise the transfer processes, three interdependent elements might be identified:

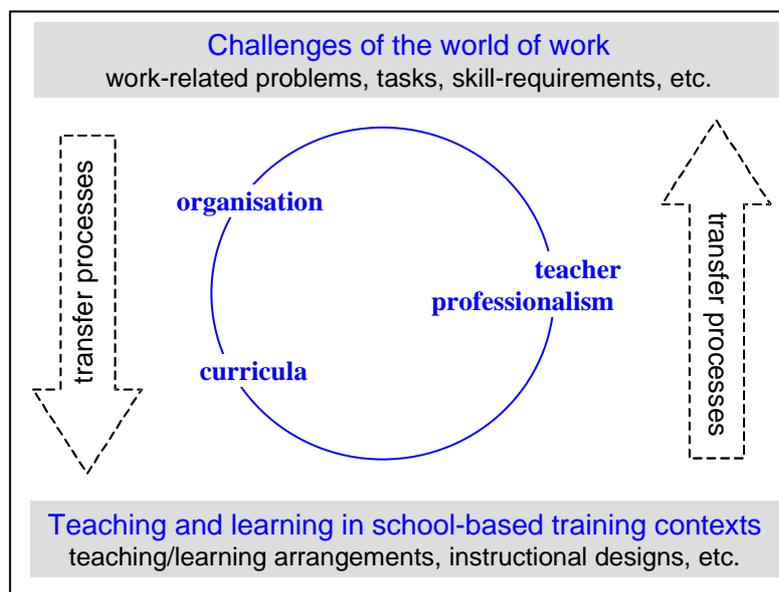


Figure 1: The world of work and school-based training contexts

Systems of vocational training are *organised* by a variety of institutions as well as the rules and agreements that regulate the co-operation of these institutional actors. In economic theory, the term ‘institutions’ comprises both the institutions themselves and the rules that define the relationships between them. Institutions determine the way in which work

challenges enter teaching and training contexts. In most European countries, employers' and employees' associations are involved to varying degrees in identifying typical work situations for which trainees should be prepared. As we have seen, the principle of corporatism is at the heart of institutional framework of the German training system and provides the social partners with a high degree of influence. Schools and training institutions interpret the guidelines set out by the authorities as well as social partners and decide on the way in which they react to the changing challenges from the world of work.

Curricula translate the knowledge and skills regarded as relevant by the institutional actors into the formulation of contents and aims of school-based training. Curricula include documents such as training plans and lesson plans. There are different ways to formulate challenges of the world of work in curricula: they might be outcome-oriented (describing the tasks trainees should be able to perform) or input-oriented (describing the way in which the training processes should be conducted). In Germany, curricula are traditionally expressed in terms of inputs such as teachers' and trainers' qualifications, class contact hours, and training contents (Koch & Reuling 1998). The different ways of conceptualising curricula influence transfer processes between the world of work and school-based training contexts.

From a more theoretical perspective, such curricula need to provide increased opportunities for learners to integrate their developing academic and work knowledge, as they develop their learning/work identities through repeated episodes of 'boundary crossing' between school and work (Griffiths & Guile 2001). We should expect, therefore, to see the emergence of new curriculum forms designed to cope with the increasing complexity of these boundary crossing episodes (Tuomi-Gröhn & Engeström 2003).

Teachers translate the contents and aims set out in the curricula into teaching and learning situations on a day-to-day basis. In addition, they are sometimes part of the institutional framework since they assume roles in school administration and curricula commissions. The way in which they fulfil these functions depends on their qualifications and their interpretations of their professional role. The degree to which teachers have contact with the world of work varies; some of them might consider this contact as less important than pedagogical skills and knowledge. Hence, elements of teacher professionalism influence the transfer processes.

It needs to be emphasised that these three areas do not influence the transfer processes in isolation from each other. For instance in Germany, teachers have traditionally seen their role in implementing curricular guidelines that were set by the competent authorities. For the context of vocational education this meant that many teachers did not regard it as their responsibility to ensure that what they taught is relevant for the challenges their students were facing at the workplace. As we will see, this self-perception of the teachers has been challenged by a recent reform initiative in German vocational colleges.

3.2 The ‘Lernfeldkonzept’

As demonstrated elsewhere, the dual system has proven to be sufficiently equipped to overcome a number of crises in the past (Ertl 2000). The means by which the stability of the system has been ensured since its formal establishment in 1969 have been cautious processes of modernisation within existing provisions. These processes seem to gather speed when the attractiveness of provisions for companies and young people decreases.

Arguably the most important step of reform in the current crisis is the so-called ‘Lernfeldkonzept’. The term *Lernfelder* can be roughly translated as ‘learning areas’. The concept was introduced formally by a decision of the Conference of Education Ministers (*Kultusministerkonferenz*) in 1999 (KMK 1999). It applies the notions of didactic innovations such as activity-oriented and comprehensive learning to the context of vocational colleges.

The main idea of this concept is the reconstruction and/or simulation of vocational processes at vocational colleges. Tasks and activities the trainees are typically confronted with in training companies (‘working area’) are the basis for the construction of ‘learning arrangements’ (learning situations at vocational colleges) that constitute a learning area (Sloane 2001). Learning areas also draw on the knowledge that is represented in conventional school subjects. However, the traditional subjects are transformed into a cross-curricular structure in which comprehensive tasks have to be fulfilled and real-life problems have to be solved by the trainees. In sum, learning areas represent pedagogically adapted and enriched vocational processes derived from actual work contexts (Kremer & Sloane 2000, 73). The connection between learning and working areas and the way in which learning arrangements are constructed is illustrated in Figure 2.

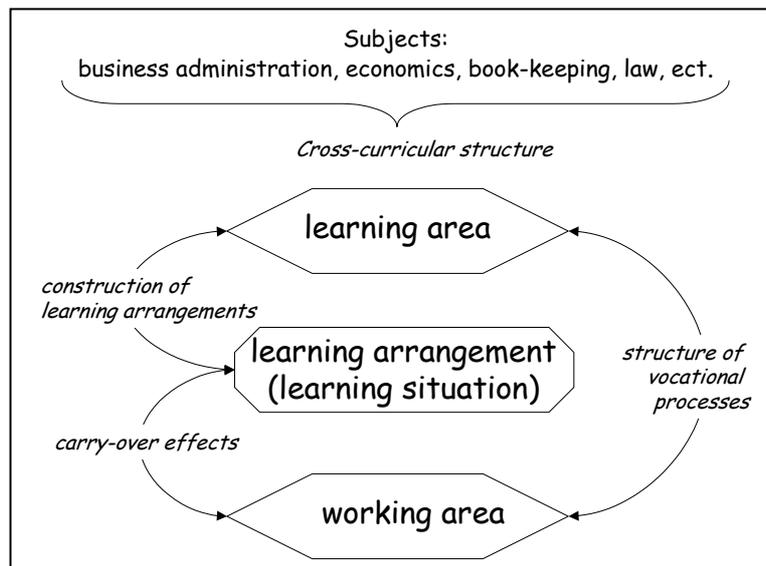


Figure 2: Connection between learning areas and work contexts (cf. Kremer & Sloane 2000, 74)

3.3 The impact of the ‘Lernfeldkonzept’ on the transfer processes

There are a number of conditions for the successful implementation of the concept of learning areas. These conditions and the resulting changes in the set-up of college-based training provisions have an impact on the three transfer elements conceptualised earlier. The changes outlined in the following illustrate the interdependence of the transfer elements.

First and foremost, the ‘Lernfeldkonzept’ is a *curricular* reform. Whereas curricula for vocational colleges used to be strongly prescriptive in terms of contents, aims and time allocated to contents and aims, curricula developed on the basis of the concept of areas of learning are formulated in an open way. The processes of curriculum construction are transferred from the state level to the level of individual colleges. This entails that actors at the political level, who assumed the responsibility of developing the prescriptive curricula in the past, now only set broad guidelines for the teaching at vocational colleges. On the basis of these guidelines workable aims and operational contents for teaching are developed at the level of the individual colleges.

This means that the work and the role of *teachers* at vocational colleges have changed. The translation of curricula into instructional designs becomes part of the work of teachers. This task can only be fulfilled in close co-operation with the teaching staff, which has consequences for the *organisation* of vocational colleges. For instance, teachers have to co-operate as a team in order develop schedules and lessons plans on the basis of the curricular guidelines.

In summary, the responsibilities of teachers increase and the tasks they are asked to fulfil become more complex. These are typical indicators for a changing notion of *professionalism* of teachers and for job enrichment. Also, the organisation of colleges has to change to initiate and support the teamwork of teachers. This change is part of a wider reshuffling of responsibilities in the institutional set-up of vocational training. The changes are illustrated in the following figure.

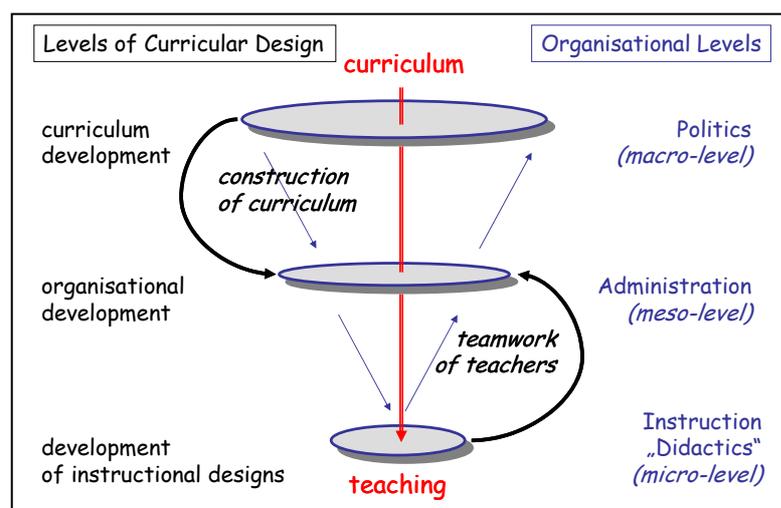


Figure 3: Curricular and organisational changes in the ‘Lernfeldkonzept’

In order to be able to plan teaching and learning processes on the basis of vague curricular guidelines, teachers have to take real-life work contexts into account. As hinted at in the previous section, learning areas represent pedagogically adapted and enriched vocational processes derived from actual work contexts. This entails that teachers have to co-operate with training companies while planning their lessons. The long-standing organisational and pedagogical challenge of co-operation between the two main venues of training in the dual system has become more pressing than ever (cf. research documented in Euler 1998b and 1999). Keeping in touch with developments in the economy and establishing contact with training companies becomes a central task for vocational colleges and teachers.

Thus, the potential changes in the transfer mechanism between the world of work and college-based training context resulting from the introduction of the *Lernfeldkonzept* can be summarised as follows:

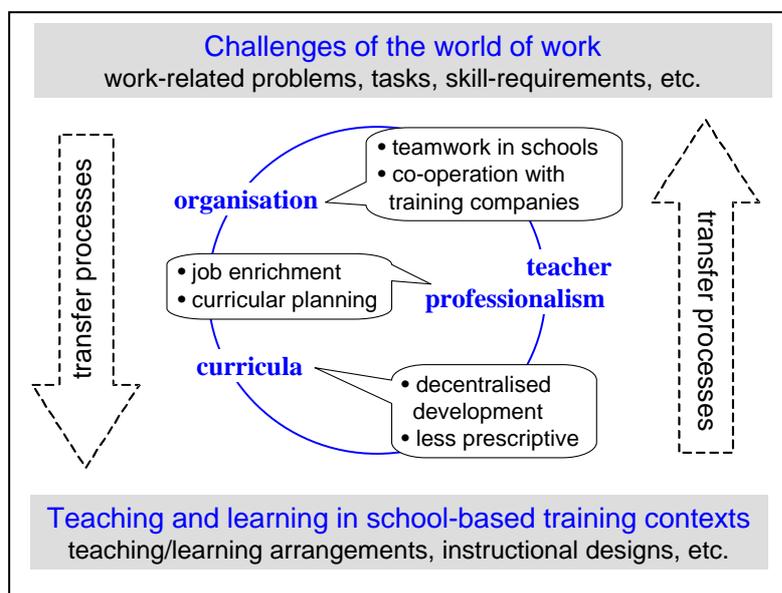


Figure 4: The Lernfeldkonzept: Changing transfer processes between the world of work and college-based training contexts

4 Conclusions: Challenges posed by the *Lernfeldkonzept*

In the light of the current ‘training crisis’, the *Lernfeldkonzept* is regarded as one way of improving the dual system, in particular in terms of its responsiveness towards the challenges of modern workplaces. Therefore, it is hoped that it increases the willingness of companies to offer training places and thus to overcome the quantitative crisis of the system.

However, research into the implementation of the concept has shown that a variety of problems qualify the potentials of the *Lernfeldkonzept* to improve existing and initiate new

transfer processes between vocational colleges and the world of work (cf. ISB 2003 and HELP 2003).²

In terms of *organisational* aspects, the headship of colleges seems to pose a particular problem. The headship traditionally instructed and supervised the work of teachers; often in more or less directive ways. The main means for instruction and supervision was the strongly prescriptive curriculum which could be used to set the criteria for the evaluation of teachers' work. The new curricula cannot be used for this purpose anymore since they leave it to the teachers to specify teaching and learning processes. In order to fulfil this task they need organisational support in terms of time to specify contents and aims of instructions, equipment and materials to implement more comprehensive learning arrangements, and arenas to meet and to work together. This kind of support can only be provided by the headship of colleges which is faced with a whole new range of responsibilities. As a consequence it is necessary to extend the headship of the traditional single headmistress or headmaster and to create new positions for deputy heads. Considering the empirical evidence, these new kinds of headship teams are in existence at most colleges now but the necessary changes in the relationship between headship and teachers – from a directive to a supportive one – has not been made in all cases. As a result, teachers often complain about the lack of time and space for teamwork with colleagues, whereas headships argue that curriculum development measures are beyond its influence and control.

In terms of the *teachers' professionalism* it appears to pose a challenge for many teachers to change their work routines and to make teamwork a central part of the preparation of teaching and learning processes. The traditional view of teachers is that of a 'single combatant' who fights the elements, that is, the college bureaucracy, students, adverse teaching conditions and the curriculum. The *Lernfeldkonzept*, however, challenges this view because it requires teachers to co-operate beyond their specific subjects. With its emphasis on typical real-life problems likely to be faced by trainees in their training companies, the teachers' main task in the *Lernfeldkonzept* is the development of learning arrangements that model these problems in a meaningful way. For this development process, expertise from across the subjects taught by a whole group of teachers is required. This notion departs radically from traditional views on professionalism. The departure and the process of working as a member of a group of teachers is often regarded by teachers – more often covertly than overtly – as problematic if not impossible. The pessimistic view of teachers is also often linked to a lack of direct contact to local companies and up-to-date knowledge of processes in the world of work.

Finally, there seem to be a number of problems in the conceptualisation and implementation of the new type of *curricula*. In particular, teachers complain about the lack of workable

² The findings outlined here are drawn from the final reports of two pilot projects that investigated the implementation of the *Lernfeldkonzept*, Nele (*Neue Unterrichtsstrukturen und Lernkonzepte durch berufliches Lernen in Lernfeldern* – new instructional designs and learning concepts in vocational learning in areas of learning) and Wislok (*Wissensforen als Instrument der Lernortkooperation* – knowledge arenas as instruments for the co-operation of learning venues) (cf. ISB 2003 and HELP 2003). Further, results derived from the student project 'The *Lernfeldkonzept* as an initiator of transfer processes', conducted at the University of Paderborn during the winter term 2003/04 were used.

starting point for connecting curricular areas of learning with the world of work. In some cases, areas of learning are formulated in ways that make it difficult for teachers to identify their relevance for the world of work. These conceptual problems seem to have been particularly severe in the earliest generation of new curricular. It could be argued that the cooperation with experts from the world of work remains of particular importance for developing curricular guidelines – a notion that has not lost its value with the introduction of the *Lernfeldkonzept*. These problems were intensified by a lack of information for teachers about the ideas of the concept.

In summary, an array of potentials of the *Lernfeldkonzept* to initiate new ways and strengthen existing ways of developing transfer processes between the world of work and college-based training in the dual system can be identified. However, these potentials depend on far-reaching changes in the organisational, curricular and professional set-up of college-based training; changes that have not yet taken place to a sufficient degree in most German vocational colleges.

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The System of Continuing Education in German VET

1 Classification of continuing vocational education and training

Continuing education in Germany consists of vocational, general and political continuing education. An enormous diversity of institutions, providers and offers is typical of the whole area of continuing education.

Continuing vocational education and training (VET) is one of the biggest sectors within continuing education. It contains all courses and programmes leading to qualifications that intend to maintain, expand and build up vocational knowledge and skills.

Over the last ten years, in the literature and in statistics dealing with continuing VET we can find a distinction between formal and informal education and training. Formal programmes include organized seminars and courses that are, at a minimum, linked to an institution, lecturers/ trainers and a predefined schedule which lead ultimately to a formal qualification (diploma or certificate).

Informal further education subsumes all those ways of acquiring knowledge and skills which are not institutionalized, of short duration and integrated in the daily and work contexts (e.g. reading technical literature, learning through observation or experiment, attending talks and lectures and the like). Figure 1 summarises this structure.

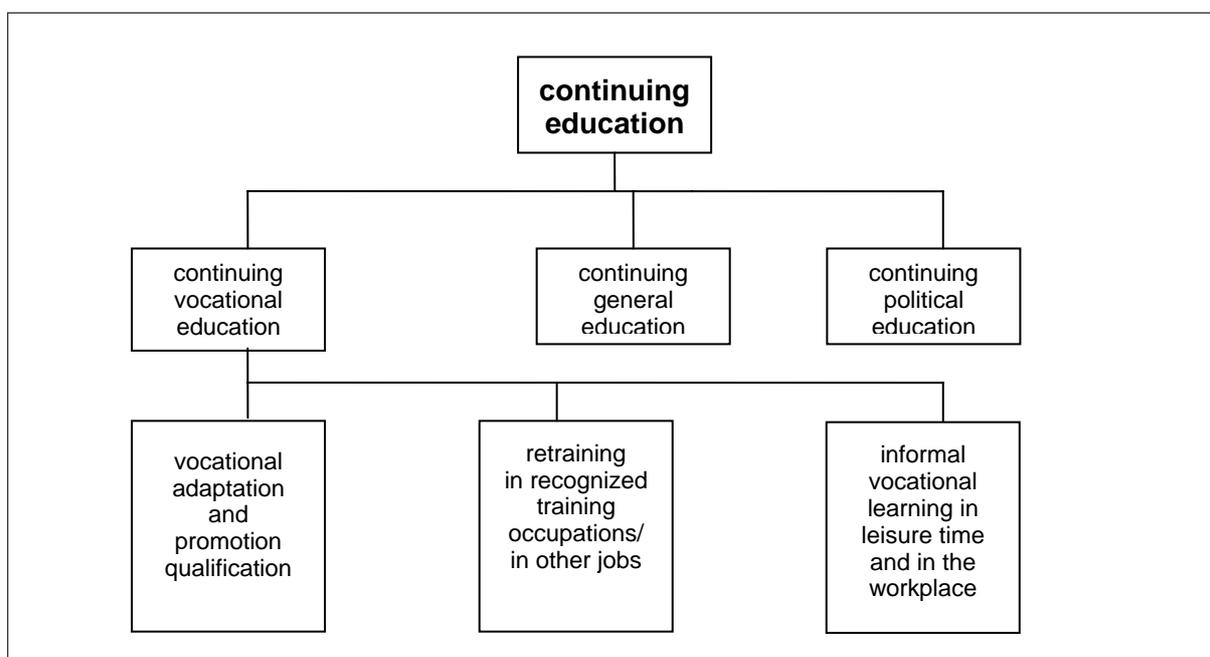


Figure 1: Continuing education in Germany

1.1 Formal continuing education

Following the structural plan of the German Educational Council (Deutscher Bildungsrat) of 1970, the “fourth recommendation of the Conference of Ministers of Culture on further education (2001)” defines continuing education as “the continuation or resumption of organized learning after the conclusion of an initial educational phase of varying length and usually after beginning professional or family work” (KMK 2003, 60).

Hence the term continuing education includes different areas such as adaptation qualification¹, advanced training, promotion (advanced) qualification and retraining. The area of continuing education is designated the fourth pillar of the German educational system, but even in the so-called tertiary sector of vocational training, continuing vocational training takes place in school-like form, in specialized and vocational schools, in adult evening centres and universities.

Compared to other European systems, the German system of continuing vocational training is characterized by its market led approach to provision. The consequence is that there is a confusing multiplicity of institutions and offers for continuing education. The reasons for this plurality are the result of both historical and educational planning causes.

Thus, historically and in terms of terms of democracy, the protagonists of adult education in the 1920s insisted that the sector of adult education articulate as many interests as possible and that correspondingly differing providers be involved. This principle of pluralism took the place of overall regulation by the state, something which has continued to this date.

From a planning perspective, a continuing education structure characterized by diversity and competition between its suppliers and the programmes that they provide can react more rapidly to the quickly changing demands of the employment sector or compensate for the chronic co-ordination deficiencies between the educational and employment systems. This also speaks in favour of a minimal role for the state in continuing education.

The state, therefore, merely determines the principles and governs the organization and promotion of continuing education. The arrangement of continuing education largely follows the principle of “subsidiarity”. This means that the state leaves the development of continuing education to different powers in society and exhorts all those involved in the sector of continuing education to show public responsibility.

However, some suggestions have been made to increase the systematic nature and accountability of continuing education, such as developing “co-ordinating legislation”, a Federal framework, and for Federal regulations in continuing vocational training aiming at a middle course between the hitherto underdetermined continuing education “market” and a nationalization of continuing education.

¹ The German term “Anpassungsfortbildung“ includes all kind of further training that intends to obtain vocational qualification, enlarge it or adapt it to technical developments.

The legal responsibilities for continuing vocational training are regulated in Germany according to the division of competences between the Federal government and the Federal states agreed upon in Constitutional Law (Art. 30, Art. 72, Art. 74 of the Constitutional Law). Different Federal and state laws are relevant to the governance of continuing vocational training. Thus, specific aspects of continuing vocational training are regulated in individual Federal laws. In a broad sense, the Vocational Education Act, for example, determines the examination modes for advanced training and retraining, the Work Promotion Act (Social Law Book III) the financing, and the Works Constitution Act or the Personnel Representation Act co-determination in the field of corporate continuing education. Whereas the Federal government regulates extra-school continuing education, legislative competence for continuing vocational training at school is in the hands of the states (Länder). The Career Advancement Further Education Promotion Act (AFBG) that took effect on 1 January 1996 aims at achieving an individual legal claim to the promotion of vocational advancement further education.

1.2 Informal continuing education

The field of informal continuing education cannot be clearly differentiated from formal continuing education. The reporting system “Weiterbildung VIII” (BMBF) (2003) includes those forms that have formal character and are organized, such as those at which the place of learning and the workplace are spatially and temporally separated. Learning in the context of work plays a special role in informal continuing education. This includes conventional forms such as instruction, initial skill adaptation training and new forms like exchange programmes, job rotation, “Lernstatt”, quality circle and self-directed learning at the workplace by reading specialist literature or learning at the computer. Furthermore, information giving events (specialist talks, conferences/congresses, trade fairs, exchanges of experience and other information events) are also provided at work (cf. Arnold and Schiersmann 2004, 40).

2 Structure of supply and demand

In keeping with the principle of pluralism, the structure of providers in continuing vocational training is extremely heterogeneous. Continuing vocational training is offered by employers/companies, private institutions, chambers (“Kammern”), professional associations, academies, polytechnics, technical schools, vocational schools, adult evening centres, the employers’ association, occupation co-operatives, labour unions, church institutions and correspondence schools. The literature on the subject makes different suggestions as to how this wide spectrum of providers can be categorized. Most authors differentiate between public providers not pursuing any particular interests and accessible to all (state and communal facilities); free providers (chambers, employers’ associations, professional associations, churches, labour unions), which according to their mandate offer their own continuing education activities to a defined group of persons; and private providers (companies and commercial institutions of continuing education), which work on a for profit basis. The statistical registration of the structure of providers in continuing vocational training still

proves to be a complicated undertaking. One of the reasons for this is the problem of counting because not all the providers are recorded on continuing education databases. A further reason is given by the problems of differentiation and categorization between the different providers.

The database KURS of the Federal Agency for Labour is the largest database on continuing education in Germany. It has the task of providing an overview of continuing vocational training opportunities in Germany in order to produce transparency in the continuing education market. Currently, the database contains 12,500 providers of continuing vocational training with approximately 450,000 activities (cf. BMBF 2004, 174).

As measured by the numbers participating in the year 2000, employers/companies are the most frequent providers of continuing vocational training with 53% of participants. Private institutions and chambers rank second and third with shares of 9% each (cf. BMBF 2003, 240). This ranking has remained much the same since the 1990s.

Alongside the increase in the number of providers of, continuing vocational training the range of activities has also grown in recent years with a 50% increase in the number of programmes being offered between 2001 and 2003. Of the continuing education courses recorded in KURS, 95.6% were concerned with adapting and expanding professional knowledge and skills, with 2.9% serving to promote professional advancement (see Table 1).

Table 1: **Objectives of professional continuing training**
(source: BMBF 2004, 176)

Domains of vocational continuing training	Number and percentage of events
total number of continuing education events	450,004
continuing training for adaptation	95.6%
advanced continuing training	2.9%
<i>thereunder:</i>	
<i>graduates in business administration or of a commercial education</i>	1.2 %
<i>master craftsmen</i>	1.2%
<i>technicians</i>	0.5%
academic continuing education	1.5%

The KURS database categorizes the learning opportunities offered in adaptation continuing training into 74 main groups. In terms of popularity the first ten of these are (in rank order): data processing and informatics (24.8%), electronic data processing (EDP) applications (11.3%), leadership, labour and communications techniques (6.3%), journalism (5.7%), welding and metal joining techniques (5.2%), health care (4.7%), law (4.4%), office/administration (4.0%), finance, accounting and costing (2.5%), management, corporate representation (2.0%). All the other subject groups account for 29.2% of participants (ibid. 178).

There are no data on the subjects/learning areas of informal continuing vocational training. Only the kinds of this form of continuing education have been recorded to date. The most frequent activities in informal continuing education is headed by self-study by observation and experimentation at the workplace, closely followed by the reading of professional literature or specialist journals, short events (e.g. talks, morning seminars), and instruction/training. Those kinds connected with organizational effort (specialist visits to other departments, quality and workshop circles, “Lernstatt”, participation groups and exchange programmes) are found at the bottom end of this ranking (cf. BMBF 2003, 186).

3 Structure of participation

Despite numerous educational assumptions only half of the adult population participate in continuing education. The causes of this non-participation in continuing vocational training are manifold (Bolder and Hendrich 2000) including: negative experiences at school, motivational difficulties, lack of material and time resources and the anticipated inability to utilize what has been learnt. All in all, it can be ascertained that the social selectivity, which still exists in the overall system of education, cannot in effect be compensated for by the system of continuing education.

However, over the long term participation in continuing vocational training has clearly increased. According to information from different reporting systems on continuing education in Germany, participation in 2000 (see Table 2) was three times higher than in 1979² (cf. Kuwan 2004, 204).

Table 2: **Participation in continuing vocational education in Germany 1979 – 2000**
(Source: Kuwan 2004, 204)

Types of actions/programmes	Quotas of participation (in %)							
	1979	1982	1985	1988	1991	1994	1997	2000
I took retraining into another profession/occupation with the help of courses	1	1	1	1	2	2	2	2
I participated in courses for occupational advancement	2	2	2	3	3	4	3	3
I participated in courses in the company for familiarization with a new job	3	4	3	4	4	5	6	6
I participated in courses for adaptation to new tasks in my job	-	-	-	8	10	7	12	11
I participated in other courses in my job	6	8	8	9	8	9	9	10
Participation in at least on one these measures = quota of participation in continuing training	10	12	12	18	21	24	30	29

² Persons between the ages of 19 and 64 were interviewed. The last sample comprised 7,000 cases.

The latest data on the structure of participation in continuing vocational training derive from the ongoing project of the Federal Institute for Vocational Training (BIBB) entitled „Costs and Benefits of Vocational Continuing Education for Individuals“ ("Kosten und Nutzen beruflicher Weiterbildung für Individuen"). The BIBB survey covers the totality of employable persons aged between 19 and 64. A total of 5,058 persons (net sample) were interviewed between November 2002 and May 2003 and the participation rate amounted to 39% (cf. Beicht, Schiel and Timmermann 2004, 6).

Up to now the study has been able to corroborate the traditional structural characteristics of participation in continuing vocational training: the degree of participation by adults in continuing vocational training correlates with the possession of a middle/higher certificate from schools of general education (see Figure 2).

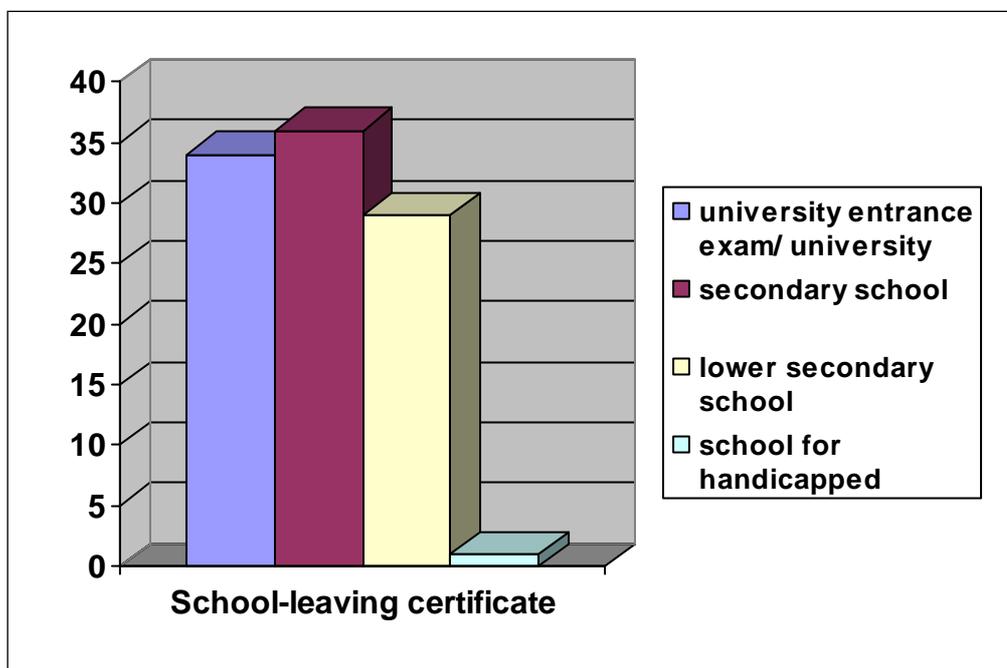


Figure 2: Participants of continuing vocational training related to school-leaving certificates, in % (Beicht, Schiel and Timmermann, 2004, 7)

An individual who completes their vocational training with a medium/high level of qualification (completion of initial vocational training, training as a master/technician and university/polytech) is likely to have a greater likelihood of subsequent participation in continuing education (94%). In addition, participants in continuing vocational training are usually fully employed (75%). Moreover, participants differ according to their professional status: with 79%, white-collar workers, civil servants and the self-employed are more strongly represented in continuing vocational training than blue-collar workers (20%).

However, these results are completely reversed when the question is posed as to the time expended by participants on continuing vocational training. According to the reporting system “Weiterbildung” (BMBF 2003), the amount of time expended in continuing education

by different types of participant differs from the participation rate of these different groups. The reason for this can be traced back to the high proportion of continuing training for the unemployed. In 2000, for instance, a participant without vocational training invested on average 259 hours on continuing vocational training. One with a university degree invested only 95 hours (BMBF 2003, 64). The time expenditure of participants with an apprenticeship was also higher than those with a university degree. Blue-collar workers spend more time as participants than white-collar workers or civil servants. Those employed in industry or the civil service spend less time as participants in continuing education than employees in other sectors of the economy. In the expenditure of time per participant, employees in small enterprises exceed those in large enterprises (cf. Kuwan 2004, 207).

Finally, the CVTS Survey (Continuing Vocational Training Survey), provides comparative information on the participation rate in different countries (Grünewald, Morall and Schönfeld 2003). With a participation rate of 36% in enterprises offering courses, Germany is in the second half of the countries covered. The Scandinavian countries (Sweden: 63%, Denmark: 55%, Finland: 54%) lead in terms of the participation rate, followed by Belgium (54%), Norway (53%), Ireland (52%), Great Britain (51%), France (51%), Czech Republic (49%), Luxembourg (48%), Italy (47%), Slovenia (46%), Portugal (45%), Netherlands (44%), Spain (44%). Austria and a number of Eastern European countries (Bulgaria, Estonia, Hungary, Lithuania, Romania and Latvia) have a lower participation rate in corporate courses than Germany (24).

4 Finance

The financing of continuing vocational training as a whole is carried out by a mixture of cost sharing between private individuals, the Federal Agency for Labour, enterprises and the public authorities. The distinction between prefinancing (“who pays?”) and refinancing (“who bears the costs?”) is significant for an analysis of the financing of continuing education. This distinction results from the fact that participants, enterprises or the state can replace the expenses for continuing education by getting them back from other actors (cf. Expertenkommission 2002, 94).

No topical data are currently available. The Expert Commission on “The Financing of Lifelong Learning” (2002) arrived at the finding that with a share of over 54% and an overall budget of € 17.32 bn private enterprises represent by far the largest financing group (prefinancing). In prefinancing the Federal Agency for Labour takes a clear second position investing €6.73 bn (21%). Private individuals take third position with a share of €5.73 bn (18%) with the public authorities fourth, paying €2.22 bn (7%). It is striking that, as Figure 3 shows, the proportion of the gross domestic product being invested in continuing vocational training has declined significantly since 1986 (cf. 111).

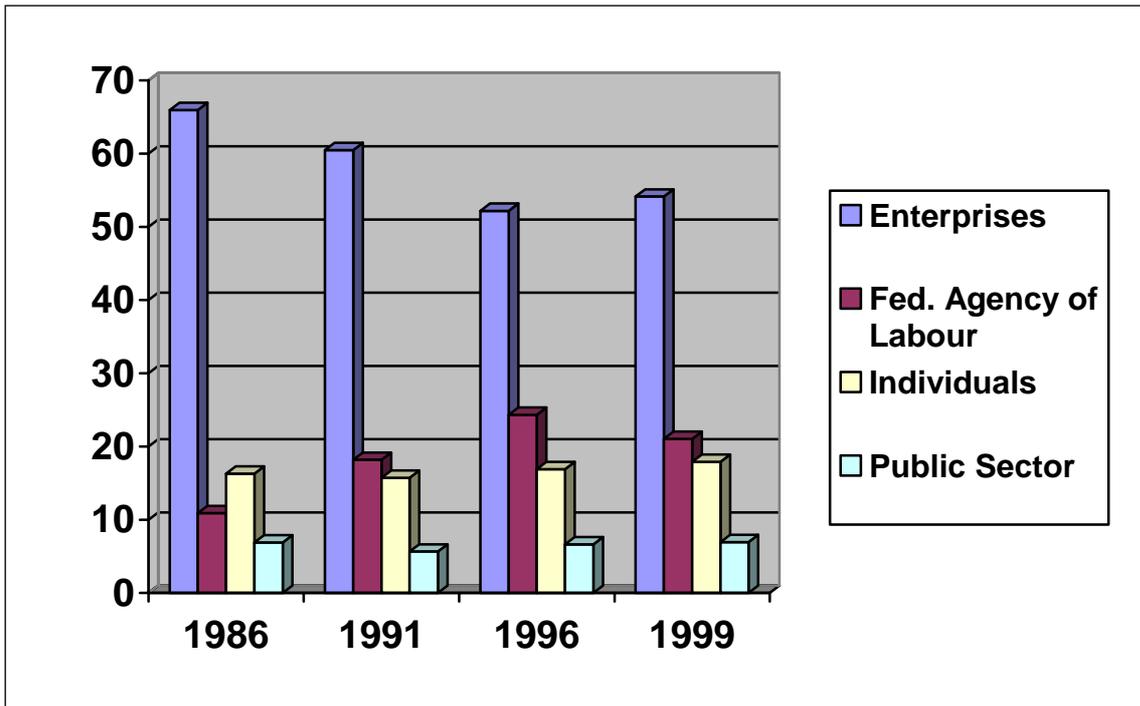


Figure 3: Total volume of prefinancing for continuing education (1987-1999), in % (Expertenkommission 2002, 111)

Those who pay for continuing education are not necessarily those who bear the costs of continuing education. Whereas the prefinancing of continuing education can be ascertained relatively easily in Germany, recording refinancing largely avoids empirical grasp. We have to resort, therefore, to considerations of plausibility in order to say something about the refinancing of continuing education. The Expert Commission assumes that the tax system (tax refunding) prevents enterprises and private persons from being burdened to the extent that the expenditure and cost surveys would suggest. However, proceeding from this assumption, a lot speaks in favour of the premise that private individuals are ultimately the financial bearers of continuing education as consumers, taxpayers and contributors to unemployment insurance (cf. 117).

5 Control of continuing vocational training by co-operation and networking

The existing structure of continuing vocational training leads not only to lack of transparency on the further education market, but also to fundamental difficulties in the empirical recording of the different individual aspects mentioned above. In recent years further education databases and large-scale panel studies (Bellmann 2003) have contributed towards improving the overview of continuing vocational training structures in Germany. Nevertheless, the many different databases, as well as the partial statistics, only provide a fragmentary and not an overall picture.

A further drawback of this market-like organization and the absence of an overall tax system in continuing vocational training must be seen in the fact that the numerous providers of continuing vocational training are free to act as they wish, and have no long-term obligations to co-operate. This circumstance considerably favours the lack of transparency of further education.

As a compromise between the existing market dynamism and the non-existent overall taxation of continuing vocational training, since the 1970s proposals have been submitted, both in the vocational educational and scientific discussion, that aim at improving and systematizing co-operation and networking in continuing vocational training. In the 1990s especially, the EU, the Federal government and the states provided financial grants to test and implement networks in continuing vocational training.

The key objectives of promoting the co-operation and networking of providers of continuing vocational training are: grouping resources and capacities in continuing vocational training; increasing the transparency of offers of continuing training, their services and usage by participants; increasing the quality and usability of educational offers; intensifying co-operation between education, employment and labour market policies; business development; as well as other fields of policy to promote the employability of people and permeability between the educational sectors.

To reach such and similar objectives a number of projects have been launched to implement networks in recent years. However, in relation to the expectations attached to such networks, reports on real network activity and results are scant. The number of programmatic approaches still exceeds that of empirical contributions. It is only very recently that individual reports have been published from scientific monitoring of regional further education networks (Gramlinger and Büchter 2004).

A major reason for this lack of information is due to fact that the effectiveness of co-operation and networking in continuing vocational training is difficult to ascertain empirically, not least because its effects only tend to appear long-term. In this respect there is a great need for research, in particular in view of the large budget that has been spent on promoting co-operation and networking up till now. An important question would be to what extent projects to promote co-operation and networking in continuing vocational training have contributed towards changing or improving the behaviour of participants.

6 The relation between vocational training and continuing vocational training

In the debate in Germany on further education the question as to the relation between vocational training and continuing vocational training has been little heeded to date. In the additional survey to CVT II (Continuing Vocational Training Survey) (cf. Grünewald, Morall and Schönfeld 2003, 123ff.), which only collected data on corporate further education in Germany, companies were asked about their opinions on the future relation between training

and continuing training. The question was less one of regulatory and curricular integration, but rather of weighing the two areas against one another. The following picture emerged: 44% of enterprises are of the opinion that training and continuing training should be expanded in scope and content; 34% felt that continuing training should be expanded and vocational training maintained; only 16% stated that both vocational training and continuing training should be kept as they are; and merely 6% advocated only expanding vocational training and maintaining continuing training (cf. 124). These findings can be interpreted as indicating that enterprises show a clear preference for a priority use of corporate continuing training for adaptation to technical and organizational changes (cf. 123).

In the political and scientific discussion on vocational training in Germany there is widespread agreement that both fields of vocational training to promote permeability must be more strongly integrated in the educational system and lifelong learning. A number of suggestions have been made as to how this might be achieved but surveys on actual practice are still rare. However, approaches to and ideas for interlocking vocational training and continuing vocational training must take note that both areas demonstrate different structural characteristics on different levels as indicated in Table 3.

Table 3: **Structural characteristics of vocational training and continuing training**

Structural characteristics	education & training	continuing training
Legal basics	Vocational Training Act/ school laws of the countries	partial legislation, e.g. vocational training law, SGB III, Betriebsverfassungs-, Personalvertretungsgesetz
Curricular basics	curricula for recognized training occupations	only partially made-up
Provider	enterprises, inter-company training places, vocational schools	diversity of providers on the continuing training market
Addressees	adolescents	adults
Personnel	Instructors/teachers in vocational schools	trainers without specific requirements of qualifications
Finance	enterprises/state	various possibilities of finance and promotion

The proposal of the Federal Institute for Vocational Training (BIBB) suggesting an interlocking and simultaneous “dualisation” of training and continuing training including higher education is far-reaching. Conceptual evidence can also be discerned in the approaches of additional qualifications (qualifications accompanying training and leading on to continuing training) (Schiersmann, Iller and Remmele 2001).

In addition, it must be borne in mind that in practice in small and medium-sized enterprises there have long been established practices that interlock vocational training and continuing vocational training. Here training resources are an essential prerequisite for continuing training. That means that continuous training in these enterprises benefits to an extent that should not be underestimated from the demands and conditions of initial vocational training in terms of content and personnel (Büchter and Goltz 2001). However, at the moment there are few data on real practices of the integration of these two fields of vocational training. Here there is a major requirement for research.

7 Conclusion

Due to its historically evolved structure, continuing vocational training is a complex field in Germany. This complexity is increased by the fact that the concept of continuing education has been expanded by the empirically elusive forms of informal learning and that simultaneously more and more providers are pouring onto the further education market. "Expertisen zu den konzeptionellen Grundlagen für einen Nationalen Bildungsbericht – Berufliche Bildung und Weiterbildung/Lebenslanges Lernen" (Baethge, Buss and Lanfer 2004) provides a number of suggestions for research.

In our opinion a future focus should be placed on the following issues in particular:

- What relevance do formal and informal learning have for curricula vitae and labour market policy?
- What success in learning can be achieved by informal further education in particular?
- With what criteria are opportunities in continuing vocational training planned (who determines the needs on what basis)?
- How can groups currently not participating in education be motivated to take part in continuing vocational training?
- What financial incentives already exist in continuing vocational training and what effects of such incentives can be demonstrated on the participation structure?
- How can the effectiveness of promoting co-operation and networking in continuing vocational training be recorded empirically?
- How can training and continuing training be interlocked at the level of curriculum and content?

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European National and regional change drivers in the transformation of Italian VET system

1 The changing institutional framework

The picture of Italian VET in 2005 is characterised by change – both exogenous and endogenous – and uncertainty.

The national institutional framework for VET used to be constituted as follows: a highly decentralised (Regionalised, but with significant responsibilities attributed to Provinces in several Regions) vocational training system, and a very centralised Education System (including vocational education) with very limited integration between them. In recent years a significant decentralisation process of education and a push towards integration of the different sub-systems are continuously changing the VET Scenario, stimulating the interest of regional politicians towards the increased competencies offered by education and sometimes neglecting the tradition of offering political leadership and specific innovation policies for vocational training. In terms of numbers (budget, people, electorate) this can be explained very easily; in terms of personal experience and political debate, it is easier to talk about schools than about Vocational Training. In 2004 some newspapers reported that the Government was seriously considering the idea of the definition of Vocational Training competencies being absorbed by the Ministry of Education, University and Research (from the present balanced of responsibility between the Ministry of Employment and Regional Governments).

The Reform Law (53/2003) of the school system, extending the duration of compulsory education but involving the provision of vocational training system in the later years, has definitely changed the status quo of initial vocational training.

At about the same time, a reform of continuing training has given a key role to Social Partners and their new representative bodies (Fondi Interprofessionali – Inter-professional Funds for Continuing Training) to plan and fund continuing training projects. It must be noticed that Italy was not only a pioneer in guaranteeing workers the right to continuing education (the “150 hours” allowed to study any subject and historically used to certificate or re-certificate lower qualified workers in the Seventies), but also a country with one of the lowest participation rate of adults in any form of structured learning, related or not to the job and/or the workplace. The new system cannot be evaluated yet in terms of impact, but it has contributed to de-stabilize the quiet, almost static situation that had characterised the Italian VET system for so many years.

However, national reforms are not the only cause of a somehow chaotic but certainly dynamic phase in the evolution of the Italian VET system: variations in the amount and priorities of European Structural funds available, European priorities in the field of lifelong learning, regional cooperation and competition dynamics are all contributing to make life challenging for VET policy makers and practitioners. This article is an attempt to briefly explore the European, national and regional change drivers and to discuss their potential positive and negative impact on the VET system.

2 The European drivers

2.1 The ESF Planning and Monitoring System and the use of resources in Italy

As described above, the Italian VET system, in its present shape, is relatively “young” (Law 845/1978) and the ESF system was an important factor in shaping the organisation and development of regional and national provision of vocational training. Thus, the new ESF Agenda (2007-2013) characterised by a strong reduction of funds, constitutes a major change driver for the Italian VET system; and, it is important to stress the role played traditionally by the European policies and strategies in the orientation and definition of Italian national policies as well as of the Agenda of policy makers at regional level.

Given the fact that the ESF resources were traditionally the main source of funds for the VET system, the Italian VET market has had to face, in the present phase, an important challenge and has experienced considerable difficulty in moving from a totally supply-driven situation dependent on the public funds to a situation much more dependent on the demand and funds of individuals and organisations.

One effect of such changes has been that the total amount of investments (1.657.768 € in 2002-2003) in continuing training in enterprises has increased constantly over the last few years with the percentage of public funds constantly diminishing. Obviously we can find important differences between the North East, the North West Centre and the South and the Islands¹.

2.2 The Lifelong Learning Agenda and the Copenhagen process

As stressed above, European policies and strategies have traditionally played a key role in the change and development process at national, regional and local levels and this is particularly true for the Lifelong Learning Agenda and the Copenhagen Process. Considering the policy decisions and strategies at European level to achieve the Lisbon goals, Italy has developed over the last few years a strategy and concrete choices to move from a VET system articulated in subsystems (Education, Initial vocational training, Continuing training and Adult training) into a Lifelong learning system. Different initiatives have been launched over

¹ Unioncamere, Ministero del Lavoro, Sistema informativo Excelsior, 2001-2004

recent years in order to embed the Lisbon Goals in the national and regional systems and to express them in policy decisions as well as in concrete instruments.

At a national level, the VET system is based on traditional training bodies with schools and universities as the main providers. The training supply is articulated as follow:

- Compulsory training: the new framework introduced by the Moratti School Reform (Law 53/2003; 28/03/03) is changing the overall design of the education system, from the primary school to the university. The reform process is “in progress” and it is very difficult to evaluate the results and the impact of the new organisation;
- Higher Integrated Education (FIS) and Higher Technical Education & Training programmes (IFTS): these tools/courses are one of the main vectors through which to innovate the education and training systems and to promote their integration.

After the first period of implementation we note an important success in terms of satisfaction with learning, as well as in terms of employment effectiveness. After the first experimentation phase with more or less 200 IFTS courses, during the period 2000-2001, 600 courses were carried out with a high level of satisfaction of final users and mainly with a high level of employment effectiveness. These programmes allowed learners to develop technical and professional competences with good employment chances thanks to the new models/patterns of collaboration between universities, enterprises and training bodies. In the academic year 2002-2003, 520 such courses were scheduled². Nevertheless some weak points can be identified, like the low level of supply (IFTS is again an experimental programme) and the percentage of drop-outs (26% of young people in the first two months of training). A new challenge comes from the Moratti Reform (Law 53/2003) that allows learners to move directly from the 4th year of Education and Vocational Training courses to this type of courses.

One of the main innovations during the last year is the development of a common, standard system of competences, shared between the different actors involved in VET and aimed at improving the geographic and professional mobility among Italian as well as between European regions. A first experimental phase was carried out during the year 2002-2003 covering basic and transferable skills, affecting the design as well as the implementation phase. The results are now the subject of an evaluation analysis in order to identify major strengths and weaknesses.

Finally an important agreement was achieved by the “Joint Conference State – Regions – Local Bodies” (29 April 2004), concerning the minimum standard of acquired competences/ of performance. This is based on the “Unités Capitalisables” methodology and affects 37 professional profiles in Agriculture, Environment, Building, ICT, Manufacturing Industry, Transport, and Tourism.

At a regional level, since 2002 several Italian regions have started a reform process based on the lifelong learning principles and priorities. In particular, three regions are implementing

² Unfortunately, these are the last available data.

their reforms based on a process geared to integrate education, training guidance and employment systems: Toscana, Emilia Romagna and Basilicata.

It is important to stress some key elements:

- The reform laws concern two different levels, institutional and functional;
- The focus, at organisational level, is on the demand coming from the different target groups. In particular the “learning citizen” is at the centre of the process, especially in terms of the barriers to access and to benefits from the training supply.
- The close link between the “Training Booklet” (Libretto Formativo) and the lifelong learning policies (please refer to the next paragraph).

2.3 The single EUROPASS Framework and the Italian existing instruments

At the end of last year, the European Parliament and Council approved the new EUROPASS, designed to encourage mobility and lifelong learning in an enlarged Europe. It aims to help European citizens make their qualifications and skills easily understood throughout Europe by 2010. EUROPASS brings together into a single framework several existing tools for ensuring the transparency of diplomas, certificates and competences. The Italian Ministry of Employment and Social Affairs adopted the new instrument and also promoted a feasibility study to develop an electronic version of the EUROPASS.

In the same period the Italian Government adopted the “Training Booklet³”, created by the D.L. 10/09/2003 and based on the agreement between two Ministries (Ministry of Education, University and Research and Ministry of Employment and Social Affairs), the Joint Conference State – Regions – Local Bodies, and Social Partners. It was conceived as a tool to record competences acquired through formal, informal and non formal learning, as well as to help the learning citizen in reflecting on personal and professional development.

The “Training Booklet” will be the key tool to ensure the transparency of lifelong and life wide learning and will assume the form of a synthetic device and portfolio of documents and proofs concerning individuals’ prior learning, professional and personal experiences. The Italian regions will play a key role in this process, and they can decide to delegate the administrative responsibilities to accredited bodies. The final responsible and owner is the citizen.

From the citizen’s point of view this important communication tool aims at:

- Providing information on the citizen, her/his CV and formal, non formal and informal learning experiences to be used for finding a new job, for professional mobility and for mobility between different education and training systems;
- Making competences and prior learning achievements recognizable and transparent;

³ The “Training Booklet” must not be confused with other tools/instruments, such as the European CV (which is completely self-managed by the citizen) and the Anagraphic- Professional Card (which has an administrative nature/character).

- Guiding people in professional development.

From the point of view of the Labour market and of enterprises, the Training Booklet represents an information tool useful for:

- Promoting the transferability of expertise and individual competences within the enrolment process and labour mobility;
- Stressing the learning and professional path of each citizen, paying particular attention to the potentialities, the expectations and the excellence results achieved.

Finally, from the point of view of Regional and Local Governments, and of the education system, this tool represents a guarantee for:

- Valorising the certification and acknowledgement which are carried out in education and training;
- Assuring transparency and transferability of learning and professional information of people at European level, fostering the flexibility and the individualisation of pathways.
- Assuring the visibility of competences and of personal experiences in order to promote the geographic and professional mobility and lifelong learning of individuals.

However, the risk of generating confusion is very high, because even if the different tools are all citizen- focused and all aim at fostering mobility and the possibility of recognising acquired competences, each tool plays a different role/different function. Consequently, the diffusion of the tools could generate problems because the same information is included in different tools with different formats (and consequently it will be necessary to adopt the same format and shared procedures to fill in the form). Furthermore, different actors own the tools: in some cases the full responsible is the citizen's, in some other cases there will be a shared responsibility between the citizen and the institutional body.

3 The national drivers

3.1 The reform of the Educational System and the push towards the integration

In the latest years a new development model has emerged in Italy: in harmony with the new European policies, it focuses on human resources as an “investment area” able to foster economic and social growth. The goal of the “knowledge society” has become a concrete objective. Tools to implement it have been set out in national and regional policies, aiming at improving the education and training supply for adult people, and at integrating different educational and vocational systems.

The Italian Government, together with the Social Partners, has already, through the “Work/ Employment Agreement” (1996) and then in the “Social Agreement for Development and Employment“ (1998), underlined the key role of continuing training in relation to the competitive changes occurring in the labour market, characterized by mobility and the

emergence of new professional models which require workers to have the continuous availability and capacity to learn.

Considering the main steps taken to transfer into the national context the European policy priorities encouraging the implementation of a “continuing education and training system”, the “Education for adult people” Act, by the Ministry of Education, becomes particularly relevant. The above mentioned Ordinance allowed the creation of the “Permanent Territorial Centres” (Centri Territoriali Permanenti - CTP), ‘places of needs’ comprehension, planning, conciliation, activation and government of education and training initiatives [...] and also collecting and spreading documentation” aimed at defining agreements with all those corporate bodies which operate in the adult education field, to foster their position in the territorial context. According to the above Act, the CTP’s activities are not only focused on courses to achieve school qualification, but also to receive, listen, guide and organise primary certification courses, developing basic/competences needed by “fragile and weaker” people .

The “Joint Conference State – Regions – Local Bodies” in 2000 approved a document concerning the reorganisation and the expansion of continuing adult education, in order to organise the different actors between the State, the Regions and the Local Bodies. This system gives credit to the European Union requirements on training system, which have to respond to a new economic and social demand, and also to encourage knowledge acquisition through differentiated learning opportunities in which times, places and learning methods are not totally pre-determined and codified.

Responding to the suggestions coming from EU policies, the document stresses the need to exploit both “formal training opportunities” (education and certified training), and “non-formal” ones addressed to citizens (culture, health education, social studies, education in clubs and societies, etc.). A primary goal is to remediate the low levels of education and training recorded for so many adult people. The new model appears as an “integrated” learning system, in which schools, vocational training bodies at a regional level, enterprises, universities, several associations (cultural, volunteers ...) work together in synergy.

In particular this system consists of three institutional levels, identified according to functions and competences linked to adult education:

- A) a national level, managed by a National Committee composed of the Ministry of Education, University and Research, the Ministry of Employment and Social Affairs, and a representative of Regions and Local Bodies. The main functions of the Committee are:
 - ◇ To integrate systems
 - ◇ To define strategies
 - ◇ To identify resources to carry out programmes and projects
 - ◇ To set up guidelines to build a national quality standards in education and training and shared criteria for the monitoring and the evaluation activities
 - ◇ To identify and agree methods to certify and acknowledge credits.

- B) a regional level, managed by a Regional Committee composed of Regional Governments, Local Bodies, the Representative of the Regional Education Office (depending on the Ministry of Education, University and Research) and the Social Partners. The main functions are:
- ◇ To agree on the regional planning of an “integrated learning supply”
 - ◇ To promote education and training activities according to a lifelong learning approach
 - ◇ To monitor and evaluate the system.
- C) at local level, the functions and competences are shared between Provinces, Municipalities and Mountain Communities, Local School offices, Social Partners, agencies dealing with education, and local school Councils. The Local Committee’s main functions are:
- ◇ To promote the education of adults in their area
 - ◇ To plan activities in line with regional criteria
 - ◇ To plan and define the criteria used to allocate funds
 - ◇ To carry out projects.

The following data provide a general framework of the CTP activities and gives an idea of the Italian situation concerning the supply of lifelong learning opportunities.

Table 1: **Supply with lifelong learning opportunities in Italy**

<i>Training Supply of CTP</i>				
Academic Year	CTP	Courses	Adult learners	Non Italian citizens
2001-2002	546	17.068	387.007	76.819
2002-2003	546	20.124	414.663	116.319

<i>Schools with evening courses</i>				
Year	Vocational Training	Technical Education	Classic, Scientific and artistic Education	Total
2001-2002	166	346	32	544
2002-2003	189	387	37	613

<i>Learners in evening courses</i>				
Year	Vocational Training	Technical Education	Classic, Scientific and artistic Education	Total
2001-2002	11.968	32.757	2.230	46.955
2002-2003	14.148	40.084	2.620	56.852

Unfortunately, these are the last available data.

Generally speaking, the process will be fostered by the possibility of recognising competences acquired not only in formal courses, but also through non-formal and informal learning experiences.

Another important factor of success will be the full implementation of the Individual Learning Accounts System (ILA System). The ILA system could be a radical change in the allocation of public resources, focused on a direct relationship between the demand and supply of services, through the mediation of local authorities and aimed at promoting individual development. In particular, some Italian regions have adopted a voucher system which is conceived as a tool to promote Lifelong Learning as well as to improve the contribution to the costs of final beneficiaries and of enterprises.

In the latest years the Ministry of Employment and Social Affairs launched a policy to foster the individual learning experience in order to support active citizenship and to improve the opportunities for, as well as employment in, a lifelong learning perspective.

The Italian Government promoted several individual tools, such as:

- Savings books
- Individual insurance plans
- Training vouchers
- Individual accounts.

Even more recently an evolution has started moving from the training voucher towards a new system which provides opportunities to:

- Build an analytical framework of the global system (supply of tools for training based on the individual demand; supply of services to reconcile professional life and personal life) in order to identify the main links between the different tools (Vouchers, ILA, etc) the different targets as well as the planning, implementing and control strategies implemented by the Government;
- Identify the success factors of the tools in social, economic and cultural terms, in order to better assess the effectiveness of the vouchers or of the other tools;
- Compare the models adopted by Italian organisations with other policy and strategies at European level. The Ministry is involved in a benchmarking system at European level thanks to the ELAP- European Learning Account network.

Also in view of implementing the European Memorandum of Lifelong Learning, several Italian regions adopted in the last years a sort of catalogue integrating the learning supply for continuing and adult training, based on a new approach to the balance of demand and supply at local level.

Since 1999 Italian training bodies are also experimenting with new ways and solutions for continuing training based on the individual demand. At present it is possible to identify two main categories of systems and tools: an experimental approach and the challenge of the Fondi interprofessionali (FIP). The approach experimented with over recent years in several Italian regions promoted integration between different funds and public resources to foster individual plans and programmes. Simultaneously, the Ministry enlarged the potential target for the public supply of training to including “fragile” and temporary workers (interinali) as well as unemployed people.

Moving from the national to the regional level, in 2004, a few regions (namely Piemonte, Emilia Romagna, Umbria, Veneto and Lombardia) invested public resources to provide individual adult training. Accordingly, the “learning citizen” is able to choose a programme or course in a local/departmental catalogue (for instance in Emilia Romagna this is called “electronic catalogue”). This ‘voucher’ amounts to about 1000-1300€

The innovative approach is represented by the FIP managed by the social parties. However, while all statutes and regulations include individual adult training, based on individual demand, only some of them specifically addressed the resources to implement the FIP. In particular, SME managers allocated 50% of funds to individual vouchers, stressing this tool as the best way to foster the professional development in SMEs. Normally the other funds are meant to finance the individual workers on the basis of a previous agreement with the enterprises.

The ILA is also a new tool in Italy, and three regions (Piemonte, Toscana and Umbria) are experimenting this new solution. For example, Toscana addressed funds from ESF to test this solution for 3000 unemployed people (90%) and “atypical” workers (10%) in two years. The main elements characterising this solutions are the following:

- The lack of co-financing by the worker;
- The personal account based on a “credit card”, charged by the local government in the closing phase of the course (grants will amount to a maximum of €2,500)
- A selection of guidance services based in Public Employment Centres.

3.2 The reform of Labour Law and the Impact on the Employment and Training Systems

The Italian Framework of employment, human resources and VET has been changed considerably over recent years as a consequence of new policies. For example, Law 30. 14/12/03 (known as Biagi Reform), has instituted Labour market reform by providing new instruments and solutions to promote more flexible working patterns. The Reform is a comprehensive labour market reorganisation initiative promoted by the Berlusconi government aiming at improving the flexibility of labour contracts, adaptability of labour demand and supply, and the transparency of the system and its processes, including effective measures to combat undeclared and illegal employment. In our view, one of the main weak

points is the lack of full integration between the Biagi reform and the new flexibility schemes of work on the one hand, and the social and economical measures to support people during the periods between different contracts/jobs on the other hand.

In addition, the network of local Public Employment Centres, is now facing competition from Private organisations active in the Labour market which provide recruitment and employment services.

The role of the Regions is confirmed, but the local dimension is getting more and more important in the organisation of Labour market policies and services. According to the guidelines provided by the International Labour Office (ILO), the model adopted is characterised by a proactive coexistence between public and private actors. The main trends seem to be:

- The outsourcing of the delivery services;
- Competitiveness between public and private services;
- Cooperatives or even private Agencies used in the field of on-line services (a web platform launched by private or public bodies);
- Cooperation with private agencies in the more complex projects to solve an enterprise's crisis or any other specific programmes in the Labour market.

The main changes introduced by the present national government are:

- The criteria to identify unemployed status as the lack of job and revenue as well as the "marginality/fragility" of the labour contract;
- the abrogation/suppression of the "seniority rule" within the employment system for the Public Administration.

The Regions were asked to define a new system concerning the Labour market, coherently with the national reform. All Regions stressed in their Acts the availability of a new approach to support the labour market, coherently with the previous experience and the priority of assuring the qualification of citizens.

The process of search of new employment ends with a new agreement between the Agency and the citizen, with the Agency providing information, guidance and training services.

3.3 The reform of continuing training and the early phase of "Inter-professional Funds for continuing training"

As above mentioned, the main means of providing training within enterprises and to employees is now the FIP, created by the Law 833/2000 and managed by the Social Partners. However, combining the figures for participation in Education with those for existing training provision within SMEs, provides an indication of the very low number participating in continuing training and adult education in Italy: in 2002-2003 only 470, 000 adults participated in Lifelong Learning and Continuous training within CTP and upper secondary schools. The key questions at this point are "How to improve this situation?" and "How to

support and promote the individual demand for learning/training in a political context characterised by economic crisis and new policies focused on the “citizen”?”.

Several critical factors can be identified:

- The lack of continuing training culture of the Social Partners, associated with the “historic” close link with the initial vocation training system at regional level, often characterized in the past by some gaps in local and sectoral development;
- The lack of an appreciation of the needs of adults because of the lack of a clear vision of their future at both a personal and professional level, and the need to provide easily accessible support that helps them to recognise and value their own strengths;
- The lack of training supply for workers in SMEs and lack of a training/learning culture among SME employers: in the current period of economic crisis SMEs are reducing training activities because they do not perceive training as a key tool to overcome difficulties in the life cycle of the enterprise.

The system is moving from Law 236/1993 (Continuous Training System) to FIP. From 2004 these bodies will have the tools and financial resources to promote a new learning supply. The introduction of the FIP is characterised by the involvement of several stakeholders in the process of orientation and definition of Lifelong Learning, and continuous training policies and strategies. The main critical dimensions of adult education, micro-firms and workers at risk of exclusion, are a priority in funding decision in 2004-2005.

Law 236/1993 and the Law 53/00 regulate adult training and are, with the ESF, the traditional way to finance the continuing training within enterprises, independent of their sector or their size. The start of the FIP in 2004, whose main instrument is the Training Plan (Piano Formativo) puts, however, a complementarity problem between the different ways of funding. The Ministry of Employment and Social Affairs -with two departmental orders in 2003 and 2004- distributed €13 M between the Italian Regions and established the main criteria to foster the integration between the different funds.

The first departmental order established the principle that the regions have to integrate the different initiatives and to plan in a closely coordinated way, considering the FIP Plans.

The First and Second order directed that 70% of funds should be used to address the problems of “weak” employees, such as those working in micro enterprises, or aged over forty-five, or with a low levels of qualification, or working in a sector or an enterprise facing serious crisis. The second order formally introduced the possibility to direct funds to meet the training needs of unemployed people.

In this first year, the main focus of FIP was the innovation processes in some/strategic economic sectors and in small and micro enterprises, with important barriers to access and use of training supply due to high costs and organisational and logistic constraints. To this end, the FIP, in which Social Partners are directly involved in planning and the management

of funds, is working to orientate resources towards initiatives consistent with the actual demand of enterprises and employees.

In May 2004 a measure to implement the law 53/2000 assigned more than €30 million to carry out two different types of actions:

- Training programmes linked to enterprise training plans, including a reduction of the labour time;
- Training projects submitted by single employees.

The analysis of the result of the evaluation of these initiatives stressed that the second kind of project is more appreciated by the final users.

The strategy of the Ministry of Labour is to foster these solutions and to push regions to provide 5% of global resources to fund initiatives submitted directly by enterprises, employees, as well as by their associations.

The main strategies at national and regional levels should provide for:

- Information and guidance services
- Dedicated funding
- Implementation of the credit and certification mechanisms to making visible informal and non-formal learning
- Set of services and tools to support learning process in order to match learning needs of adult people and to overcome barriers to accessing the learning supply (how to move from “facility” of access to “happiness” of access).

The FIP will be an important challenge and a vector of innovation of the Continuing Training System not only in terms of better match between demand and supply of competences and training, but mainly in terms of systematic dialogue with the regions (playing a new important role in socio-economical development after the reform of the Constitutional Chart) as well as in terms of providing new links among training, professional development and salary within enterprises.

4 Regional Drivers

4.1 Regional Diversity and Regional Policy Framework on the Move

Italy has always been well known for its regional diversity and stereotypically represented in terms of a rich and efficient North and a poorer and less efficient South. In fact the situation is much more complex and many declining areas can be found in Northern Italy as well as promising developments being found in districts of Southern Italy. The fundamental policy has been to give the responsibility for developing VET competencies to Regional Governments rather than to the National Ministry of Employment and to locate this

responsibility in the varying models of socio-economic development of the Italian Regions (19 Regions and the two Autonomous Provinces of Trento and Bolzano). The Regions have legislative power in the field of vocational training and have used this power to shape very diverse VET systems, some of which are clearly inspired by policy directives and planning principles of training initiatives, while others just give some policy orientation and substantially trust the initiatives of vocational training organisations to deliver desired outcomes.

A coordination of Italian Regions in the VET field exists formally, but it is not easy to find many consensual issues apart from the agreement to defend regional points of view and interests against the surviving national competencies. Some regions have privileged public provision of VT, some others have reduced the public provision to very little; some are experimenting with the so-called “demand support instruments“ like “training vouchers”, while some others are simply relying on a well established group of National Training Bodies to provide their regional articulation. Finally some Regions have just delegated their policy role to the Social Partners and limit themselves to distributing funds - according to some uncertain rules - to accredited training bodies. The present project of Constitutional reform, which is almost completely approved by the Parliament, might produce an even stronger differentiation of approaches and articulation in VET policies between Italian regions by also bringing education into the field of Regional competencies.

4.2 Main Concerns at Regional Level

Vocational training systems have certainly contributed to facilitate employment of young people, especially in the Northern and Central part of the Country, where they have shown the capacity to change and adapt to new requirements of the labour market: the employment results of youth attending their VT courses demonstrate a good record of achievements. However, the situation may not be so favourable in the less economically developed regions, but this is mainly due to a less dynamic labour market.

In all Regions, however, the concerns of Regional Governments to maintain a reasonably good relation with the Training Organisations (most of which were originally developed by labour unions, employers associations and large municipalities – with political implications that should not be underestimated) and to guarantee their funding and employment levels has always been almost as important as checking the employment results of the courses proposed, and checking the real capacity of these organisations to identify relevant learning needs. That is why, also thanks to an unemployment rate that is not as high as it used to be in the past decade, the main concern that is mentioned when talking to Regional Government representatives everywhere in Italy is not how to innovate the training supply, but how to cope with the expected serious reduction of European Social Fund availability in the next planning phase from 2007. If adult and continuing training has found its new mechanisms, the problematic issue is initial training at all levels. The temptation/opportunity then is there to integrate initial VT more closely with school education, now that school education is to a large extent in a process of regionalisation.

4.3 The Regional Innovation and Experimentation Engine – co-ordination and divergence

It would be unfair to report only the limits of the Regional Governance of Vocational Training as several Italian Regions are well known internationally for having promoted very substantial innovation processes when the national scenario was static; some of them have not given up their initiative in the new context and keep giving priority to innovation and experimentation. Sometimes they challenge together (at least in groups) the national initiatives – or lack of initiative – such as the case of standard qualification systems; sometimes they experiment alone on new measures, such as the “training vouchers” in view of a possible future generalisation at national level; sometimes they implicitly compete among themselves by proposing alternative approaches to address the same issue (e.g. eLearning in vocational training). In any case it must be recognised that the regional level constitutes a relevant source of innovations for the Italian VET System.

5 Concluding remarks

Never before has the Italian VET system faced so many and so different factors of change; they are of different origin but they all hit a country which is facing a stagnating if not recessive economic context made even worse by structural problems of national industrial and service provision structure. If the unemployment rate is not extremely high in 2005, this is probably not so much the result of VET being able to match labour demand and supply, but rather of a poor demographic development combined with relatively low labour market participation. The impact of VET on employment is uncertain because it is not systematically assessed.

At the institutional level, the main challenge is that of integration in a lifelong learning perspective, but VET has limited chances to gain room and resources when integrating with Higher Education and the School System, both much better understood and rewarded by public opinion and politicians.

Finally, and related to the previous point, the high degree of uncertainty deriving from public funding perspectives in the years to come makes VET organisations nervous, wondering between the open sea of competition to meet the demand of individuals and organisations, and the temptation to continue researching the political and financial support of national, regional and local public administration, maybe becoming something like a public school.

In addition, the uncertain situation of Italian VET deserves to be monitored with care from a European perspective, because it represents – in our opinion – a very interesting case of co-existence of several innovation streams and resistance to change. No single policy vision framework can be identified, but rather several visions produced by a multiple set of stakeholders, each of them not really able to produce the change it desires, but everybody able to prevent major changes affecting its vital interest. That is why the European change

drivers may come to be more important in Italy than in other countries, and may finally aggregate the little consensus that is nowadays possible in the Italian VET system.

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Competence-based VET in the Netherlands: background and pitfalls*

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1 Introduction

The concept of competence has become very popular in the Dutch Vocational Education and Training (VET) system, both at the level of policy-making and the level of educational practice. Competence-based education is the leading paradigm for innovation, both at the system level and at the level of learning environments. This is one of the main conclusions formulated by Van Merriënboer, Van der Klink and Hendriks (2002) in their study on the concepts of competence and competence-based education, carried out for the Educational Council of the Netherlands. An example of this trend is that competence-based professional profiles are currently being developed in Dutch secondary vocational education at the national level. These serve as a basis for designing competence-based education programmes. In higher vocational education, many educational programmes can already be described as competence-based (Mulder, 2003). Therefore, the introduction of competence-based vocational education in the Netherlands is an interesting case for educational researchers. Competence thinking also appears to have made its way back into education in the United States (U.S. Department of Education, National Center for Educational Statistics, 2002) and in various countries in Europe (Descy and Tessaring, 2001).

An important reason for the popularity of the concept of competence is the expectation held by many stakeholders in the VET field that the gap between the labour market and education can (and will) be reduced through competence-based education. The underlying idea is that vocational education should enable students to acquire the competencies needed in their future professions, and in society as a whole. Additionally, while working as professionals, they should continue to develop their competencies so that they are able to react to and anticipate future developments in their work (and outside) (Jenewein, Knauth and Zülch, 2002). In this respect, lifelong learning can be defined as “a continuous, stimulating and supporting process, initiated in regular education, supporting needs, possibilities and experiences of persons, to develop their ability to acquire competencies necessary for

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personal development and professional functioning in their own organisations and the rapidly changing society” (Lans, Wesselink, Biemans and Mulder, 2004, p. 77). Thus, there is a growing recognition of the need for vocational education to be directed at developing competencies, and not just at acquiring a diploma; the emphasis has to be on capabilities and not on qualifications. Capability is an important prerequisite for employability. Shifting the emphasis to developing capabilities is therefore assumed to improve the link between education and the labour market (Mulder, 2004). Moreover, according to Mulder (2004), recognition of informally gained competencies and the testing of these competencies acquired outside the educational system also play an important role, not only in the Netherlands but also in many other countries (Descy and Tessaring, 2001). Additionally, there is public interest in recognising these informally gained competencies, as unnecessary costs can thus be avoided. Finally, the tendency to design vocational education on the basis of competencies is influenced by the current Dutch government policy to only determine the global outlines of future vocational education programmes and not to define fragmented qualification structures.

The notion of competence-based education also receives a lot of attention in the research on Dutch VET (see e.g. Van Merriënboer, Van der Klink and Hendriks, 2002). The Dutch Programme Board for Educational Research formulated the following main questions to be examined in VET research carried out in 2003: How do processes of competence development take place in learning environments in vocational education? How can these processes be conceptualised and explained? Which factors have a direct influence on these processes, and how can competence development processes be optimised? These main questions refer to three different themes that are all related to processes of competence development and determining factors of such processes: 1) learner characteristics and competence development; 2) design of learning programmes and environments; and 3) the role of teachers and supervisors of practical internships in the learning environment. Research on competence-based assessment can be integrated in each of these themes (PROO, 2002).

This article provides a critical reflection on the usefulness of the competence movement for the development of Dutch VET. The article starts with an historical analysis of competence-based education in various countries to shed light on the attractiveness of competence-based education for Dutch VET. The concept of competence is explored and possible pitfalls and roads for future development are sketched.

2 Background

2.1 Competence-based education in retrospect

Interest in competence-based education and training arose in the 1960s and 1970s as a result of various publications on competence-based organisational training and competence-based teacher training in the United States. In their study “On competence. A critical analysis of competence-based reforms in higher education”, Grant et al. (1979) concluded that

competence was a broad term, and that the competence-based education programmes that he and his colleagues had studied were very diverse with respect to their theoretical orientation, their scope, their intentions and their scientific focus (see also Mulder, 2004). Grant et al. defined competence-based education as follows: “Competence-based education tends to be a form of education that derives a curriculum from an analysis of a prospective or actual role in modern society and that attempts to certify student progress on the basis of demonstrated performance in some or all aspects of that role” (Grant et al., op cit, 6).

Competence-based education and training have a long history. Achtenhagen and Grubb (2001) trace the first task analysis approaches back to Moscow in the 1860s. Victor della Vos developed methods for task analysis, partly based on the conditioning theory of Pavlov, and soon these methods found their way into the American movements for manual and technical training. Competence-based approaches usually start with a task analysis in which jobs are broken down into single tasks, resulting in skill-based instruction and training. Nijhof (2003) also stresses a long history of competence-based education, referring to Bobbitt's approach in the 1920s of a scientific analysis of human actions to identify underlying abilities needed for high performance. A behaviourist approach for directly translating task descriptions into behavioural attainment targets in the 1960s led to single S-R responses in programmed instruction chains. Cognitive learning theories replaced these programmed instruction models in the 1970s.

During the 1970s, the “competency movement” (see e.g. Friedlander, 1996; Lucia and Lepsinger, 1999; McAshan, 1979; Parry, 1998) was characterised by detailed analysis of the various behavioural aspects of professional tasks. Tasks of professionals were dissected in the particular component parts, resulting in long lists of fragmented behavioural elements. Competence-based education became primarily associated with behaviourism, mastery learning and modular teaching (Mulder, 2004). This approach turned out to be unfruitful, which resulted in decreasing interest in the original competency movement in the 1980s (Mulder, 2003).

In Australia and the United Kingdom, competence-based education has been implemented as a crucial part of national training reform agendas. In Australia, the National Training Framework was implemented to increase Australia's competitiveness in the marketplace (Velde, 1999). According to Velde, reform in Australia is now settling in two broad directions: a fundamental reform of the Australian System for Apprenticeships and Traineeships and the transformation of upper secondary school. In her opinion, “Australia and the United Kingdom possess many similarities both in the method of implementation and the behaviouristic stance adopted towards competence-based training both systems appear to have been based on the behaviouristic approach to competence, with little thought given to other, more holistic approaches. Although research attempts are being made to explore more holistic conceptions of competence (...), these appear, in the main, not to be applied to actual practice” (Velde, 1999, p. 438-439). James (2002) states of the Australian scene that competence-based training tends to be conservative in nature: it enhances the development of procedural, technical knowers and adaptable workers, instead of reflective

problem-solvers and innovators. The cause of this conservatism is the standardisation involved in the curriculum development methods (backward mapping from job requirements to learning trajectories; cf. Den Boer and Nieuwenhuis, 2002).

With respect to competence-based VET in the United Kingdom, Boreham (2002) argues that the competence-based training model behind the UK National Vocational Qualifications (NVQ)-system is 'mechanistic, reductionist and denies the importance of human agencies in processes of learning'. In the NVQ-system, school-based learning is erased because of the claim that any theory taught in college would be inert because active knowledge is necessarily constructed through performance in the workplace. In a Taylorist industrial age this leads to empty skills in a low-skilled economy (Payne, 2000). Modularisation often goes along with competence-based curricula. This reinforces the disintegrative approach to job analysis. The same argument applies to the use of behavioural assessment techniques: these tend to measure only the overt, routine aspects of tasks.

So, in the Anglo-Saxon literature, competence-based education does not generally have a positive connotation. A rigid backward mapping approach, in which the state of the art on the shop floor is the untouchable starting point for the definition of occupational competencies, leads to routinised job descriptions, in which the proactive and reflective worker is left out (cf. the canonisation process, mentioned by Brown and Duguid, 1996). Achtenhagen and Grubb (2001) conclude that competence-based training is appropriate for a Taylorist world, but is an inadequate preparation for the highly-skilled workplace, where flexibility and problem-solving abilities are required.

Despite the objections made against competence-based education and training, countries have continued to adopt competence-based systems during the last decades. According to Arguelles and Gonczi (2000, p. 9), "the educational framework for addressing the deficiencies of vocational education and training has become, in an increasing number of countries, competence-based education. This can be defined as education based on outcomes and pre-determined standards, on what students can do ...". Moreover, competence-based education has continued to evolve in countries where the system has been in place for some time. For example, in Australia, competence-based education is now quite different from how it was originally introduced (Miller, 2001).

Arguelles and Gonczi (2000) examined the implementation of competence-based education and training in a number of countries. They provided case studies of the application of competence-based education and training to VET systems in countries including Mexico, Australia, Costa Rica, France and New Zealand. According to Miller (2001), these case studies provide insight into the implementation of competence-based education into various cultural and educational systems and show the importance of having the various stakeholders (particularly government, industrial bodies, the education profession and enterprises) working together with a common purpose.

In the ongoing debate on competence-based education, Arguelles and Gonczi (2000) clearly support the continuation of an integrated approach to competence-based education. In this

respect, Hyland (2001) suggests that the authors have expressed a general and sometimes uncritical commitment to VET reform along competence-based education and training lines. According to Miller (2001), there are still many unresolved issues and much more research is needed before competence-based education can be regarded as meeting the expectations of its proponents.

In the recent German and Dutch discussions on competence-based education, a more holistic approach is advocated, to overcome the risks of the disintegrative approaches. In these discussions, competence is regarded as the integrated abilities required to cope with complex tasks. Boreham (2002) suggests work-process knowledge as an innovative approach, embedding and integrating specific jobs in full production processes. Work-process knowledge should enable workers to have an idea of the meaning of their job in relation to other tasks and jobs. In the recent policy debates on Dutch VET the same holistic approach is seen as a vehicle for educational innovation and the introduction of lifelong learning. Toolsema (2003) concludes, however, that although the policy device is a holistic approach, the practical design of learning processes and assessment procedures is still based on a narrow definition of tasks and competencies. Van der Klink (2003) describes the same movement: the holistic approach is often used as window dressing for behaviourist instruction. He argues that assessment is the drawback to a holistic competence-based education approach.

To conclude, competence-based education was historically based on a behaviourist model of training and learning, within a Taylorist industrial model. In the recent competence-based movement, a holistic approach is normatively put forward, but in practice the pitfalls of a disintegrative S-R model are still great. Modularisation and assessment techniques are pushing educational practice back to the traditional mechanistic and reductionist approach. In his critique of Bastiaens and Martens (2003), De Jong (2003) argues that implementing IT tools in vocational education is reinforcing this tendency, by delivering virtual, individual training trajectories. De Jong states that competencies "... should not be acquired, but should be developed in a collective community of practice and knowledge." In this view, competence is not only a technical aspect of work, but should be seen as culturally embedded.

2.2 The current popularity of the concept of competence

Competence-based education has rapidly become very popular both in vocational educational practice and in the policy field in the Netherlands and other countries as well. Its attractiveness to schools and other VET institutes lies first of all in the emphasis that the concept places on the positive side of education and learning. Making people competent has a more positive, and also a more practically relevant, connotation than making up for their knowledge deficits. The approach matches well with the culture of advancement and empowerment espoused by many in educational practice. VET teachers also feel that, because of its practical relevance, competence-based education can motivate students to finish their school much more than traditional education can. Moreover, through their direct contacts with work organisations, VET institutes notice immediately how modern companies,

occupations and jobs are changing, encouraging schools to deliver graduates with broad skills in addition to specific knowledge.

As mentioned above, the main reason why competence-based education has gained so much popularity in the VET policy arena is its alleged capacity to reduce the gap between the school system and the labour market. There is a belief among policy-makers that graduates educated under a competence regime will be better able to perform in jobs required by modern organisations than those with traditional qualifications. Also, the notion of competence-based education fits very well within the policy discourses of employability and lifelong learning. Competence systems carry with them the promise of rendering learning processes and outcomes that are measurable and manageable throughout their life span. On a related note, the concept of competence can easily be linked to the performance approach of learning and education made popular by ideas on core competencies of organisations (Pralhad and Hamel, 1990). The latter reason is another example of the perceived potential inherent in the concept of competence to bridge the education-work divide.

An interesting phenomenon in the whole competence discussion at the practice and policy level is the tendency to largely ignore the disadvantages that may be associated with it. Over the last five years a major bandwagon effect has been visible among Dutch schools and VET institutes, when it comes to shifting to the competence paradigm. From an academic point of view, this is all the more pressing because of the serious lack of scientific research and theory to underpin its claim to fame. What we do know from the earlier competency movement that peaked during the 1970s, but also from more recent UK experiences with National Vocational Qualifications and Investors in People programmes, is that the risk of bureaucratisation of an essentially good idea is very real. The question is warranted to what extent competencies are perhaps viewed as a panacea for all problems of an educational and labour market nature. For example, can one system, whether competence-based or not, realistically serve all stakeholders in the practice, policy and political arenas? Can student dropout rates really be substantially reduced by introducing another educational model? Such questions deserve to be asked and answered, but to date they are not very prominent in the competence discussion at the practice and policy level.

A final, rather different take on the popularity of the concept of competence revolves around the question to what extent schools are already working according to the competence arrangement without referring to it as such. In other words, when does competence-based VET 'officially' become competence-based VET? The lack of a clear definition does not help much in this matter, but it seems that many schools have been using teaching practices and methods that are at least compatible with competence-based education for some time already. Notions around self-directed, participatory and project-based learning, for instance, may differ from each other but are similar – and compatible with competence-based education – in that transferring subject matter is no longer their primary concern. Instead, they focus on the way in which learners (co-)construct situated knowledge and learn to learn (collaboratively) by doing so. To a certain extent, therefore, the popularity of the competence approach may be a case of old wine in new bottles.

2.3 Defining the concept of competence

As mentioned above, the concept of competence has a fairly long history in education and training research and practice. Nowadays, the notion of competencies as integrated capabilities has become very popular. Reviewing the many studies on competence development, however, it is possible to conclude that the concepts competence and competence-based education are still very diffuse and require clear definition and conceptualisation. It would therefore not be prudent to present a fixed definition of the terms competencies and competence, so we adopt a working definition from which to proceed. In this connection, Mulder (2001) formulated the following working definition for the term competence, taking the opinions of other relevant VET researchers into account: Competence is the capability of a person (or an organisation) to reach specific achievements. Personal competencies comprise integrated performance-oriented capabilities, which consist of clusters of knowledge structures and also cognitive, interactive, affective and where necessary psychomotor capabilities, and attitudes and values, which are required for carrying out tasks, solving problems and more generally, effectively functioning in a certain profession, organisation, position or role. Building upon this definition, competence-based education implies creating opportunities for students and workers, close to their world of experience in a meaningful learning environment (preferably professional practice) where the learner can develop integrated, performance-oriented capabilities for handling the core problems in practice.

Van Merriënboer, Van der Klink and Hendriks (2002) carried out a study to determine whether it is possible to harmonise the concept of competence. After a literature study and expert consultation, they also concluded that many conceptions of competence exist, both in theory and in educational practice. Competence as a concept turned out to be (too) elastic. This raised the following question: what are the commonalities with respect to the concept of competence in various sectors and contexts? They derived six common characteristics of competencies, as defined by relevant authors in the field: 1) competencies are context-bound; 2) they are indivisible (knowledge, skills and attitudes are integrated); 3) they are subject to change; 4) they are connected to activities and tasks; 5) competencies require learning and development processes; and 6) they are interrelated. Therefore, in their opinion, the concept of competence is valid, although the relationships with other concepts such as key qualifications and expertise can be quite strong.

3 Pitfalls in competence-based VET

This section discusses several possible pitfalls in applying competence-based education. The overview starts with conceptual and institutional problems, then several technical issues are presented, and finally problems related to the implementation of competence-based education within the context of Dutch VET are dealt with.

3.1 The concept of competence

As Van Merriënboer, Van der Klink and Hendriks (2002; see also Toolsema, 2003) have shown, there are many conceptual definitions of competence and competency. There is little consensus on the meaning of these concepts among the many researchers and authors (see also Van der Sanden, De Bruijn and Mulder, 2003). Also in practice, institutional actors and colleges use different descriptions. This sometimes serves as an excuse for defining competencies as one likes, decreasing the trustworthiness of the concept (Mulder, 2000, 2003). According to Nijhof (2003), designing competence-based curricula, learning processes and assessment procedures can only be done fruitfully, when competence is operationalised as unambiguously as possible. Therefore, it is necessary to understand the underlying learning processes (cf. Van der Sanden et al., 2003; Onstenk, 2003; Simons, 2003). On the other hand, it is important to avoid competence jargon while actually designing and implementing competence-based education and to choose a more practical approach (Mulder, 2003). In this respect, a common vision of the desired competencies should be reconstructed in interaction with all actors involved (students, teachers, social partners, government; Simons, 2003).

3.2 Standardisation

A second pitfall is an over-reliance on standardisation of competencies, whereas the power of competence-based education lies in its context-embeddedness. Usually, the reality of work is quite different from job descriptions and organisational regulations on paper (Klarus, 2003). Using overly standardised competencies is really missing the point, since every abstraction from actual practice makes them less applicable. Related to the problem of standardisation is the belief in forecasting techniques: competence standards should describe jobs in the future, for which students are educated, but they can only describe jobs from the past (cf. Den Boer and Nieuwenhuis, 2002). Too strict a use of competence standards leads to conservative training, instead of preparing students for innovative developments.

Competencies are more than the sum of their composing parts, so a certain context-independence should exist. However, the risk of bureaucratisation looms large when attempts are made to separate the system of (required) competencies from actual work practice. The potential power of working with a concrete set of meaningful competencies will soon be lost as a result (Klarus, 2003).

3.3 School and workplace learning

Thirdly, it is often underestimated how hard it is to integrate learning in schools with learning in the workplace (Klarus, 2003). Different actors are involved, speaking different languages, coming from different cultural and historical backgrounds, and pursuing different interests. It is no wonder that aligning the two different learning systems is so difficult. However, the distinction between the two settings should be reconsidered (Klarus, 2003): in a sense this boundary is artificial, because in the end it is all about individual students, learning in different places at different times, constructing and adjusting their mental models of the

reality of work. Trying to ensure some form of continuity throughout their learning pathways (e.g. by developing their metacognitive skills) may be easier than solving the integration problem at system level.

According to Simons (2003), the implicit character of workplace learning leads to a major problem (how to foster implicit learning?) that should be taken into account in designing learning arrangements and environments both in school and in the workplace. Onstenk (2003) raises the question whether a new mix of implicit learning, guided learning and self-directed learning is needed. People should be made aware of their competencies and ways of learning, but this requires different approaches in the workplace than in school settings. Formalising work-based learning for acquiring standardised competencies is still an unsolved dilemma in designing effective pathways to becoming competent. This aspect has specific consequences for competence-based education but holds for vocational education and training in general.

3.4 Determining learning activities

Specifying the competencies to be acquired by students does not automatically result in the design of effective learning activities. Planning, designing and implementing effective ways of learning require specific attention. Many authors in this field argue that learning arrangements and pathways should be based on principles of social, constructivist learning (cf. Van der Sanden et al., 2003; Simons, 2003, Mulder 2003). Teachers should work in multi-disciplinary teams to design new competence-oriented learning activities, using existing practical periods and on-the-job training. Translating competence-oriented goals into actual learning activities is crucial in the implementation of competence-based education. If the implementation gets stuck at the preparation phase and/or does not get carried into the execution phase, true innovation will fail. In this respect, students should not only develop work-related competencies, but also learning competence if they are to be equipped for lifelong learning (Mulder, 2003; Van der Sanden et al., 2003).

3.5 Assessment of competencies

A fifth pitfall is that assessment of competencies, especially in work situations, is a labour-intensive and time-consuming exercise (Jellema, 2003). It is hard to standardise and often involves structured observation rather than classroom examination. Developing and using valid and reliable assessment tools is a crucial but very difficult task. Moreover, the criteria for the quality of assessment become stricter as its importance increases (cf. Nieuwenhuis, Van Berkel, Jellema and Mulder, 2001). For example, if selection or certification rather than self-development is the main goal of assessment, it is even more crucial to use high-quality instruments and tools (cf. Roelofs and Sanders, 2003). Also here the dilemma between national standards for assessment and local flexibility is pressing (cf. Nieuwenhuis et al., 2001). Since traditional assessment methods are ill-suited to a competence-based curriculum, schools, enterprises and institutional actors have to find new ways to develop appropriate assessment tools (cf. McClelland, 1973).

3.6 Changing teacher roles / identity

The extent to which the role of teachers (and students!) changes can easily be overlooked when competence-based education is implemented (Jellema, 2003). The teacher is supposed to switch from the role of an expert, transferring knowledge to a coaching role, guiding students' learning processes. Students are supposed to take responsibility for their own learning, whereas the teacher used to be in charge. This requires a totally different attitude from both parties, perhaps even a paradigm shift. Achieving this challenge is all too easily forgotten by policy-makers, talking about implementing competence-based education.

3.7 Competence-based management

In developing competence-based education, it is essential that structural attention is paid to competence development of teachers and school managers. "Practice what you preach" should be the leading principle. According to Mulder (2000), competence-based management implies an open culture and co-operation. If these conditions are not met, competence-based management will be a failure. Management itself has to "walk the talk"; otherwise people at lower levels in schools will perceive it as an ordinary management tool, instead of appreciating it as a supporting strategy to develop both the school organisation and the individual.

4 Concluding remarks

The recent development of competence-based education in Dutch VET has raised an innovative challenge for both teachers and policy-makers at all levels in the system. However, it should be recognised that the concepts of competence and competence-based education have been in use for a long time in education and human performance technology. Competence-based education is seen as an alternative for working with qualifications and qualification structures, as has been the case in Dutch VET during the last 20-25 years. In fact, both approaches are based on the same assumptions: qualifications and competencies are both derived from job analysis and forecasting techniques and are both used as input for curriculum development and for assessment of learning outputs. So the innovative flavour of competence-based education can easily become "old wine in new barrels", especially when job requirements are translated into fixed goals for educational pathways.

However, introducing competence-based education in Dutch VET has raised substantial interest in and support for developing and introducing teaching-learning arrangements in the direction of flexible pathways and self-directive learning, according to the principles of socio-constructivist learning theories. The introduction of competence-based education stimulates and facilitates the development of customised pathways, in which students, teachers and masters on the shop floor can build learning communities. This creates a paradox in the competence-based education movement: at the level of learning processes it is expected to deliver more flexibility, whereas at national level, competence-based education fits well in the trend towards standardisation based on job descriptions. Most of the pitfalls

and dilemmas described have to do with the balancing of local flexibility with national standardisation. To guarantee the exchange value of qualifications, and to regulate (financial) duties and rights, national arrangements are needed. But often, national regulations hinder local flexibility and professionalism. The discussions concerning competence-based education in Dutch VET can be understood within the context of this system-level dilemma.

A holistic approach to competencies is difficult to establish (cf. Toolsema, 2003): empirical scaffolds are urgently needed. For curriculum and assessment instrumentation, an analytical/atomistic approach can easily be adopted from the older competence-based education movement: this adoption can be observed in the daily policy practice of the Dutch VET system. To use competence-based education as a vehicle for flexible VET trajectories, in which students and teachers have a large quantity of self-steering power, requires debate and measures at the national level: the policy instruments for financing, accreditation and assessment are built on features of the older competence-based education movement, based on fixed goals and an atomistic approach. Flexible VET for a knowledge-based economy requires policy instruments that enable self-steering by students and tailor-made trajectories fitted to the requirements of local labour markets. A knowledge-based economy requires more than knowledge from professionals. Current society demands more individual independence in the context of work, which requires coping with uncertainty, taking calculated risks, making deliberate but informed choices. This requires competence (cf. Mulder, 2004).

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Striving for innovation in VET in Slovenia

1 Vocational training and qualification system

The development of VET in Slovenia between World War II and the beginning of the transition of the 1990's was characterised by a shift away from the dual system in which private employers played an important role. This was understandable because the private sector of small producers was marginalised by the confiscation of private property, administrative barriers to private entrepreneurship and the growth of state-owned industry. Relatively simple production technology was used in the newly growing industrial plants, involving mainly unskilled and semi-skilled jobs for which little training was needed. Economic and technological restructuring generating jobs requiring a higher level of skills proficiency was delayed. The limited skills required for simple industrial jobs could either be acquired in school workshops or within the work process when new employees were recruited. School-based VET was simpler to organise, easier to plan and cheaper for both the state and enterprises than the dual form. The other trend was a gradual merger of vocational and general secondary education, which was particularly accentuated in the 1980's.

In the first years of transition the distinction grew again between general and vocational education and training. Finally, this was codified in 1996 in the new education legislation (www.mszs.si/eng/). The key characteristics of the newly established system are increased centralisation and a greater choice of education and training possibilities. As can be seen in Figure 1 there is, on the one hand, a general school the *gimnazija* preparing students for university studies and, on the other, the dual system providing training for the different vocations needed in small craft workshops and industry. In between, one can choose 'vocational *gimnazija*', technical schools which provide school-based vocational training.

After completing 4 years of secondary education one can then continue to study at the new vocational high schools (The Education, 2000). In addition, those who complete general secondary education and do not continue their studies can take short term vocational training in order to increase their employability for jobs such as bank tellers, sales persons, and insurance agents. One could say that this is an over-abundance of choices for a small country in which the annual cohort of 16 years old youngsters numbered over 30,000 two decades ago, but has subsequently fallen to about 17,000 (SO, 2003).

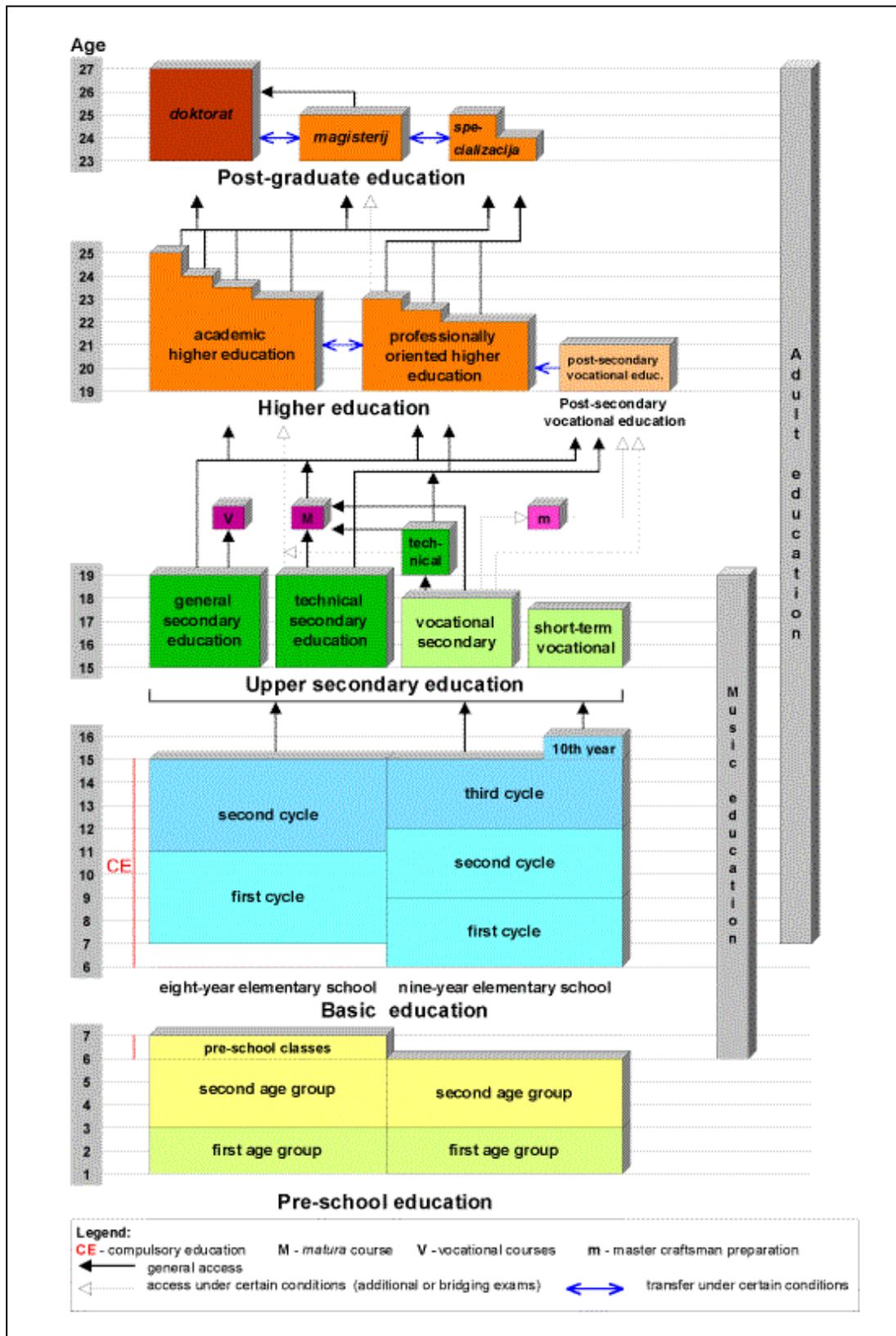


Figure 1: The Slovenian Educational System

Particular attention has been paid to the partnership-based vocational system, the school-based and the dual ones, for four inter-linked reasons:

- the strong influence of the German and Austrian education and training traditions,
- nostalgia for the lost dual system in place before and in the first period following the Second World War,
- the increasing influence of the private sector, especially small entrepreneurs and craftsmen, who demanded it through their Chamber of Crafts; and
- the increasing needs for skilled labour brought about by economic and technological restructuring.

It was also felt that the education and training system in its traditional form would not be able to cope with the increasing and changing demands for skills and competencies. Consequently, with the aim of promoting life long learning and recognition of prior learning, the Ministry of Labour, Family and Social Affairs assembled a group of experts to prepare the Law on National Vocational Qualifications (NVQ) (Zakon, 2003), which was passed by parliament in autumn 2000. The purpose of this law is to determine the procedure for developing and verifying national vocational standards and, in particular, to enable the public recognition of informally and non-formally acquired knowledge and skills to those individuals who meet these standards. National vocational standards also serve as a basis for the preparation of VET programmes. In principle, then, there are three routes to the same qualifications: (a) formal education and training in the school or (b) in the dual system (in some cases both ways are provided) and (c) the certification of prior knowledge. Since VET programmes are usually prepared on the basis of more than one vocational standard, individuals with certain publicly recognised qualifications based on some of these standards can bring these to school where they should be recognised if they are included in the VET programme one seeks enrolment in. Similarly, knowledge acquired in the school should be taken into account in the process of certifying national qualifications if one prematurely leaves a programme. However, certified qualifications do not automatically lead to higher educational grades. For this, some education in the school with the accent on general education is needed. Thus, school-based and dual vocational education on the one hand, and the system for certifying non-formal and informal learning, on the other hand, complement each other.

Implementing the Law on NVQ took two years, partly because several new institutions were needed to make it work and partly because efforts were undertaken to settle the cost issues raised by employers and trade unions. Among the institutions that comprise the system of NVQ there are:

- National Council for Vocational Training (NCVT), the supreme partnership body composed of representatives of employers, trade unions and the state
- Centre for Vocational Training (CVT), the main national professional institution in the field

- branch boards for national vocational standards, who examine the initiatives for new standards and for revision of the existing ones, propose lists of experts for relevant vocational fields, etc.
- licensed institutions that assess prior knowledge and award national qualifications to individuals, e.g., chambers of economy and crafts, school centres, adult education centres, large companies, etc.
- lists of branch experts appointed by the employers' and trade unions' organisations, trained and certified as examiners for the assessment of prior learning
- advisors to individuals who decide to apply for certification located mainly in the licensed institutions
- register of awarded qualifications
- mechanisms to monitor, control and evaluate the system.

In 2003 the system was made fully operational. By the end of 2004 over 130 new standards have been accepted, in addition to the approximately 220 existing ones, and 39 institutions have been licensed to award NVQs. Over 2,200 national vocational qualifications have been certified and awarded in fields such as pharmaceutical processing, electricity switch board operators, counsellors for transportation of dangerous goods, drivers, home page designers, home carers, specialised farm producers, bee breeders and so on.

The Slovenian qualification system functions along the following lines:

- Anybody can initiate a new qualification standard. Most frequently this is done by employers, schools and professional groups.
- The initiative is examined by the CVT experts who, in co-operation with employers' branch boards, support or reject it. The initiative is judged especially with respect to its novelty in comparison to the existing standards, with respect to its labour market prospects and with respect to the EU countries' qualification frameworks.
- If the initiative is approved, CVT elaborates a new standard. Social partners' experts are involved in the procedure.
- The proposal for a new standard is discussed by the Board for Vocational Standards, which is a body of the NCVT (both composed of social partners), which approves it.
- A new standard is signed and published by the Minister of Labour.
- When published a standard serves as a basis for certification of national qualifications. For this purpose CVT elaborates an examination catalogue, which is approved by the NCVT. Training institutions may offer teaching programmes and instruction on an informal basis in order to help individuals prepare for the certification of national qualifications.
- The same standard serves also as a basis for elaboration of a public teaching programme if it is considered to be justified. A public programme is prepared along similar procedure as a qualification standard. To economise in the educational system, and to provide for wider

education and training, one programme is often prepared on the basis of more than one standard. In such a case, the programme should be modular in order that students get rounded up knowledge/qualifications in case that they quit the programme prematurely.

- Public teaching programmes are signed and published by the Minister of Education after NCVT accepts them. It is the Ministry of Education which decides which schools run a certain programme in order to produce regionally and vocationally balanced education opportunities provided by the public educational system.

Initially, national qualification standards were elaborated primarily through employers' and schools' initiatives without paying much attention to the national qualification framework. This has led to certain imbalances in terms of abundance of standards and programmes in some fields and insufficient coverage in the other ones. For example, there has been a lack of initiative of standards and programmes for the emerging service sectors and the use of new technologies. This is why a more holistic and innovative approaches are now being sought for the development of standards within the national qualification framework.

2 Recent developments and VET issues

In spite of the education and training system reform in 1996, and the curricula reform that followed, the development of VET has not reached the desired goals. Furthermore, there has been a permanent and ongoing discussion about how VET should be shaped.

A critical review of the VET system conducted by several Slovenian and foreign experts in the framework of the Phare programme (Phare MOCCA, 2000) in the period 1999-2001 and guided by the European Training Foundation (ETF), revealed that:

- The education and training system in Slovenia including VET was too centralised and regulated in detail at the national level. Therefore, VET's responsiveness to employers' needs was quite low and the related adjustment time too long.
- VET programmes remained very traditional and composed of three blocks: general subjects such as mathematics, physics, foreign and mother languages, history and geography; vocational subjects providing knowledge in specific vocational fields; and practical training in school workshops and/or with employers. These blocks were poorly linked. The so-called subject structure of curricula and frontal didactic methods of teaching did not provide the necessary integration of knowledge and the development of either key or occupational competencies, such as an ability for problem solving, communication and learning skills. This reduced motivation for learning.
- VET programmes were prepared primarily for youth. Their implementation was not adjusted to adults, who could rarely afford to go to school without a break for three or more years. In addition, the knowledge and skills acquired outside formal education were not recognised either publicly or in the school.

- Although the dual and school-based programmes led to the same vocational qualifications, graduates in fact acquired different knowledge and competencies upon their completion.

The impact of the evaluation by the Phare MOCCA Programme was that the National VET Council decided to prepare new guidelines for developing VET programmes, which were accepted in autumn 2001 (Izhodišča, 2001). The new Guidelines demand significantly different curricula planning and teaching in the VET area. The four main changes are as follows:

- Opening up of the curricula whereby approximately 20 per cent of VET programmes should be left undefined at the national level, so as to be elaborated by schools themselves in collaboration with their regional and/or branch partners. The aim is to adjust programmes to employers' needs while keeping certain common standards, and to let them change more quickly without time consuming procedures at the national level.
- The provision of integrated knowledge and skills in order to enable students to develop the competencies needed for problem solving in real work and life situations. This includes leaving the model of subject structured curricula with the aim of creating a number of learning situations in which practical training and theoretical explanation is given simultaneously. This is expected to motivate those students not motivated for frontal didactic lecturing in the classroom.
- Modularisation of teaching programmes whereby there should be one module for each vocational standard that a programme is based on. Modularisation should enable students, especially adults, to undertake a step-wise education, to enter and leave a certain programme without losses, to combine modules, to certify knowledge acquired in the school, to bring certified qualifications into programmes and later continue education.
- Abolition of the differences between programmes used in the dual and school-based systems. The standards should move closer to the dual system, which has a greater accent on practical training.

To make Guidelines work, a special implementation programme was launched by the Ministry of Education, Science and Sport (MESS). Several groups of Slovenian and foreign experts, in collaboration with pilot schools, focused on specific development issues. The crucial role is played by the schools that are interested for change and for investing their time, energy and experiences in further development of VET. MESS financially supports their efforts. On the basis of reform endeavours from the past it has become clear that top-down changes are rather limited and are fraught with implementation problems.

The pilot schools first of all develop their implementation curriculum. This means that together with their local or/and branch partners they determine the nationally undefined 20 % of the chosen programme. As the first cases show, the fear that they would decide primarily for short-lasting pragmatic skills has not been justified. For example, some decided for additional foreign language, and some for additional general education classes in physics or

history. This also means that a programme leading to certain qualification(s) may differ from one environment to another. Schools also make arrangements for practical training of their students directly with the employers in their regions.

Second, teams of teachers prepare detailed work plans on how the teaching process is carried out. This involves organisation of a teaching process organised in modules leading to predefined qualifications, creation of various learning situations, formation of teaching teams, and adjustment of general subjects to the vocation in question. For example in a car maintenance programme should present history from a transportation and car development perspective; foreign languages should not be taught only in the class room but also in the process of practical training where students learn technical words, how to make technical reports and how to communicate with foreign clients; certain chapters of physics could be explained when students are acquainted with the construction and functioning of car engines, and so on.

Third, teachers have been trained for their new development roles. Often they form interdisciplinary teams whose members come from different schools. It is believed that the achievements of the teaching process depend much more on motivated and trained teachers than on the formal programme itself. The most important is that teachers from the pilot schools act as trainers conveying their experiences to the others.

A special team is developing a new model of lump sum financing which should replace the current highly centralised financing system according to which every teacher is paid directly by the Ministry according to a predetermined number of hours of teaching. The new model should allow for greater flexibility in organisation of a teaching process and in assignment of teaching and other work duties.

The programme of car servicing has been launched according to the new Guidelines in the school year 2004/5 as an experimental one. Four more programmes for mechatronic operator, operator in graphics, car body maintainer and hairdresser, will be implemented in the school year 2005/6. It has been agreed that a permanent monitoring of novelties, information feed back and eventual corrections of programmes and their implementation procedures will be established. It has become clear to the majority of the experts involved that one cannot jump from one reform to the other but that a permanent monitoring, development and adjustment to of the changing environments are needed. This is possible only by using a bottom-up approach in which schools and their teachers increasingly play a development role. The other central institution in this process is CVT with permanently employed experts.

3 Discussions on VET

Implementation of the new approach has been far from easy. The first obstacle is the lack of knowledge and experience with modularisation and alternative non-subject-structured curricula planning. It is easy to modularise programmes in terms of breaking them up into smaller parts. However, if these parts are to give students certain rounded competencies that

can be used in real work situations before the whole programme is finished, the task becomes much more difficult, and organisation of the teaching process more complicated. It is even more difficult and unusual to merge traditional subjects into a problem-structured curriculum.

The second obstacle is even more delicate. There has been strong opposition from the side of 'generalists' who claim that the new approach sacrifices general and reflective knowledge in favour of functional skills and competencies, which in any case change quickly and do not enable students to continue their education (Muršak and Vidmar, 2001). Their campaign against the new guidelines is quite strong, although for the moment the change in the VET system only applies to the 3-year vocational programmes and leaves the 4-year technical programmes almost untouched. It is difficult for the critics to accept the argument that youngsters enrolled in VET programmes have relatively low motivation for general subjects and that general knowledge could be better conveyed in the form of key competencies (Key Competencies, 2002) and by means of problem solving, role playing or other methods of the integrated approach. It seems that teachers of general subjects are afraid of losing their jobs and eventual retraining.

There are some doubts also about the nature of partnership to be established between schools and employers. Originally the idea was to have local or regional networks that are supposed to link the main employers of graduates coming out of vocational schools. However, in Slovenia the labour market is small and in many cases education and training of certain vocations is carried out in just one or two schools. In such a case, representatives of country branch associations seem to be more relevant partners. The question is also who should bear the responsibility for the partnership. Are schools themselves capable to bring together social partners effectively, should employers' associations be authorised to do this, or should the state intervene more directly? In the case of pilot schools the initiative for partnership is in their hands. This works well in the regions where joint efforts of schools and employers have been traditional. It is much more difficult to build partnership networks anew, especially in the surroundings with new employers who have not yet observed the imperfections of the labour market.

The Slovenian education and training system has been highly centralised in the period of transition. This is particularly so in the case of its financing. Although there is a will, except from some officers in the Ministry's administration, to go in the direction of lump sum approach, which would allow schools to raise additional resources, the shift seems quite demanding. Many school principals are not ready to take higher financial and organisational responsibilities. Employers think that their contribution via paying taxes should be sufficient and are reluctant to contribute directly additional resources. They also permanently bargain about the cost of training places, which they think should be covered by the state.

If the new approach is to expand then teachers will have to change their traditional way of teaching. The sceptics point at this issue as most important. It is easy to work with highly motivated teachers and principals of the pilot schools who receive additional resources for their participation in the experiment. It is another story when the change is introduced

generally, when it becomes an obligation for everybody and when all the teachers should be retrained. Therefore a stepwise approach seems reasonable. No programme should be allocated to unprepared schools.

The network of vocational schools in Slovenia is rather dispersed meaning that there are several small schools, which have difficulties engaging good teachers and especially justifying investments into training equipment and workshops. This issue is increasingly pressing in the light of the falling number of students. One of the responses has been a foundation of inter-company training centres. However, further measures seem to be needed to integrate small vocational schools into bigger school centres capable of maintaining a development function, investing in expensive training equipment and sharing the expertise of their staff.

4 VET and the world of work

Along with endeavours to reform the VET system in line with the changing labour market demands, figures showing interest in VET and enrolment in VET programmes are far from encouraging. Throughout and after the 1990s, a shrinking share of young generations has been going to vocational and technical schools and the trend towards enrolment in general education has been strengthened as shown in Table 1. Vocational schools are cutting the number of groups/classes and they recently started to reorganise the teaching process so that they merge the groups of students enrolled in different programmes when they have the same and sometimes also similar lectures in the schedule.

Table 1: **Changing structure of students in secondary education in Slovenia in the 1990s (in per cent; source: Cek and Vranješ, 2003)**

TYPE OF SCHOOL	1995/96	1999/00	2002/03
Gimnazija - general	21.7	32.5	36.2
Technical school – 4 years	36.3	29.8	32.8
Vocational school – 2-3 years	42.0	37.8	30.9

The Minister of Education and Sport of the new government, which has been in power since the end of 2004, has observed this trend and expressed his determination to stop or even reverse it. This seems understandable in the light of economic growth and demographic decline, which in the mid term lead to the shortages of labour. The first measure was to decrease the number of available places in Gimnazija. If this measure turns students from general programmes, social sciences and humanities to vocational and technical programmes it may contribute to a more balanced labour market in the future. However, if it decreases the aspirations of youth for higher education achievements its effects are problematic in the light

of comparatively low percentage of the labour market active population with post secondary education (17 %).

There could be several reasons that explain the shift away from vocational training (Svetlik, 2004):

- The first is the low valuation of manual occupations, which is deeply embedded in the culture. It has not changed in spite of the new technologies applied in several occupations, which make work easier and more interesting.
- The consequence of upward mobility is that jobs and occupations at the lower levels of the occupational scale are taken by immigrants and marginal groups. Many occupations of this kind in Slovenia can be found in the fields of construction, mining and public utilities (ESS, 2003). The local population's interest in training in the respective programmes is very low.
- The third factor gained momentum especially in the period of transition. The Slovenian economy, which used to be highly industrial, is changing into a service economy as shown in Table 2 (Ignjatović, 2002, p.180). This change is associated with the breaking up of several companies in the metal, textile, wood-processing and other industries. It has given a strong signal to youngsters and their parents which schools not to chose. Vocational programmes leading to technical qualifications in the textile, leather, metal and similar industries are therefore losing students, while those leading to service qualifications such as hairdressers, salespeople and administrative workers remain attractive.
- One should not neglect the influence of the growing labour market and employment flexibility. Vocational training has frequently been described as too narrow and specialised providing a weak basis for mobility between jobs in the turbulent labour market. There is a prevailing opinion that general education gives individuals better opportunities for alternative careers when the existing ones are broken.
- On the supply side, an important factor influencing the shrinking interest in vocational training is demographic decline. The numbers of youth entering secondary education fell by 13 per cent in the period 1995/96 to 2000/01 (Cek and Vranješ, 2002). Because the supply of education and training programmes has not changed significantly and the number of teaching places has not dropped, the competition for students is being won by the more prestigious *gimnazija*.
- The dual system, as part of VET, has also not attracted as many students as expected. Although intended to become the dominant form of vocational education and training (Medveš, 1999) this has not happened. According to Meglič (Meglič, 2003), a main reason the dual system does not meet the expectations is the competition from the school-based one. Since students can acquire the same qualification in both ways, schools deliberately discourage them from opting for the dual system. In the school-based track there is more time for teaching in the classroom and thus more jobs for teachers. If general

schools successfully compete for students with vocational ones, then vocational schools focus their competition on the dual system.

Table 2: **Distribution of the labour market active population in Slovenia according to industrial sectors in the period 1931 – 2000 in per cent (sources for 1931 and 1971: Kramberger, 1999, p.160; for 1991 and 2000: Ignjatović, 2002, p.180).**

	1931	1971	1991	2000
Agricultural	61	26	15	11
Industry	21	34	45	38
Services	18	40	40	51

The criticism of the vocational schools has also been that they represent *gimnazija* at its lower point, where training for vocational competencies is rather weak. VET schools are seen rather as institutions to motivate and prepare youngsters for further education than to provide for their employability. In addition, teaching methods have in fact not changed significantly. It is unlikely that young graduates who had entered VET schools as ‘the rest of population with lower general abilities’ would be able to cope successfully with real work and life situations if these situations are not simulated and reflected upon during the teaching and training process. Insisting on subject structured curricula means that students receive systematic knowledge in mathematics, physics, languages, history, geography etc. However, real work and life situations are usually composed of complex problems to be addressed by a combination of knowledge and skills of various disciplines simultaneously. How can one expect a young graduate to be successful in this if the school he/she attended was not able to demonstrate it?

It seems that the trends towards higher education levels and towards service occupations are very strong. They are not only supply- but also demand-driven. The educational achievement of the labour market active population in Slovenia is low compared to the educationally more advanced EU countries. In 2002 only 17 per cent of the working-age population (15 – 64 years) had a tertiary (ISCED 5-7) education (Cek and Vranješ, 2003). Slovenia’s most important economic partner Germany had 23 per cent, while the Nordic countries and Ireland had significantly better (www.oecd.org/edu/eag2003). If the Slovenian economy wants to compete successfully with others its workforce must be able to receive and work effectively with the most advanced technologies and provide for the effective organisation of economic and social life. The shift from industrial to service occupations also seems natural. VET should take these trends into account and can only adjust to them.

A good response of the VET system to this trend to higher education is to make transition in the system as easy as possible. Such is the case with the so-called 3+2 system. Students who complete a 3-year vocational programme can continue with technical education in the

following two years, and a large number of vocational graduates take up this option. Another possibility for upward mobility is offered by post-secondary vocational schools, which in 2001/02 enrolled more than 6,000 students (Cek and Vranješ, 2003). If these students take the so-called vocational maturity exam some university programmes are also opened up to them.

Irrespective of the general trend to more demanding jobs and higher levels of education, some occupations at the middle level of proficiency will still be needed. Among those some traditional ones, such as goldsmith, thatcher, gardener, and confectioner, will be needed in the tourist industry if not to meet the population's everyday needs. New ones are also emerging, such as a home care provider and the maintainer of audio and visual equipment. The Chamber of Crafts has started a campaign, in co-operation with the Ministry of Education and Sport, to make these occupations more visible, to show their interesting sides to potential students and to inform them of employment possibilities.

VET schools are expected to make a special contribution to lifelong learning. They will have to open up to the domestic adult population and to immigrants. This offers a chance to compensate for the loss of young students. However, the approach and teaching methods should then also change. Modularisation of programmes and more integrated problem-focused teaching are just two of the changes required. The possibilities of this training are confirmed in post-secondary vocational colleges, where nearly two-thirds of students are adults (Cek, Vranješ, 2003). Offering courses to the unemployed is another example.

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School to Work Transition, Labour Market Flexibility and Lifelong Learning in the Swedish Context

1 Introduction

The purpose of this paper is to discuss Swedish policies and practices in lifelong learning in the context of labour market flexibility and employability. Any observer of the development of current policy language will find an increasing use of new buzzwords with a seemingly high level of policy power. Some of these words like flexibility (nowadays mixed with security to ‘flexicurity’ by the EU Economic and Social Committee), innovative, mobile or adaptable are frequently used to provide rhetorical force in public policies in the EU countries. Labour market flexibility, employability and lifelong learning belong to the same family. The concept of lifelong learning is also now being used as a catalyst in almost all policy fields.

The paper starts with some observations regarding the changing notions of school to work transitions. New skill demands and their connection to the concept of lifelong learning and the increasing flexibility of the labour market are then outlined.

The main section of the paper presents some current Swedish initiatives on enhancing lifelong learning at various levels of the learning society; for example, the reform of adult education in the 1990s (Adult Education Initiative; *Kunskapslyftet*), the idea of individual learning accounts, workplace learning as part of industrial relations, current reforms of upper secondary education and finally attempts to validate and recognize the educational background and vocational skills of immigrants.

In a broader sense, the challenge of lifelong learning in Sweden, as well as in other European countries, implies a balance between vocationally and educationally oriented programmes at upper secondary level, interaction between generic skills and specialization, and also an environment for tacit knowledge, judgement and experience that cannot be expressed and made visible in the same way as explanatory and factual knowledge.

2 Redefining traditional school to work paradigms

The pattern of transition from school to work has been transformed as part of the educational evolution in modern societies. Early vocational schooling was part of the guild system and the apprenticeship model. For many years, pupils completing compulsory school could get a job on the open labour market. Nowadays upper secondary education tends to be the common entrance ticket to youth employment. Tomorrow’s educational objective in Sweden anticipates that 50% of an age cohort should continue to higher education at the age of 25 years.

Thus, some students of the 1990s and onwards into the 21 century will stay in the educational 'quarantine' for almost twenty years until the age of 25 followed by the accompanying problems of finding a job. This development reflects a paradox of lifelong learning society characterized by a permanently prolonged formal education with earlier school-start and postponed school-graduation opportunities. The general policy view in Sweden tends to focus educational upgrading as a means of preparing for a future labour market with a number of job-shifts and growing uncertainty. The search for more generic knowledge and skills – in Sweden reflected through the system of core subjects in upper secondary education – also has its price if the connection between school and work does not function in practice.

The gap between education and work can be described in an epistemological dimension. One major aspect concerns the world of concepts, theories and ideas in education and work. A simplified or superficial approach is to connect school-knowledge with theory and work with practical skills and specific context-bound knowledge. Another way of understanding the gap is to talk about different knowledge settings characterised by various concepts, intellectual tools, assumptions and practical solutions.

Another common comprehension is that school knowledge is organised in and around school subjects, and that work is organised settings for the application of school knowledge, occupational skills and practical intelligence. It is the presumption of this author that the gap between education and work cannot be resolved simply by making school knowledge more similar to work or everyday experience. The challenge lies in developing a dynamic interface between school-knowledge, experience-based knowledge and practical applications at work.

Educational policy makers in Sweden are trying to solve or resolve this dilemma by various efforts to develop new lighter forms of the traditional apprenticeship model and the dual system as integrated parts of a more comprehensive model of upper secondary education. The disadvantage of a more traditional apprenticeship model is of course, that it can be a preparation for a vocation that is decreasing in numbers or being totally redefined. Furthermore, it has some restrictions and limitations with respect to further education and equality of opportunity. The integrated or general model, on the other hand, might loosen the connection with work, and be excessively future oriented and fail to take account of the fact that most occupations do not disappear overnight.

Thus, the context for bridging the gap between education and work is shifting over time, between and within countries. In the pre-industrial society with its guild system, there was a close connection between the apprentice and the master depending on the specific cultural, economic and social context as well as the fact that the trainee was prepared for a specific lifetime occupation. In an industrialised context, this preparation has increasingly been taken over by vocational schools or by internal learning platforms within larger corporations. Still, the distributive model was built on the premise that pupils were allocated to occupations by social determinants and vocational heritage in combination with personal interest and talent.

The new interface between school and work can, for the younger generation, be labelled as an 'accordion phenomenon' with a longer period of socialisation, with variations in the

opportunities available for absorbing a work ethos and work values as well as with a weaker work connection for many youngsters. Another impact of this situation is the need to illuminate and articulate a new interface between education policies, labour market policies and social policies. Some of the questions to be discussed in a lifelong learning perspective are; from school to work, from learner to master, from work to retraining, from unemployment to work, from family back to paid work, from work reduction to retirement and the new pathways to post-retirement work.

Thus, employability and lifelong learning has a much broader connotation than a direct relation between education and employment. In the long run, employability is a necessary but not sufficient skill requirement for lifelong learning and adaptation to new qualification needs.

3 New skill demands, lifelong learning and labour market flexibility

When the structural transformation of the labour market intensified, a growing number of employees had to be retrained to meet the needs of the new and expanding sectors of the labour market. The epoch of a single occupation for life for all education experience was over. Employment training and retraining schemes became an important tool of modern labour market policies.

The skill demands of the labour market are changing so quickly now that it is even more important to move from passive policy of administrating unemployment to an active policy of equipping people to compete for jobs. In a country like Sweden, more than 90% of vacancies require skills and qualifications.

The pace of change is remarkable.

Expert tells us that by 2005, 80% of the technology we are using now will have gone. In its place, there will be new and better technology. The information and communication technologies are entering the work-place, and revolutionising daily life, even more quickly.

Some years have passed since Allan Larsson, the former Director General for Employment, made his statement in which he shares some of the most common beliefs of modern working life. One of the core issues concerns the continuous increase of skill demands. Another presumption concerns the high level of job turnover and change rate. A third common conception related to the increasing level of temporary work contracts often labelled as the contingent work force. Another trend often discussed is work intensification as a characteristic feature of modern work.

Current research and long-term studies of the Swedish labour market questions some of these beliefs (cf. Grande et al. 2001, 2004 and SOU 2001). Skill requirements are not expanding in the pace and speed often mentioned in most occupations. The major change tends to be of a structural character by a decrease of low skilled jobs and a growth of medium- and high skilled jobs, while the changes within occupations have not been so striking. The level of job turnover has been high in Sweden during the last decade due to restructuring, down-sizing

and a high level of unemployment. The proportion of temporary jobs has increased but not in a dramatic way if viewed over a longer period of time. During the last few years, however, there have been evident changes. The level of work intensification has expanded in most jobs and particularly in the public service and caring sector. In summary, these studies by the Swedish scholars raise the need for a more critical debate of ideals and realities in the changing conditions on the labour market and on the work-place.

There is a dynamic relationship between lifelong learning and labour market flexibility and employment contracts. The concept of labour market flexibility (LMF) is usually seen as a function of, and an arena for, social dialogue about the labour market. There is also a genuine industrial relations perspective embedded in the concept of LMF. Crucial institutional mechanisms are the balance between state regulation, negotiations and agreements between social partners, and local unregulated praxis. The pro and cons of various forms of labour market flexibility patterns are usually assessed and valued in different ways between employers and unions.

Corporate values highlight productivity, market expansion and high levels of profits, while unions tend to look more at acceptable wage levels, secure employment conditions and a good working environment. Wage setting, deregulation, relocation and temporary employment contracts are fields for testing the level of flexibility of the labour force. Current criticism of the buzzword 'flexibility' often points to the fact that the word is used in a management context and with a limited interest in what can be regarded as flexibility, as viewed from the employees' perspectives and needs. The need for a concept of mutual flexibility still awaits a satisfactory balance between employee and employers interests.

If we view labour market flexibility more from an operational setting at corporate or firm level, it is common to talk about various forms of flexibility such as functional flexibility, skills flexibility, numerical flexibility, flexible working patterns and wage flexibility. In practice, the flexibility of an employee depends on his or her level of mobility. Functional flexibility is often combined with or stimulated by a flexible organisation of the work-place and a readiness of employees to move between different tasks or meet new skill demands. Numerical flexibility implies that the employer can adjust the number of employees to current needs. Flexible working patterns are another form of often used method of flexibilisation. The concept of mobility, as such, incorporates geographical mobility (even of a transnational nature), occupational mobility on the external labour market, and occupational mobility and career change at work.

Numerical flexibility is often used in the context of temporary job contracts, a situation that is not always beneficial for work environment, salary, job security and learning options. Working hour flexibility could be developed to a mutual agreement with a win-win situation where both employees and employers see the benefits. In practice, however, part time work also tends to be related to underemployment and low level of control and influence. Generic flexibility is built on the assumption that the employee has a competence profile and job-

related experience portfolio that also comprises general knowledge and skills to be used in new working settings.

A recent Swedish study shows that employers tend to use a more diverse tool-box and do not give as high attention to the so-called constraining impact of the job-security act as is sometimes indicated in media debate and national politics. First, there is a strong variation between different sectors, industry, finance and care. The need for flexible employment contracts was stronger in the industrial sector than in finance and care sectors. Job-rotation and over-time were often used for flexibility as well. In all three sectors, recruitment, skill gaps and time needed to master an occupation were regarded as major problems (FAS, 2004, Gronlund, 2003 and 2004). There are also some results showing that conditions for a healthy and developmental workplace is more difficult to reach in temporary employment than in more stable and enduring forms of employment. Less control, increasing economic constraints and economic problems influences the stress-level and lead to a higher risk of sickness absence. The role of temporary employment as a bridge to enduring job-security depends on the employment contract; the best results was for sixth months of introductory employment, then for project-employment and least for temporary workers (Aronsson 2004). This result also corresponds with a study reported by the Swedish Trade Union Confederation.

Table 1: **In-service training first half of the year 2000 for employees with different employment contracts (Source: LO 2000a)**

Employment contract	In-service training participation (in %)	Time for IST as part of total working time (in %)
Tenure position	46	2.8
Vacancies	39	1.7
Object/ Project-employees	33	2.7
'Just-in-time employees'	14	1.8

Table 1 illustrates results from a study by the Swedish Trade Union Confederation (LO) on learning options for individuals with different employment contracts. The conclusion to be drawn from this table is that not all temporary job-contracts restrict access to in-service training and life long learning. People working in high-status temporary work as project work have a much higher level of learning access than the just in time-employees. In general however, access to adult learning at the work-place has a considerable social bias. Another observation from the Swedish context relates to dramatic changes in the provision of in-service training organised and paid for by the employer. Studies initiated by the Swedish Trade Union Confederation, LO shows that the educational gap has increased between different kinds of employees in Sweden (cf. LO 2000a and 2001). If we assess in-service

training as time of training as part of total working time, a blue collar worker will on average have 1.6% in-service training time while white collar workers have 3.7% and professionals with academic background 4.7%. According to SCB (2004), although options of in-service training have increased for employees in Sweden during last years, there are still enduring gaps.



Figure 1: Participation bi-annually in in-service training by trade union membership 1986-2003 (SACO=Swedish Confederation of Professional Associations, TCO=white collar workers; Swedish association of Professional Employees and LO=Swedish Trade Union Conferedation. (Source: SCB (2004) www.scb.se)

4 Lifelong learning in Sweden between traditions and modernity

4.1 The formation of modern adult education

Although the concept of lifelong learning has been increasingly popular in various policy quarters, its roots go far back in history. Adult schooling traditions in Sweden emanate from the mid-19th century and popular literacy tradition goes back to the end of the 18th century. The pioneer institutions were Workers Institutes and education circles, followed by folkhigh schools (residential colleges for adults) from 1868 and onwards, and finally study circles emanating from the start of the 20th century. Broadly speaking, Swedish adult education development can be described in three periods. The first period, mentioned above, has strong roots in and driving forces emanating from popular movements aiming at self-education in a more collective sense. This period lasted until the late 1960s. The second period is characterised by stronger state intervention in the infrastructure of municipal and curriculum-based adult education. The basic institutional structure for formal adult education was set up in the

1970s. It comprised various supply and demand oriented measures such as a new law on educational leave of absence, the introduction of municipal adult education, new forms of study finance and a policy of recognising work experience in higher education.

This period culminated in the Adult Education Initiative from the late 1990s and the experiment on advanced vocational education started at virtually the same time. During the early 1990s, another period started emerging in the form of stronger market influence illustrated by a more diversified provision of learning opportunities, new private mandators as well as new forms of distance teaching and e-learning. Furthermore, new policy developments in lifelong learning cannot be discussed without reference to Sweden's membership in the European Union. Policies of lifelong and lifewide learning were developed in Sweden many years before it turned in to a major policy profile of the European Union. Thus, the development of popular adult education in Sweden now brings three centuries together by the development of reading circles, study circles and folk high schools.

The aim of promoting recurrent education has been a central value in modern Swedish educational reforms. The expression lifelong education has not only been used to characterise adult education, but rather to spell out the lifelong learning potential of youth education. The reforms in upper secondary education, designed in the late 1980s and implemented during the 1990s, have been supported by the idea of lifelong learning. In fact, one could say that content, quality and outcome of upper secondary schooling forms a basis for lifelong learning and an entrance ticket to the learning society. The recent policy orientation takes one step further by trying to build bridges between the formal infrastructure of adult and lifelong education and learning environments, learning centres and recognition prior and informal learning.

The objectives, educational design and outcome of systems of upper secondary schooling have a fundamental impact on an individual's employability, life chances and further learning routes. The Swedish system, with its focus on common core subjects for all pupils, aims at a combined support of both further learning routes and occupational options (cf. Abrahamsson 1999). Lifelong learning is an activity that comprises learning in various forms from formal and non-formal settings to informal learning in an everyday context.

The early 1990s can be characterised by a significant shift in education values and ideas in Sweden. The role of working life orientation and preparation is redefined in the new national curriculum for the compulsory school, for the upper secondary school and for municipal adult education. More attention is paid to the quality of subject content and academic preparation at the expense of working life orientation.

4.2 Current adult education provision

Adult education in Sweden comprises a number of different actors or organisers with various objectives, target groups and forms of teaching and learning. It is, of course, difficult to formulate general indicators of access and educational attainment due to the wide variation of factors such as content, length and function. Table 2 below gives a broad picture of the

volume of adult education and in-service training but does not include other forms of on the job-learning not included. An interesting feature of this table is that women are in a majority in most forms of adult learning. The most common provision is study circles, which has about the same enrolment as in-service training organised and paid for by the employer. Municipal adult education, formal education usually at upper secondary level, also forms an important tool in adult education in Sweden.

Table 2: **Different organisers of education for adults** (Source: **Statistics Sweden 1998**)

	Number of participants, during a week in autumn 1998	Proportion of females (in %) 1998
Adult Education Associations	2 815 679	57
Folk high school (191 290 according to FBR)	104 530	60
Municipal Adult Education	237 510	68
Municipal education for adults with learning disabilities	4 137	44
Swedish Tuition for Immigrants (Sfi)	20 460	61
SSV (distance education)	111 862	66
Labour market training/	41 899	46
University colleges and universities (undergraduate education)	305 581	58

Sweden has a growing number of education enterprises. These corporations offer not only education, but also consultancy and information technology services. There are also educational institutions providing education for manual workers. Education companies are also very much concerned with the training of senior executives. Education companies, however, account for a relatively small share of the total volume of corporate educational activities. Various surveys have indicated that only a third of this volume is provided by external educational organisations. The major part of in-service training is both supplied and paid for by the employer. The annual cost of in-service training in Sweden has been assessed at SEK 43 billion or somewhat more than 5 billion EUROS.

A more recent study on adult enrolment in various forms of learning has been published by SCB (2003). Statistic Sweden (2003) has described the general adult education participation level in Sweden. From autumn 2001 to autumn 2002, individuals with post-secondary education participated in study programmes, courses, study circles, and so forth to a greater extent than individuals with a lower level of education, that is upper secondary education or lower secondary education. During the same period, the interest in education among the latter, who did not participate in any study programme, was so low that there was little chance of a balanced participation in education between groups with differing educational backgrounds. Women had a higher level of participation than men regardless of previous education.

In terms of age, participation was highest among the younger individuals in the survey, i.e. those aged between 20 and 24. The participation rate declined gradually for each age group and was lowest among the oldest age group, those aged 65-74. Every other individual who participated in a study programme, course or study circle, and so forth from autumn 2001 to autumn 2002 were interested in following more study programmes than they were able to. This proportion was the same for both men and women. A quarter of those who did not participate in any studies were interested in taking part. In this group, the proportions were also the same for men and women.

Statistics Sweden (2003) has also tried to map the level of informal learning. Four methods for informal studying, that is, not teacher-led studies, were examined. From autumn 2001 to autumn 2002, six out of ten individuals studied by themselves by reading specialist literature. Fifty percent visited trade fairs or exhibitions with the intention of improving their knowledge or skills. Four out of ten individuals studied using computers, the Internet or a CD-Rom. Two out of ten used radio, TV or educational radio. Women and men both used the same methods in roughly the same amounts.

Concerning the methods involved in the survey, informal studying built upon previous education in length and level. The links between previous education and studying by radio and TV were not as evident as for the other three methods. This result points to the need for further research into the relation between formal, non-formal and informal learning.

4.3 The rise and fall of individual learning accounts in Sweden

In December 1999, the Government appointed a Commissioner to analyse and design a system of *individual learning accounts*. The Government, in its Budget Bill for year 2000, proposed that special funds be set aside to stimulate continuing individual competence development. The financial frame set out for individual competence development in the Bill amounted to SEK 1.35 billion for the year 2000 and thereafter SEK 1.15 billion annually.

The task for the Commissioner was to submit proposals on how budget funds set aside for individual competence development could be most effectively utilised. The Commissioner was required to present a system flexible enough to provide scope for limiting and expanding the financial frame in the future. The tasks of the Commissioner included the following:

- providing the most important proposals and existing models for a system of individual competence development as well as submitting a recommendation on how such a system could be structured and organised;
- producing an analysis based on the perspectives of effectiveness and growth as well as on redistribution policy;
- paying attention to the question of how the proposal could stimulate other agreements and insurance solutions on the labour market;

- indicating what the relationship should be between the proposal and the study support system and other public funding for education, in addition to the possible impact of the proposal on the supply and demand for education and the labour market, as well its impact on other forms of savings.

One of the major ideas behind individual learning accounts is that individuals should be better trained and prepared to navigate themselves through the lifelong learning society and ‘be able to steer their own competence development.’ By developing the relevant competence the individual's self-confidence in their ability to strengthen their position on the labour market would, it was hypothesised, be stronger, that is supporting or upgrading employability. The rationale from society’s point of view is that learning accounts – in combination with other measures – could mean more favourable conditions for increasing growth and reducing the costs of unemployment. The practical payment model for the individual is built on the principle of tax exemption.

Another important dimension of this idea is its connection to social partners and negotiations between employers and unions. It was the intention of the government that a system for individual competence development ‘can stimulate new collective bargaining solutions between trade unions and employers, direct agreements between wage-earners and employers, as well as for the competence development of the self-employed.’ (SOU 2001:53) According to the hidden rules of the Swedish labour market system, the state should not intervene too much in work-place learning.

The mission of renewal at the work-place in the promotion of new work organisations, new patterns of learning and a better utilisation of skills and competencies should be a challenge for social partners. Negotiations about learning time or redistribution of learning time should be as common as wage-setting policies, policies for flexible working hours or retirement schemes. Thus, the *individual learning account model* calls for a new lifelong learning contract with stronger involvement of all parties, the state and the municipality, the corporations and the market, and last but not least, the individual. The suggestion also focuses on the need for general competence up-grading, and more narrow and corporate-specific knowledge. The implementation of these ideas has, however, met strong resistance from some trade unions, arguing against the risk of increasing learning gaps in society. Recently the government decided to call off this experiment, thereby placing it in the archives of Swedish educational ideas.

4.4 Collective competence agreements between social partners

There is more or less a hidden rule in Sweden that the state and government should not intervene in the climate of competence and work-place learning developed by the social partners. Instead of law enforcement and anti-discriminatory legislation, the government strongly supports active work-place learning initiatives in conjunction with the social partners.

The Swedish Trade Union Federation has reviewed the presence of collective agreements on in-service training and competence development at work. Only four or five trade unions out of approximately twenty unions in the federation do not have collective agreements on competence development at work. The content of these agreements varies significantly. For some unions, the agreements stipulate that a certain time or volume of in-service training and work-place development should be provided. Other agreements focus on the equity dimension and equal access to work-place learning. The union in the retail sector has recognised the idea of learning accounts. The union for metal workers has also given a high priority to competence agreements and has also been active in the policy discussion on the connection between individual learning accounts, corporate training and the individual's own investments. Some unions have also given attention to the connection between competence development and the wage level. The Swedish Trade Union Federation (LO) is now promoting the idea of union representatives for competence development (*kompetensombud*) to support the competence development strategy at work and to inform, orient and stimulate members to take part more actively in work-place learning.

Sture Nordh, President of the Confederation of Professional Employees (TCO) and also a leading spokesman for a revitalised competence strategy has underlined the need for broad support for work related competence development in Sweden (Nordh 2000).

The social partners are in agreement about the crucial importance of knowledge development for growth, and also agree that the content of knowledge development should be determined in close co-operation between the partners at the local and central levels. Nevertheless, an individual company's investment in expensive training for its employees is, when all is said and done, an extremely uncertain investment. This is why companies are under-investing. The contribution made by the State is therefore vital in determining what resources can be allocated to training in the companies.

Broad and extensive investments in competence development in companies and administrations must now be made. It is time for less talk and more action, and without the bureaucracy and complications that risk killing off the interest of many companies.

Thus, the social partners play a crucial role in defining and implementing the new lifelong learning contract in Sweden.

4.5 Background, objectives and impact of the Adult Education Initiative

School education in Sweden is governed by certain national-level policy documents, the most important of which are known as 'goal' documents (which lay down the goals school education is to achieve) and 'steering' documents' (by means of which education can be steered towards attaining those objectives). The goal documents for adult education are the Education Act, various ordinances, the curriculum, and course syllabuses (which include the criteria for awarding grades). At the local level, schools/colleges draw up their own timetable and work plans.

The curriculum which applies to all adult education is known as 'Lpf 94' (national curriculum for upper secondary and adult education). The curriculum lays down the value-base and tasks of adult education. There are certain specific targets which adult education is charged with working to achieve:

- to reduce discrepancies in the level of education and training between individuals, thus contributing to greater equality and social justice;
- to enable students to increase their ability to understand, assess and participate in cultural, social and political life, thus contributing to democratic development in society;
- to provide adults with training and education which equips them to carry out varying work tasks; the programme also aims to provide an input to the process of change in the conditions of working life, and to make a contribution to the attempt of attaining full employment, thus promoting development and progress in society;
- to meet the wishes expressed by individuals for expanded study and training opportunities, and make it possible for them to supplement the basic school education they had as children.

Adult students' knowledge is only to be supplemented to the extent that, when they have completed their programme of study, their knowledge is equivalent to that gained by young people on their courses. The goals in terms of the level of knowledge to be attained are the same for both adults and for young people, but the content, scope and areas to which emphasis is given do not have to be identical.

The Adult Education Initiative (AEI – in Swedish *Kunskapslyftet*) is a five-year programme of investment and development in adult education initiated by the Swedish government in July 1997. Across the country intensive work was carried out with the aim of ensuring that the hopes and expectations placed on the programme by those taking part in the education and training, by public authorities and by industry can be realised.

During the first year a special Adult Education Initiative Delegation (*Delegationen för Kunskapslyftet*) was charged with looking after the contacts between the state and the municipal authorities in matters concerning the programme. Since 1 July, 1998 this responsibility has rested with the National Agency for Education.

The 'Take-Off' has to be seen in a broader political context as a Swedish response to a European strategy towards unemployment and structural transformation. Instead of supporting a low-wage structure on the labour market, this policy gives high priority to the educational upgrading of the labour force. The purpose is not only to raise the employability of unemployed individuals, but also to support retention strategies at work and to help employees adapt better to meet new skill requirements and new production methods or business ideas. In short, one can also say that the AEI-mission aims at a more comprehensive policy relating to labour market developments, to the infrastructure of adult education and training as well as supporting a fairer distribution of wealth and economic growth. The Adult

Education Initiative can also be conceived as a crucial component in a policy of lifelong learning. The Ministers of Education of the OECD countries highlighted three cornerstones: a good standard of basic education as the foundation for lifelong learning; increased opportunities for switching between study and work throughout working life; and a clarification of the roles of, and the distribution of responsibility between, the different parties involved. If the goal of enabling individuals to continue furthering their education throughout working life is to be achieved, then this will have far-reaching consequences for the state.

The principal target-group has been and are unemployed adults lacking three years of upper-secondary school education. The aim is to enable people to acquire greater self-confidence, increase their employability and enable them to make use of opportunities for furthering their own development in their work. The programme is designed to assist participants in achieving the necessary qualifications and competence levels to study at a higher level and to lay the foundations for lifelong learning.

The responsibility for creating the conditions which can enable these objectives to be reached lies with the municipal authorities, which are charged with building up an infrastructure for learning that corresponds to the needs of the individual and society. The municipal authorities are charged with the task of implementing the Adult Education Initiative; the state contributes funding to their work in this regard to the tune of SEK 3 billion per year. In total, AEI comprises a hundred thousand adult students per year. The Adult Education Initiative was the major adult education reform during the 1990s.

The impact of the Adult Education Initiative has been subject to research and follow-up initiatives. It is obvious that the reform covered a major part of the adult population, although there is always the dynamics of social bias in most adult education reforms. ENCELL, the Swedish National Centre for Lifelong Learning has made a meta-analysis of the outcome of the Adult Education Initiative (Nordstrom & Bengtsson-Sanberg 2004). Their study is not primarily focussing on the economic, social and individual impact, but a more comprehensive approach. The implementation process has comprised various forms of collaborations and co-ordination between different organisations and actors. Thus, the impact of the reform is not only related to individual performance on the labour market, but also the organisational set-up and infrastructure of adult education as a whole.

The Swedish Agency for Public Management (Statskontoret 2003) has also investigated organisation and structure of adult learning today, and points at the need for a better co-ordination between state, municipal and labour market institutions and agencies. The government presented a bill to the Swedish Riksdag in 2001 (Govt.Bill 2000/01:72 Adult learning and development of adult education). This education bill comprises more support to the municipalities to develop adult education, more stress on informal learning, learning centres, validation and guidance. Lifelong learning and flexible learning contracts and contexts also reflect this new policy.

4.6 Reforming upper secondary schooling with new vocational profile

The design and organisation of initial vocational education and training (IVT) are under discussion in most countries. In some countries like Sweden, IVT is embedded in a comprehensive educational structure, while other countries such as Germany have the tradition of the dual system. In both systems, the balance between general subject knowledge and specialised vocation knowledge and skills is a major policy issue.

Upper secondary education in Sweden is subject to a new reform. Already in the early 1970s an umbrella-organisation for traditional academically-oriented gymnasiums, vocational schools and practical schools was created. In the late 1980s, all two-year vocational programmes were prolonged to three years with the objective of giving general eligibility to higher education. In the new curriculum of 1991, all programmes in upper secondary schooling in Sweden share the same eight core subjects.

The mission of the task force was to modernise and renew upper secondary education in accordance with current and future changes in society and the labour market. It has to be considered that the ideological background in forming the suggestions for an organisational renewal of upper secondary education is a combination of vocational orientation or preparation, higher education transition and personal development; all being integrated in policies of lifelong learning. Thus the multi-function of a comprehensive model is more difficult to design and evaluate in relation to a binary model as represented by the German dual system.

The task force's final report was presented to the government at the end of December 2002. One of the report's recommendations suggests reducing the 17 programmes to 8 sectors.¹ The general mission of the task force 'Gymnasieutredningen 2000', has been to present a model of broader programmes giving to pupils a more general preparation both for an occupational career as well as further studies at higher education level.

The task force presented eight upper secondary education sectors in their final report:

- The service sector
- The individual and society sector
- The culture and communication sector
- The economy and social sector
- The construction and real estate sector
- The nature, science and society sector
- The technology and production sector
- The ICT and design sector

¹ Åtta vägar till kunskap – en ny struktur för gymnasieskolan (Eight ways to knowledge – towards a new structure of upper secondary schooling in Sweden). SOU 2002:120

The idea behind the suggestion was to make the system more comprehensive, easier to overview and understand from the students' point of view, and to decrease the number of study programmes by various forms of educational integration.

In April 2004, the government presented a bill to the Swedish Riksdag entitled *Kunskap och kvalitet – elva steg för utvecklingen av gymnasieskolan* (Knowledge and quality – eleven steps for improving upper secondary schooling; Govt.Bill 2003/4:140). Surprisingly for people that had been involved in the task force, the Minister for upper secondary education, Mr. Thomas Östros, did not consider the need for a structural and organisational renewal of Swedish upper secondary education by reducing the number of programmes and entrance doors to upper secondary schooling. Instead, the government made the choice to launch a general improvement programme for Swedish upper secondary education, paying special attention to vocational education. The focus of the bill was 'to give more emphasis to knowledge within a context, in-depth studies and coherence'. Furthermore, the minister underlined the need to counteract stress and reduce tactical choices and fragmentation.

Among the initiatives and measures being suggested were the introduction of an upper secondary school certificate, more attention to qualified project work, history as a new core subject, enhanced quality for vocational programmes ('All pupils will be given the opportunity of high quality learning at the work place, connected with the programme the pupil has chosen'), larger modules to give space for in-depths studies and quality assurance of local modules. Finally, a modern system of apprenticeship training will be introduced:

A new system of upper secondary apprenticeship training is proposed as an attractive and eligible alternative in upper secondary national vocationally oriented programmes. Upper secondary apprenticeship training will be designed as an interesting option for all pupils. Apprenticeship training will have the same knowledge targets as education taking place in schools and will give pupils good knowledge in the school's core subjects and programme specific subjects, so as to equip them well for both labour market and life in society.

If we consider the long-term development of Swedish educational reforms with regard to equity, vocational orientation and capacity for further studies at higher education level, it is obvious that this bill represents a stand-by or wait-and-see kind of reform. The idea of eight broader sectors, suggested by the task force, represented a further step on the comprehensive lane. The new bill to the Parliament can be seen as a modest move backwards (or 'progress' as seen from the vocationalists point of view) move in a VET-direction, although still keeping firm to the idea of a comprehensive model with the same core subjects for all pupils. Recently, the Parliament decided to accept the upper secondary school bill.

5 Concluding remarks and future developments

Policies for lifelong learning have to come down from the ‘clouds’ and have to be analysed in a more specific context with respect to specific skill gaps and possible social, economic and institutional measure to enhance skill upgrading, on-the-job training and lifelong learning for various groups. Traditional institutional, social and psychological barriers will not disappear merely because today we talk about lifelong learning instead of vocational training, adult education or skill formation.

Looking ahead, it is necessary to make forecasts about strategic issues for lifelong learning over the decades to come. It is not sufficient or even constructive to choose more of the same strategy by prolonging formal education with an earlier start to schooling and more years in educational ‘quarantine’. New education and skill requirements cannot always be translated into years of formal schooling. In order to reflect on the effort of analysing the new redistribution pattern, my observations are as follows:

- Educational expansion naturally leads to higher standards of education in the labour force, but, if we take into account the forthcoming demographic turbulence due to high levels of retirement, we could also foresee a high level of loss of competence.
- The polarisation and differentiation over the average level of education has to be analysed at a deeper level with special focus on new combinations of general and specialised competence, as well as a new pattern of interaction between formal schooling, tacit knowledge and IT-skills.
- Furthermore we can anticipate new groups lagging behind, such as refugees with low education and traumatic social experiences, new dropouts from youth education as well as adults with a low level of life-mobility or who are locked in to the same vocation over too long a period of time.
- Finally, it is necessary to focus on the growing educational needs besides, or in addition to, work. The major challenge lies in the lifelong and lifewide learning mission in a population with a higher proportion of elderly persons and in the new provision of learning tools and adventures over the Internet.

In order to compensate for competence loss due to increasing retirement and to meet new skills, it seems reasonable to recommend increasing the volume of adult and continuing education, as well as providing more options for lifelong learning. Furthermore, learning options at work have to be facilitated and expanded. A more fundamental problem is, however, the Swedish love and passion for supply-oriented measures and not enough recognition of the problem of increased demand and commitment to learning from the corporate sector or from individuals themselves.

Statistics and inquiry show that Sweden can be characterised as having a rather low level of mobility and weak learning incentives (Nutek 2000). During the implementation period of Swedish adult and higher education policies in the 1970s and 1980s, there were no strong

incentives for wage earners to embark on lifelong learning due to the existence of relatively high wage-levels and a postponed structural transformation of the economy. The unemployment shock in the early 1990s led to a fundamental transformation of the economy and a new spirit for adult learning. Still, the Government's policy is more on the supply side than on the demand side.

A lifelong learning society cannot only be built on a continuous expansion of formal education in huge compensation schemes for different generations. It must also promote skill utilisation at work and leisure as well as supporting the individual's own spirit of learning in a lifelong context. The need for a revitalisation of the pool of talents, to support the mission of anti-discrimination and to facilitate the learning environment at work, has recently been analysed in a policy study presented by the Ministry of Trade and Industrial Development (DS 2000, 49).

Although Sweden is taking a frontier position on the information highway, there are various risk-scenarios with increasing information gaps in society. The Swedish Trade Union Confederation published a study 'The use of Internet in the homes is steadily increasing' (LO 2000b). It showed that 57 % of the LO members have access to computers in their homes. In only five years, the number of LO members with access to computers in their homes has almost quadrupled. Internet access varied widely between the three major unions in Sweden; 41 % of LO members also have access to Internet which can be compared to 63 % of the TCO-members (white-collar workers) and 73 % of the SACO-members (academics).

The differences between the sexes are also great and the differences are still greater between the generations. For example, 55 % of LO men aged between 25 and 29 years have used the Internet during the last twelve months and 37 % of LO women. The information gap seems to increase with gender and age; internet use for the age group 50 - 64 years was 18 % for men and only 13 % for women. Of all employees in Sweden, about half the number (51 %) have used the Internet in their homes during the last twelve months.

Thus current and future knowledge gaps in society will no longer only be related to educational attainment levels, but also to the individual's capacity to utilise new information technology and to understand public pronouncements and the implications of the new knowledge economy. The knowledge environment and skills gap are, however, more complex than described above. It is now time to initiate a policy debate and analysis of the risk of a double skills gap and mis-match on the labour market. It is necessary to look into issues of parallel over-education and under-skilling on the labour market (Abrahamsson, et.al. 2004).

Finally, it is necessary to scrutinize the connotations of the concepts of flexible learning and flexible employment. Studies of flexible work contracts cover a wide range of control, influence and learning resources for the individual. Project work and pre-employment in-work periods are usually connected with better work environment, control and influence than if you belong to the contingent work-force with series of demand-driven temporary job-obligations. Strong social and economic conditions as well as high level-skills and specialization are prerequisites for a beneficial temporary work contract. The same goes for flexible

learning. Not all adults are efficient, self-directed learner with capacities to organize their own learning. Thus, there are both challenges and risks in launching the open learning metaphor with its stress on lifelong learning, learning centres and learning environments as well as new methods of recognizing prior learning and informal skills. It is necessary to define and develop a learner-friendly flexibility as well as an employee-friendly flexibility to promote lifelong learning.

The Swedish membership of the European Union forms a platform for comparative efforts and for bench-marking system characteristics and the impact of reform. A recent review of access and quality of the whole system of education has been published by the government (Ministry of Education 2003). It was not a surprise to find the Adult Education Initiative as one of the major activities in adult education and lifelong learning. In this context, it seems reasonable to end this overview by quoting the Swedish government's aspirations in the field of education and learning (a.a., page 52):

*In recent years, the Government has used the term **flexible learning** in the field of education and training. A rich choice of programmes should provide plenty of opportunity for individuals to obtain qualifications or supplement their education as they wish. Both adult secondary education and liberal adult education promote flexible learning and provide greater opportunity for learning based on the wishes and conditions of the individual. The uniform Swedish system, in which upper secondary school and higher education offer both more vocationally oriented and more theoretical programmes, also strives to provide both flexibility and the opportunity for individuals to change study path or specialisation without them having to 'start again' in a new form of education.*

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Across Conceptual Models and Practices: Workplace learning in Higher Vocational Education in Sweden and Finland

1 Introduction

The increasingly competitive nature of the global economy and occupational change has in turn had a significant impact on the nature of work. In general, the concept of work has become more fragmented and subject to processes of rapid and unpredictable change. This process which affects the physical, emotional and cognitive demands on workers includes, for example, blurring of distinctions between the private sphere and working life, and the difference between what is learning and actual production (Garrick and Jakupec 2000). These changes have in turn meant that the skill level of employees is subject to continuous development (Johnston and Hawke 2002; Beck 1992), which has spurred the need for new and more efficient solutions for improved educational attainments and provision of individual skills (Brandsma and Nijhof 1999; Furlong and Cartmel 1997). Perhaps most importantly, education and training is no longer seen as being solely the realm of educational institutions in society. Rather, education and training is increasingly viewed in terms of a broader network-thinking involving the workplace, educational institutions, individuals and a variety of government, private enterprises and community organisations (Illeris 2003; NCVER 2002; Garrick and Jakupec 2000).

In this changing context, the Swedish approach of providing vocational educational and training (VET) through a single integrated national education system, experienced difficulties and problems at the beginning of the 1990s (Lindell and Abrahamsson 2002). This was mostly because the educational system tended to focus more on what schools can supply, rather than what industry actually demands (SOU 1995). Similarly, in Finland by the end of the 1980s it was felt that the education and training structure did not respond to the rapidly changing needs in the labour market or the changing international environment. Here it was believed that the most efficient way to expand higher education was to establish more vocationally and practically-oriented institutions.

In response, in 1991 the Finnish government launched the reform of polytechnics which, together with the traditional universities, provide the highest level of vocational education and training (Ministry of Education 2000). In a similar situation to meet the demands from domestic industry and commerce, but also to counteract the rather high rates of unemployment, especially among young people, in 1996 the Swedish government launched the reform of Advanced Vocational Education (AVE). What jointly characterises these two reforms are the efforts bringing educators and representatives of working life together to develop innovative forms of workplace learning.

Aims and research questions

The principal aim of this study is to analyse the organisational structure of the Swedish AVE and the Finnish reform of polytechnics in terms of their ability to bridge the worlds of school and work. In particular, this study aims to describe how workplace learning has been organised and, furthermore, what kinds of practical implications these new forms of training have resulted in.

This study addresses the following two research questions:

1. What are the main differences between how workplace learning is formally designed within the reforms of AVE and Polytechnics respectively?
2. How is workplace learning practically arranged within the reforms of AVE and Polytechnics respectively?

In the next section, the authors briefly contextualise the extensive concept of workplace learning and, in particular, the adjacent issues of some contemporary models of learning at work and qualifications. This is followed by a section outlining the methodology of this study. The paper concludes by answering the research questions addressed above.

2 Concept of workplace learning

The concept of workplace learning is deemed to be among the highest priorities of western economies. At the same time this globally disseminated concept has many different connotations, causing confusion as to what it actually comprises. Indeed, depending on the context, apprenticeships, traineeships, work-based degrees, continuing vocational and professional education, could equally be labelled as different categories of ‘workplace learning’ (Forrester and McTigue 2004). For this cross-national study, ‘workplace learning’ is defined as an ‘umbrella-concept’ including both formal, informal and occasional methods of learning at the workplace (see Boud and Garrick 1999). In addition to purely economic reasons, the motives for pursuing workplace learning are also educational, social and cultural (Garrick and Jakupec 2000; Jakupec 2000). Hence the suggested benefits are multiple.

Taking a managerial perspective, Sauter (1999) stresses that workplace learning enables rapid application of what has been learnt to cope with the growing volume of work and more stringent quality requirements. Similarly, Curtain (2000) suggests that workplace learning offers at least three sets of benefits which at the same time link educators and working life together. Firstly, employers can demonstrate to students the skills needed, and hence reinforce the value of relevant education. Secondly, students gain a better appreciation of how and why classroom performance is important in their future career and hence exert more effort. Thirdly, teachers accrue additional authority towards students based on their close association with future employers.

2.1 Models of learning at work and qualifications

Evans and Rainbird (2002) elaborate on the contemporary models suggesting that four different but overlapping forms of workplace learning can be found. The first form is *initial workplace learning in traineeships and apprenticeships*. Various types of apprenticeships and traineeships undertaken by students of compulsory education are included in this group. The second form of workplace learning, *work-based degrees and 'foundation' degrees*, is on the increase in higher education in the USA, Australia and the UK. In these programmes the 'clients' can gain credits from their work experiences and achievements. The degrees are awarded on the basis of these credits (Evans and Rainbird, 2002). This second form is in line with Lave and Wenger's model on how the apprentice undertakes a clearly defined and bounded linear journey in which older workers train and mould their successors, thereby ensuring the continual reproduction of an organisation or community of practice (Lave and Wenger 1991; Wenger 1998).

Non-formal workplace learning, the third form of work-based learning, can be defined as learning through work and community experience. One way of measuring this non-formal work-based learning is National Vocational Qualifications (in the UK), which try to recognise and accredit competence developed through experience and practice. Non-formal learning may also include planned and explicit learning approaches in other environments outside the formal education system. Non-formal learning is a dimension of initial vocational education and training as well. The fourth and last form of these work-based learning definitions is *access to continuing non-formal learning opportunities through the workplace*. In this group the non-formal learning opportunities are made available in the workplace through external providers. In this form of workplace learning, the role of lifelong learning is essential (Evans and Rainbird 2002). Besides the importance of the models themselves, there are also the various types of interaction between qualifications and work-based learning, which are elaborated below.

2.1.1 Interaction between qualifications and work-based learning

Eraut (2002) has defined four different types of interaction between qualifications and work-based learning. The first type is *transfer of knowledge gained from qualifications*. Most of the knowledge qualifications provide does not become usable at work without further learning in the workplace itself. Transfer of knowledge is about recognizing what prior knowledge fits the current situation. After recognizing the relevant knowledge, a new assembly of knowledge and skills required for situational understanding and responsive action is integrated (Eraut 2002).

Accreditation of work-based learning is the second type of interaction between qualifications and work-based learning. It can be argued that accreditation will provide an incentive to the learner when it confers a qualification with significant selection or promotion value, but that value can be added only if the assessment process entails significant further learning and a tolerable amount of cost and effort (Eraut 2002).

The third interaction type is *mutual enhancement through integrated learning*. This type of interaction is described to be ideal. Mutual enhancement through integrated learning is learning through interaction at the point of use: when planning, conducting, managing or evaluating work-based activities, processes or outcomes. This type of interaction can be described as using the more formal knowledge which is gained in working for a qualification to enhancing the quality of ongoing informal learning in the workplace. This type of interaction involves deep, critical and systematic thinking about work-based practises and experiences with guidance from concepts and ideas encountered in educational/ training context (Eraut 2002).

The fourth type of interaction, *competition for attention and commitment*, can occur when learning associated with qualifications has to compete for the learner's time and attention with other learning in the workplace. Aspects of the qualification may have little or no relevance to the workplace or they fail to improve the learner's career prospects. It is possible that qualifications can relate to and make demands on some job aspects but not on others. This can result in more emphasis on learning for qualification rather than other learning needs. (Eraut 2002).

3 Methodology

The methodology of this study includes two main steps. Firstly, in order to provide a contextual background and a deeper understanding for the formal design and organisation of workplace learning within the two national reforms, a number of domestic research studies, government reports and other policy documents were analysed. To retrieve the background information, governmental and bibliographical databases in Sweden and Finland were searched. In the process of selecting relevant sources, the authors felt it necessary to be flexible by keeping the amount of text material to a minimum. Thus, emphasis was put on analysing significant policy documents behind each reform only.

Secondly, this study uses the most recent national data available to explore the practical arrangements for workplace learning implemented in the 'field'. For this step, an in-depth research overview for completed or on-going research studies on these two reforms in question was made first. In particular, the overview emphasised research studies which included the topic of collaborative partnerships and models of learning at work. Criteria for inclusion of studies included rigorous research methodology with concern for validity and reliability of the sample, instruments for measurements, and scrutiny of analysis. From this overview, the Swedish data in this study stem mainly from two national evaluation studies: *Evaluation of Advanced Vocational Education– Report From a Research Team* (SOU 1999a) and *An Evaluation of Advanced Vocational Education Commissioned by the Committee on Advanced Vocational Education* (SOU 1999b). In the Finnish case, the data consists of a wide range of research studies including statistical data and governmental reports, and policy documents. In addition, descriptive statistics from the national database on monitoring the polytechnics, the 'AMKOTA' were included.

This study has some methodological considerations that need to be addressed. The main reason, as with all cross-national studies, is that it is difficult to standardise for the host of related factors that vary between nations (Ryan 1991). Firstly, there are differences on the curricular level between the two reforms (Ahola 1999). While the polytechnics include training of medical nurses, social workers, and engineers, these forms of professional degrees are not provided by AVE in Sweden, but are the responsibility of Universities and University colleges (Lindell and Adams 2000). Secondly, although Swedish and Finnish labour markets have developed along similar patterns in terms of industrial sectors, and the emergence of labour unions and employer associations, differences do exist on how these various representatives view the role of training, as well as their requirements for granting work licences, certificates, which in turn grant entry into a specific trade.

4 The Swedish reform with Advanced Vocational Education

The reform of Advanced Vocational Education (AVE) was initially launched in July 1996. The government report (SOU, 1995) that preceded the launch concluded that drastic improvements in VET regarding flexibility and adaptability towards working life had to be made. The report especially focused on the lack of higher vocational education emphasising workplace learning, which resulted in a short supply of specialists in several sectors of the Swedish labour market.

4.1 Organisational structure within AVE

AVE saw a number of new educational as well as organisational features being introduced. First, as required by law, one-third of the course programme, which ranges from one to three years in length, is devoted to advanced application of theoretical knowledge outside school at a company or organisation under the supervision and guidance of an experienced worker. Second, each AVE programme is designed in close co-operation with regional and local businesses to reflect their particular needs for skilled workers. The final decision to start a new programme rests, however, with the National Authority of Advanced Vocational Education (NAAVE), that aside from assessing applications, monitoring and evaluating the quality of the programmes, also grants financial support.

Third, to facilitate maximum employability, the content and subject matter in the programmes comprise different parts taken from labour market training, upper secondary schools, supplementary courses, and universities. This means that AVE is not provided at certain educational institutions with a fixed curricular level within the national education system. Instead, organisational belonging and responsibility varies between those who have the best opportunities depending on teacher competence and location. Thus providers of AVE programmes are upper secondary schools, municipal adult education, higher education, and also private training companies. The reform of AVE became a permanent part of the Swedish system for continuing vocational training in 2002 (Lindell and Johansson 2003). In comparison with other VET reforms in Sweden, AVE is medium-sized in terms of volume.

An overview of available programmes in 2001 distributed within the twelve different industry sectors that reflect the diversity within the labour market and the number of students for the education year is provided. There are two industrial sectors, namely information technology and manufacturing that together comprise more than 50% of the AVE programmes available. In comparison there are also small sectors, for example wood and food industry, that only constitute about 1 % of programme supply (NAAVE 2002).

4.2 Designing workplace learning within AVE

The very heart of AVE reform is the strong emphasis on learning at work. The decision that one-third of each AVE programme is to be dedicated to work-based learning was made in order to ensure that programmes are both practical, as well as based on theoretical knowledge. This means that the courses are not organised as a traditional traineeship period, but rather revolve around work-based learning and problem solving in an overall educational context. One requirement of the course providers is that the workplace itself be organised to make learning possible. Although the aim of training is to impart familiarity with an occupation or vocational area, the training is required to be more general than, for example, in-service training also provided by companies. Moreover, during the work-based learning, students are encouraged to apply a systemic perspective, to train and enhance their analytical capabilities, to apply a holistic approach towards their future profession, learn how to take responsibility for their work, and finally tune their capability to co-operate with other people in teams. According to the Government Bill (1995/96:145), a detailed plan of how these aims were to be fulfilled was required to be enclosed with every application. Moreover, the policy documents required that work-based learning should not only be designed to satisfy the current demands of the trade in question, but also to lay the foundation for continuing training throughout an individuals' active working life.

Achieving these rather high demands of work-based learning, the government policy documents also detailed how co-operation between educators and enterprises would be organised. First, it was decided that every AVE programme should have a local committee in charge of operative and strategic questions. Second, it was decided that local committees should comprise representatives from education and working life. In the latter case, both representatives of trade unions and employer associations were assumed to participate. In the former case of educators, both management and teachers were required to participate, thus forming a broad representative board with equal opportunities to exert power and responsibility, while at the same time compensate for regional and industrial characteristics and expertise (Government Bill 1995/96:145).

4.3 Results of implementing workplace learning within AVE

From the national evaluation study (SOU 1999a), the research team, of which the Swedish author was a member, found that when initiating an AVE programme, the planning process usually starts with the regional or local industry identifying a need for specific knowledge and skills. In the next step, business approaches local educators, enquiring whether they have

the possibility to provide a certain number of courses with specified content. According to the government detailed plan of how a local programme board should operate, educators and enterprises thereafter engage in appointing the representatives to the board. Based on the findings, the enterprise with support of their employer associations typically supplies the background labour market demand analysis and, through their internal networks assuring the supply of a workplace for learning while educators provide the educational contents and the matching curriculum (SOU 1999a). The parliamentary committee which investigated the pilot project with AVE indicated that the very meeting of these two groups resulted in positive synergies. In particular, the committee emphasised the necessity of bringing top management into the boards, functioning as 'door openers' towards the middle-level management in enterprises (SOU 1999b).

In terms of developing workplace learning models, four 'ideal' types could be identified. These were: trainee, project, apprenticeship and adoption. The most common form of work-based learning was organised as a traditional trainee period. Students were supposed to put their theoretical knowledge into practice. Usually the students started with single sub-operations and gradually advanced to work as a full time employee. Another common way of organizing work-based learning was in the form of a work-based project. For example, the students could develop a market plan or design web pages for a company. Using this form the students developed their ability to plan and coordinate their own work, often in cooperation with other students and company staff.

A third form, used only in a few craft or trade courses, was the traditional apprenticeship. Under supervision of an experienced tutor, the students practiced the trade and assimilated its traditions. What the students actually learn depends on the tutor and on what kind of production is available during that period. Finally, a few courses focused on entrepreneurship and self-employment using what we describe as adoption. The AVE students were adopted by a group of companies and together students, teachers and company representatives planned different types of work-based learning related to the needs of the individual students (SOU 1999b).

5 The Finnish reform of Polytechnics

The Finnish polytechnics have been developed using an experimental method (Lampinen 1995). The aim of the experiments was to gain experience that could be used later in building a permanent system, and the temporary polytechnics were given the chance of eventually gaining permanent status. Launching the reform 31 polytechnics were formed out of 215 older institutes, most of them were multidisciplinary. Since August 2000, all Finnish polytechnics have been permanent (Ministry of Education 2003b).

5.1 Organisational structure within Polytechnics

The goals of the reform were to promote regional development and meet regional needs for higher education. Both national and local forces guide the polytechnic network, formal bodies

which are composed of representatives from the workplace. Their task is to deliver the ideas derived from enterprises for planning and developing polytechnic education, and to improve a co-operation between education and working life (Ministry of Education 2002).

The polytechnics grant bachelor level degrees, comprising 140 to 180 points (3.5 – 4.5 years of full-time studies). All polytechnic degree programmes consist of practical training and diploma work. The framework of the degree programmes is governed by legislation. Each institution is free to define its own degree programmes, which consists of basic studies, professional studies, optional studies, practical training and a diploma project. Educational programmes provided by the Polytechnics in 2002 fall into seven main sectors. The largest is Technology and Communications, where first-year places in 2002 accounted for about one-third of the approximately 126 000 students that encompassing the reform per annum. The rest of the sectors are as follows: Business and Administration 27%; Health Care and Social Services 20%; Culture 7 %; Tourism, Catering, and Institutional Management 6%; Natural Resources 3%; and Humanities and Education 2% (Ministry of Education 2003a).

5.2 Designing workplace learning within Polytechnics

The guiding principle of workplace learning within the polytechnic education is to ensure that the students have possibilities during their studies to transfer theory into practice, and possibilities to test the level and usability of their know-how. This takes place, for example, through different collaborative projects in the workplace, through exercises and theses, and during practical training (Ministry of Education 2002).

The purpose of practical training is to further increase the students' learning outcomes, their possibilities to acquire a job and promote their careers (Ministry of Education 2002). Furthermore, the purpose is to raise the skill level of students and generate transfer between the educational institution and the enterprise, since both parties can benefit from the mutual know-how, methods and co-operation. Moreover, practical training, together with theoretical studies, aims at the growth of professional expertise during the course of study.

In contrast, students' diploma projects aim to develop workplaces, apply practical knowledge and meet the needs of working life (Ministry of Education 2002). A successful diploma project is perceived to help enterprises in their research and development (hereafter R & D) activities, which includes decision making and improving their competitiveness. On-the-job training offers students an opportunity to work independently and in teams, and to apply their newly won theoretical knowledge.

5.3 Results of implementing workplace learning within Polytechnics

At the outset, the reform of polytechnics appears to have increased co-operation between the worlds of vocational education and working life at various levels of organisational complexity. In particular, the concept of R & D appears to be one of the main areas in focus developing workplace learning. These core elements have certain characteristics since R & D in this educational context is mainly based on the stated needs of workplaces and not as an end in

itself (Ministry of Education 2002; Laakso-Manninen 2002). Examining these characteristics, Laakso-Manninen (2002) found four essential features, which describe the R & D activities at the Finnish polytechnics: 1) apply and develop the approach; 2) tailor in accordance with customers' needs; 3) pursue regional influence; and 4) connect the R & D to tuition. Facilitating these features, every polytechnic has prepared its own strategy for R & D (Malm 2002) where the objectives are primarily aimed towards regional support for industrial SME's and service production.

While R & D is said to be a rapidly developing field at polytechnics, the institutes do not really have a well-founded tradition in this field but are still learning, which leaves much room for organisational 'trial-and-error'. This is evident in monitoring, quality control and funding, which among others areas, are not yet fully established (Ministry of Education 2002). A report of the Finnish Higher Education Evaluation Council (Impiö et al. 2003) indicates that at some polytechnics the regional impact means almost exclusively strengthening the regional know-how through the use of traditional educational tasks. Many polytechnics have also invested in R & D and in the supply of services, but rarely are all educational sectors of a polytechnic represented.

The research results concerning project-based studying and learning at the Jyväskylän Polytechnic indicated that project learning is a cooperative construction of shared understanding and expert teams. The students learn in the authentic contexts, where they will later need the knowledge. The study revealed that since the project was a development project, the students were more tightly connected to the work community than during normal learning such as practical training (Vesterinen 2001).

The national study of the Finnish polytechnic graduates (Virolainen and Valkonen 2002) revealed that learning at work gave them a wide range of skills and good potential for finding jobs. Especially, they thought that joint projects, practical training and diploma projects between the polytechnics and local business and industry contributed to their transition to working life after graduation. The study also indicated that the guided practical training improved working skills more than part-time working while studying. Although student assessment of the qualification for working life is positive, the findings also indicated that some polytechnic graduates were also quite critical of the co-operation between polytechnics and working life. Hence there is a challenge for the polytechnics to improve connections to working life. The quality of practical training can be seen as a test for the special identity of the polytechnics in the Finnish educational system.

6 Conclusions

In answer to the **first** research question as to what the formal differences in terms of designing workplace learning are, the results indicate similarities as well as differences. On an organisational level, the two reforms appear to be designed in a similar manner where a range of the course programmes are dedicated to active learning at a workplace. One difference is that while course length within AVE programmes is approximately one-third of the

programme length, with the possibility of adjustment depending on industry's production cycles, the equivalent length of training within polytechnics is quite fixed depending on the educational sector. Secondly, while in AVE the decision for when students will have their periods of training and what the focus of the training should be like within a programme, is up to the local course providers and employers to agree upon, polytechnics have two training forms with different focus, categorised in practical training and diploma projects. The latter is focusing on research & development (R&D).

The **second** research question concerns how workplace learning is practically arranged. The results reveal important conceptual differences between the two reforms. At an organisational level, the overall flexibility within AVE also seems to affect development of workplace learning models in the 'field'. As the findings suggest, four different types appear to be in use: trainee, project, apprenticeship and adoption. Such heterogeneity is not surprising as representatives were allowed a large degree of freedom from the start (SOU 1999a). From an analytical point of view, the originality and variations of the models inhibit a clear-cut categorisation as they in sum surpass the explanatory models as described by Evans and Rainbird (2002). Hence, from a workplace learning theory perspective, this central part of AVE could better be analysed as a variation of the concept of 'situated learning' as developed by Lave and Wenger (1991) and Wenger (1998). The purpose of students spending several weeks and sometimes even months at a workplace within an enterprise is not only for testing and improving their practical skills, abilities and theoretical knowledge under real circumstances. Equally important, in sharing everyday practices with the supervisor and others learning the informal rules, values and ethics connected with the vocation. It is intended that the students will become socialised into the profession, and thus become mainstream members of the workforce in a manner that simply cannot be taught by school-based training only – a pedagogical idea corresponding well to the Lave and Wenger's perspective on how the relations of legitimate peripheral relations and communities of practice underpin learning and identity formation (Lave and Wenger 1991; Wenger 1998). This latter model also links well into what Eraut (2002) describes as *mutual enhancement through integrated learning*, since the training within AVE involves deep, critical and systematic thinking of everyday experiences and day-to-day practices guided partially by teachers and partially by mentors at the workplace.

The Finnish reform of polytechnics is slightly more difficult to grasp at this point as it is still striving to establish routines regarding partnership with working life (Ministry of Education 2002) Nevertheless, from an organisational perspective, the actual implementation of workplace learning within polytechnics appears, as with AVE, to take multiple forms depending much on geographical location. In sum, it appears that experimental learning and transfer of knowledge are two crucial factors that guide the fieldwork, which is in line with the fourth model of *access to continuing non-formal learning*, as proposed by Evans and Rainbird (2002). This also encapsulates Eraut's (2002) conceptualisation of transfer of knowledge, and recognition of prior knowledge in current workplace situations. Overall, the main aims of workplace learning appears to be assisting enterprises improve the organisation, trouble-

shooting or other more managerial tasks, rather than participating within the daily practices of the workplace, as is the case with the AVE. However, it is very important to stress that since this study focuses on the institutional framework of the reforms – not analysing the patterns of participants social, ethnical or gender background – this delimits the possibility for presenting evidence of how the reforms actually support or render individuals access to, and equity within, workplace learning. Hence, questions such as how students view their workplace and whether they become accepted by employers remain to be answered.

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Vocational training in Spain: Changes in the model of skill production and in management modalities

Firstly, this text deals with the role of vocational training in the qualified Spanish work force. It also deals with the restructuring process in which the different modalities of vocational training existing in Spain are merged. Finally, it deals with the challenges that vocational training faces today. In this paper we do not intend to make a description of the Spanish vocational training system beyond what is indispensable to analyse the aforementioned subjects¹.

This paper is based on the idea that an essential element to understanding the vocational training system of a country is knowing what its contribution is to the production of skills for the economy of this very same country.

We cannot understand Spanish vocational training outside a general system of skill production for the economy, in which general education and the experience acquired through work have played a fundamental role. This consideration, which is valid for any country, is essential in the Spanish case, for this generalised presence of vocational training cycles is relatively recent and the presence of such cycles in the younger generations of Spanish people is relatively poor, as we will see later on. This is why the training of a general type and that acquired through work experience have constituted the essential source of skill acquisition for most generations that are presently working in Spain.

In 1970, the *Ley General de Educación* (LGE, General Act of Education) was approved in Spain. Its introduction around 1980 implied the generalisation of the presence of vocational training in the initial training of the Spanish population. This is why this generalised offer of initial vocational training (IVT) has only affected the generation born from the middle of the 1960s onwards. For the previous generations, many of them still present in the working population, vocational training has only had an anecdotal presence.

This fact has characterised the offer of Spanish work for some decades and, to some extent, it still does, as Kölher's work (1994) proves. When referring to the predominance of work itself as a source of skill production for work, the latter even spoke about the "Spanish production model".

¹ The reader that is interested in it may find a description of vocational training in Spain in: "Vocational education and training in Spain" (short description), 2001, 46 pp., Cedefop Panorama Series. Catalogue nr.: TI-41-01-396-EN-C. http://www2.trainingvillage.gr/download/publication/panorama/5122_en.pdf
In German: http://www2.trainingvillage.gr/download/publication/panorama/5122_de.pdf

The development of IVT in Spain has corresponded, *grosso modo*, to the development of other modalities of vocational training –Occupational Training (OVT) and Continuous Vocational Training CVT. Therefore, when we generally speak about vocational training in Spain, we are referring to three modalities separately organised and that are presently undergoing a process of integration, within the Qualifications and Vocational Training Act (*Ley de Cualificaciones y de la Formación Profesional*).

In addition, the different modalities of vocational training in Spain are closely structured with the other educational cycles from which one may access them. In turn, from the *IVT* cycles it is possible to access general training cycles; therefore, we are dealing with an initial training system that integrates general training and vocational training. What is more, the effort of the Spanish administrative agencies in charge of vocational training are directed towards an integrated system including the different vocational training studies.

This paper consists of three sections: the first one deals with the space that vocational training occupies in the production of the work skills of today's Spanish working population (*Población Activa, PA*); the second one discusses the reform of vocational training that is in progress by means of the implementation of the “Qualifications and Vocational Training Act”; and, finally, the last one discusses the main challenges that vocational training faces today in Spain; these challenges are outlined by formulating an hypothesis regarding the future changes in the model of skill production for the economy in Spain.

1 Vocational training in Spain and the production of the skills needed for the economy

Over the last decades, in Spain – with some delay compared to other EU countries – we have seen a change in the model of skill production in which the amplification of the initial training undergone in our countries has played a leading role (Béduwè and Planas, 2003).

Today, most of the economically working population is made up of people born between the 1940s and the 1980s in the twentieth century. The education level of these generations varies very much; this is a reflection of the history of our education system during the second half of the twentieth century. Each generation had different opportunities of access to the education system (including initial vocational training) and acquired its professional skills from different models of behaviour.

From the 1980s onwards, the presence of the modalities of Occupational Training and Continuous Training has increased in the training of the Spanish working population, but it has also increasingly concentrated its presence in the younger population with a high level of initial training, as we will see in the following sections.

If we analyse the role of vocational training, we cannot forget the demographic factor; the Spanish demographic evolution has been so important that the generation born in 1990, which would be ready to enter lower-level of IVT, only represents 60% of the population born in 1970. In Spain, the number of young people is constantly decreasing.

In the following sections, we will see what the presence of the different modalities of vocational training is in the training of the Spanish working population, and, consequently, in the production of skills for the economy. To do this, we will separately present and comment on the three subsystems that make up vocational training in Spain: Initial Vocational Training, Continuous Training and Occupational Training.

1.1 Initial Vocational Training (IVT)

Today, initial vocational training is ruled by a law, the *Ley de Ordenación General del Sistema Educativo* (Act on the General Organisation of the Education System, *LOGSE*), passed in 1990. This law structures vocational training in two cycles: *Ciclos Formativos de Grado Medio* (Lower-Level of Initial Vocational Training, *CFGM*), to which one may have access after passing compulsory education, and the *Ciclos Formativos de Grado Superior* (Superior-Level Vocational Training, *CFGS*), to which one may have access after passing the baccalaureate. The students that have not passed compulsory education cannot access *CFGS*; for the students that have not passed it, there exist some *Programas de Garantía Social* (Social Guarantee Programmes, *PGS*), about which we will talk later.

As regards initial training, the data presented in Table 1 indicate that the importance of vocational training as regards the initial training of the working population is incidental for the generations born before the 1960s, and limited, at least compared to countries such as Germany and the United Kingdom, for the later ones. The generalised growth in the level of studies of the younger generations (Vincens, 2002) appears mostly in the growth in the number of students with a baccalaureate degree and a university degree who, as a whole, total 45% as regards the generation born in 1980 (Planas, Sala, Vivas, 2003).

Table 1: **Percentage of each generation with an Initial Vocational Training degree in some countries of the EU.**

(Source: Béduwè and Planas, 2003, and Planas, Sala, Vivas, 2003)

	Germany	UK	France	Italy	Spain
Born 1940	51	34	20	3	3
Born 1950	53	38	30	5	5
Born 1960	56	30	31	7	14
Born 1970	58	31	23	7	20
Born 1980					17

In the younger generations, the number of people that have obtained an Initial Vocational Training degree shows an important decrease. For the individuals of the generation born in 1980, who are just completing their first work experience, the presence of initial vocational training undergoes a twofold decrease: firstly, a reduction in the percentage of the individuals that obtain a degree in vocational training due to the increase in the tendency towards carrying out higher studies of the people born in this generation -those with a baccalaureate degree or university degree of this generation surpass 45%-, with the corresponding decrease in the percentage of those individuals that carry out vocational training studies, and, secondly, in absolute numbers due to the demographic decline (Planas, Sala, Vivas, 2003).

The data available indicate that between the 1970 generation and the 1980 one, the students who graduated in vocational training in Spain decreased by about 25% (Planas, Sala, Vivas, 2003). For the following generations, whatever the scenario considered, the decrease is maintained (Planas, Sala, Vivas, 2003). The data on the number of students presently registered in Vocational Training Cycles published by the Ministry of Education² corroborate the trends indicated for the generations which are still for the most part in the school system.

All these data on the evolution of the presence of students that have graduated in Initial Vocational Training (IVT) of the different generations not only are historically interesting as regards the evolution of the Initial Vocational Training system in Spain, but they express as well today's reality as regards the Spanish working population and provide a projection of its future (Planas, Sala, Vivas, 2004).

1.2 Continuous Training (CVT)

Continuous training may be an initiative of the companies or of the individuals. In both cases, in Spain, they can count on the financial and organisational support of the *Fundación Tripartita* (Tripartite Foundation)³, which administers funds for the "Vocational Training Quota" ("*Cuota de Formación Profesional*") (0.7% of the total wages bill).

The role of the companies in Continuous Training appears in the results of the CVTS (Continuous Vocational Training Survey 1993 & 1999), a European survey of companies. According to its results, the participation of the Spanish companies in Continuous Training in 1999 was 33.6%. This datum places them in a medium/low position with regard to the EU average, between the highest level of 96% of the Danish companies and the lowest level of 18% of the Greek ones.

According to this survey, 25% of the Spanish employees received Continuous Training during 1999 for an average period of 42 hours. This percentage implies an important increase compared to the 20% that received it in 1993.

² <http://www.mec.es/mecd/estadisticas/educativas/dcce/Cifras2004-05.pdf>

³ In the past it was called FORCEM; it is a foundation managed with a tripartite participation: state, trade unions and employers' associations.

In the companies that asserted that they had carried out continuous training, more than half of the employees followed some continuous training course (56.5%). This figure must be nuanced according to the size of the company; in small companies, the percentage of employees that are being trained is very low in comparison with that of companies with 250 employees or more. The difference is even bigger if we only take into consideration large companies, for very often they have their own departments of human resources from which they manage specific training plans for the company, whereas small companies do not have training plans available.

According to the kind of tasks carried out, the greater levels of participation in Continuous Training correspond to the group of “professionals and medium-level technicians”, followed by “executives and higher technicians”, “office employees and other services”. If we are to compare these data with the ones provided by the European surveys, no significant differences are observed. As Peraita (2000) indicates, “In addition, the distribution of training is concentrated in the most qualified employees in the highest sections of wage distribution” (p. 305).

In view of these results, we may conclude that, although the levels of Continuous Training in Spain are still very low in comparison with those of other European countries, the profile of the population that is still benefiting from continuous training is similar (Planas & Rifa, 2003); that is to say, continuous training is concentrated in the most highly trained employees that carry out the most qualified tasks.

According to the *Encuesta de Población Activa* (Labour Force Survey), based on individuals, we conclude that not only initial training, but the fact of “being young” as well, are key factors for the access to continuous training. People are trained mostly in the first years after entering the labour market and after a short break from initial training.

Thus, according to these data, “long-life training” is not as long as its name might suggest and it is concentrated during the first period of working life. No doubt, this is due to a multiplicity of factors (the younger people are the most highly trained ones; to train them may be more profitable for they have all their working life ahead, they have more free time for it and greater expectations, etc.).

There is the risk that older people (or less qualified younger ones) enter into a dynamic which is a closed circle, because, on the one hand, from a certain age on, it is very difficult for them to go backwards and recuperate the initial training that is missing and, on the other hand, their possibilities of having access to continuous training due to their lack of initial training are reduced.

1.3 Occupational Training (OVT)⁴

The aim of Occupational Training is “to foster the professional insertion and reinsertion of the individuals seeking work”, with special attention to those groups with greater difficulties.

In 2002, 305,421 people took some courses in continuous training, which means 112 people per every 10,000 inhabitants of the working population (16 to 65 years old).

As regards the age, over 75% of those that followed these courses were less than 35 years old, which means a great concentration in younger ages. As regards the level of studies of the users of this training, it is quite diverse, and although the weight of the lower levels is very high (close to a half), it also includes some students with baccalaureate and university levels (Table 2).

Thus, again, younger people are the ones that access preferentially this type of training modality and, although it is fundamentally addressed to groups with greater difficulties, the presence of baccalaureate and university degrees totals over 40%.

Table 2: **Level of studies of the students trained in Occupational Training, percentages.**

(Source: “Anuario de Estadísticas Laborales y de Asuntos Sociales 2002”, Ministry of Work and Social Affairs.)

Lower to compulsory education	10.4%
Compulsory Education	33.4%
Vocational Training	13.6%
Baccalaureate	23.0%
University	20.1%

1.4 Programmes of Social Guarantee (Programas de Garantía Social, PGS)

Although their existence is defined within initial vocational training, the Programmes of Social Guarantee deserve to be considered separately.

The *Ley de Ordenación General del Sistema Educativo* (Act on the General Organisation of the Education System, *LOGSE*⁵), a law that regulates non-university initial vocational training cycles, excludes the teenagers that have not passed Compulsory Secondary Education (*Enseñanza Secundaria Obligatoria, ESO*). In so doing, it also excludes 25% of

⁴ The source of statistical data on occupational training is the “Anuario de Estadísticas Laborales y de Asuntos Sociales 2002”. Ministry of Work and Social Affairs.

⁵ Act on the General Organisation of the Education System (*Ley de Ordenación General del Sistema Educativo, LOGSE*) (approved in 1990 and implemented at the end of the twentieth century).

the generations that were born after 1980, who are those that did not pass satisfactorily these studies, from their access to the later cycles of secondary education. As an option for those teenagers that get to the end of secondary education when they are 16 without passing it, the same law proposes to access the Programmes of Social Guarantee.

These programmes, not included in the cycles of vocational training, have a twofold aim: to provide a vocational training that allows access to work and to overcome, even if it is only partially, the deficit of initial training, giving access to the cycles of vocational training reserved for those students that have passed Compulsory Secondary Education (*ESO*).

The fact is that only a third of the teenagers that fail in compulsory education finally access these Programmes of Social Guarantee and only a tenth of those that access these programmes continue their professional training in the Lower-Level of Initial Vocational Training Cycles (CFGM), overcoming their failure in their initial training (Merino, 2005).

These figures indicate that the capacity to overcome one's initial failure in Compulsory Education through the Spanish Initial Vocational Training system is quite poor.

1.5 Some general considerations

a) The importance of IVET in the production of skills for the economy has been and still is quite limited. It affects only 20% of a generation, very far from the figures close to 60% in Germany, and its importance tends to decrease again compared to the growth of students who have obtained baccalaureate and university degrees that amount to more than 45% of these generations.

b) The relative decreasing importance of IVT in the generations that have recently incorporated themselves into the labour market is reinforced by a demography that is also decreasing.

c) Only a percentage of the students of CVT and OVT come from IVT. In fact, most students of OVT and CVT come from general training cycles. The structuring in the individuals' training itineraries between cycles of general and vocational training is very important in Spain, which makes it difficult to establish specific itineraries and certification of vocational training.

d) The training itineraries of young people move progressively away from the following sequence: general training, vocational training, employment, continuous training. General training is in many cases the way to access continuous training and it increases the number of people that return to general training (especially university training) after vocational training cycles.

2 Trying to create an integrated and transparent system: The National System of Qualifications and Vocational Training

The most important recent change that is still in progress in vocational training in Spain is the one regulated by the “Qualifications and Vocational Training Act” (2002). In its fundamental aspects, it is a **law of management of the three subsystems** (IVT, CVT, OVT) produced by vocational training, the development of which we discussed in the previous section. The main aim of this law is to create a single system of vocational training on a Spanish scale that includes the offer of the three subsystems and improves the transparency of their certification.

Integration is understood in three areas: a) that of the professional qualifications in order to create a common reference of skill certification for all types of vocational training; b) that of the different ways of acquiring professional skills; and c) that of the training offer of vocational training.

Along the lines already undertaken by other countries and international institutions, the main axis of this reform is the creation of a common reference framework for the recognition of the employees’ skills, independently of where the latter have been acquired (initial training, continuous training, occupational training or work experience) and planned by the central administration of the Spanish State and for its entire territory.

2.1 The National System of Qualifications and Vocational Training (Sistema Nacional de Cualificaciones y Formación Profesional)

This common reference framework is understood as an “...integrated system of qualification and vocational training... the aim of which is to try to structure a system that is able to obtain a global, coordinated, coherent and optimal treatment of the problems of qualification and vocational training of the different groups of individuals, of the organisations and the companies.” (CGFP, 2000 – Vocational Training General Council)

The three subsystems of vocational training that exist at the same time in Spain (IVT, CVT, OVT) have developed their management and certification separately. This new law intends to create a mechanism of central management of the three subsystems all over Spain. Such management refers mainly to the definition of the contents and certificates of vocational training courses, which it aims to include in a “**National Catalogue of Professional Qualifications**” (“*Catálogo Nacional de Cualificaciones Profesionales*”) that is to be the common reference for all the different vocational trainings independently of the system that teaches them and of the place⁶ in which they are taught. It also aims to establish a system of equivalences between the different types of training by means of a Modular Catalogue of Vocational Training (*Catálogo Modular de Formación Profesional*).

This law aims at creating a **National System of Qualifications and Vocational Training** (*Sistema Nacional de Cualificaciones y Formación Profesional, SNCFP*) to which “...it

⁶ One of the characteristics of the management of IVET and OVT in Spain is their decentralisation and dependence on the Autonomous Communities (Spanish equivalent of German *Länder*).

corresponds to foster and develop the promotion of the vocational training offers with a National Catalogue of Professional Qualifications, as well as to evaluate and accredit the corresponding professional skills.” (Art. 2.2.) To develop these tasks, it counts on the following tools: the National Institute of Qualifications (*Instituto Nacional de las Cualificaciones, INCUAL*), its observatory, the *OBINCUAL*, and the Reference Centres (*Centros de Referencia*).

The aforementioned NSQVET: “...will operate as a guiding and reference framework of every action, especially those regarding training of the different administrations, of the social agents, of other bodies, of the companies and of the individuals, favouring the required cooperation and consensus, in order to allow all the participants to harmonise their aims and interests in the qualification system, in a coherent and structured way” (GQVET, 2000).

For the development of this task, the **National Institute of Qualifications (*INCUAL*)** was founded, as a technical tool that has the basic aim to define, elaborate and maintain both the “National Catalogue of Professional Qualifications” and the “Modular Catalogue of Vocational Training”.

In order to carry out its functions, the *INCUAL* counts, among other instruments, on an observatory, the *OBINCUAL*, which is conceived as the “network of networks”; within this network it intends to become a meeting point of information and exchange on the requirements of skills and vocational training in relation to the different vocational training subsystems existing in Spain and between the different regions.

One of the aims of the *OBINCUAL* is the prospect, by means of the analysis of the key areas of the qualification and economic activity in which it is immersed, of determining firstly, the subjects and the variables of the productive process where changes mostly occur, and, secondly, obtaining the information on the trends and future previsions on these subjects.

To develop the activities of definition and updating of the curricula associated to the “National Catalogue of Professional Qualifications”, the National System of Qualifications and Vocational Training must also have a “**National Network of Reference Centres**” (“*Red Nacional de Centros de Referencia*”) (Art. 11.7) available, specialised in the different productive areas, the aim of which is innovation and experimentation in the sphere of vocational training.

2.2 Some pending questions

This management modality poses, among others, three types of questions, which were already put forward in analogous previous experiences developed in other countries: a) How to carry out the integration under a single certification system (National Catalogue of Qualifications) of such different modalities of access to professional skills such as initial training, continuous training and work experience?, b) How is it possible to guarantee the interaction and coherence among recognition systems developed at a supranational, national and regional levels? And, more than anything else, c) How will these certificates end up being recognised

in the labour market? The ultimate test derived from the degree of recognition of these qualifications is found in their degree of acceptance in labour market practices. The development is still in its first stage: the National Catalogue of Professional Qualifications was passed in September 2003.

3 Challenges to be faced

The challenges that the vocational training system faces in Spain may be centred around the two subjects that we have dealt with in the previous sections. Firstly, the role of professional training systems within the framework of a new model of skill production that seems to be coming for the Spanish economy and, secondly, how it is possible to structure a management model that will be compatible with the multiplicity of challenges that the globalisation of the economy implies.

3.1 Vocational training in a new model of skill production

Like the other European economies, the Spanish economy has enjoyed in the last decades a large supply of increasingly well trained young people; in the near future, this offer will decrease due to demographic reasons related to the decrease in the size of the population of younger generations. The increasing presence of an immigrant work force in Spain does not substantially alter this fact, and it does not seem that it will do so in the future either (Planas, Sala, Vivas, 2003).

If the demand for skills by the economy increases, as our evolution towards a knowledge society indicates, and if, in addition, it becomes less predictable due to the speed of changes, the companies and the Spanish economy in general will have to rely more and more on continuous training in order to obtain the skills they require (Planas, Sala, Vivas, 2004). In addition, we count on the fact that the general rise in the level of initial studies of most of the working population will favour the access to continuous training and will increase its performance. This implies a new model of skill production in which the greatest development will move towards continuous training and it will be based on a solid initial training, an essential prerequisite for lifelong learning.

What are the challenges that vocational training faces within the framework of this new model?

a) To reduce school failure to make lifelong learning possible:

The main economic challenge, but that which is also a social one, that our education and training systems face today is school failure. At present, the deficit of initial training acquires a new dimension when the individual's training process inevitably becomes a lifelong process. Evidence shows that the capacity to access lifelong learning essentially depends on the initial training on which it is based, as our aforementioned data on the users of continuous training show.

The risk of the polarisation of the training processes by means of CVT is clear: the individuals that have more possibilities for undertaking continuous training are those that in turn have a higher level of initial training; this increases the risk of exclusion from training courses and the work force for those who have not attained the minimum levels considered compulsory. In Spain and in regard to the most recent generations, school failure affects 25% of the students.

The reality of Social Guarantee Programmes has shown their great limitations: for the students that have failed in school after 10 years of unsatisfactory schooling, to return to school by means of actions that are external to the school system and after their failure in it is a very difficult task. These programmes have only been able to attract a small number of the students who failed in school with an even smaller number actually returning to school.

b) To avoid “early retirement” in lifelong learning:

As we have seen in section 1.2, continuous training is preferentially for workers under 35 years of age; this is a kind of “early retirement” from continuous training for the population between 35 and 65 years old.

We will have to put into practice some measures that favour the incorporation of the 35-65 age range in continuous training.

c) To increase the integration of general training and vocational training:

In fact, as we have indicated in the first section, in the skill production process for the economy there is no vocational training system apart from the general training one; the training itineraries of young people -and of some of the not so young ones as well- have broken this rule and experience entry and exit trajectories from vocational training, going through the different modalities of vocational training and employment.

The structuring of bridges between general training and vocational training within a common framework has favoured the rise in the level of studies of the population (Béduwè and Germe, 2004).

This fact is not reflected enough in the model of the National System of Qualifications and Vocational Training, as for instance in the National Catalogue of Qualifications and the Modular Catalogue of Vocational Training, which focus their task on the organisation of the certification of vocational training graduate students.

d) Promoting lifelong access to general or basic training:

Presently, the access to these types of training is very limited to the initial training period. We will have to broaden the concept of continuous training to the access of cycles that traditionally have been only of initial training such as vocational training or university cycles. We will have to invent new organisational modalities, probably a greater flexibility of duration periods and methods, for the basic training that favour these types of access. Some experiences of this kind already exist, but they are not enough.

3.2 The management of vocational training systems and of the mechanisms for skill recognition

The effects of economic globalisation and the technological change with regard to the labour markets and their skill requirements, as well as the multiplying of skill production modalities imply new information requirements for the labour market (Descy and Tessaring, 2001). The development of mechanisms that make the signs regarding the skills in the market more flexible and transparent is one of the challenges faced by the management of vocational training systems. Among these challenges, the ones that imply more difficulties are those that legitimate information systems and ones regarding the interaction of the different territorial levels within the framework of a globalised economy.

a) To obtain the recognition of the certifications corresponding to the NSQVET (SNCFP) in the labour market. School legitimisation versus legitimisation through the market.

Transparency in the recognition of skills has a previous requirement, that of legitimacy (Bjørnavold, 1998a and b).

The structuring axis of the Spanish system of skill recognition within the framework of the National Catalogue of Qualifications includes the cycles and the diplomas of IVET. This conditions the fact that they are fundamentally based on the logics and the legitimisation mechanisms that correspond to education and training systems. The development of “equivalence” (“*convalidación*”) mechanisms between diplomas or certificates requires more than those of recognition in the labour market.

The main challenge that a true system of skill recognition faces is the recognition by the market.

To some extent, it is “normal” for an approach on a national level to be based on the education and training systems, with their diplomas and certificates, which play a leading role in the recognition and comparability of training. To the contrary, on a local level and on a company level, the mechanisms corresponding to the labour market become predominant as regards the recognition and legitimisation of skills.

Were it true, the structuring between the mechanisms and the sources of legitimisation corresponding to education systems and those of the labour market becomes a strategic need for a system that wishes to both provide the tools for national or international recognition, and to be recognised by the companies and the employees.

b) Articulating national developments with GLOCAL development.

Today, the national level is an intermediate level -that is difficult to manage- to identify skills needs and the mechanisms to recognise them. This is due to the fact that it finds itself between two extremes, the global and the local ones (GLOCAL), which are increasingly acquiring greater power.

The technological and commercial process of globalisation to which most companies in Spain are subject has effects that surpass, “at the top” and “at the bottom”, the territorial area of the state. On the one hand, the greater tendencies towards a change in the production of goods and services are defined as spaces that surpass the nations; on the other hand, in the production and the recognition of human resources, regional aspects and even local ones, which, as many authors observe (for instance, Castells, 1996), may be an element of fundamental competitiveness for companies in a globalised economy. Really, the question could be posed on the role of national dimensions: What is the space corresponding to the nation state in the prospective management of skills?

Taking into account the essential role that nation states play today in the making of rules for the management of skills in our labour markets, it seems reasonable that they should integrate the two other dimensions, the global and the regional ones, in their “national” mechanisms in order to guarantee their efficiency. For instance, the needs of skills, and mostly of training, of the industries in the microelectronic sector (even belonging to only one company) are not the same in Helsinki as in Barcelona.

To develop systems of skill recognition and certification that are able to express local specificities and be recognised by companies is one of the challenges that the National System of Qualifications and Vocational Training will have to face. To incorporate recognition and legitimisation mechanisms corresponding to the labour market in the general systems would help in this task.

This is the reason why the incorporation of the GLOCAL dimension, which articulates the relation between what is global and what is local, is fundamental for the efficiency of the national mechanisms.

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Challenges in the Swiss Vocational Education and Training-system

The picture presented by Swiss education and training is complex and constantly changing. Understanding it calls for considerable knowledge and expertise, particularly if one wishes to gain an overall view of more than one area covering all parts of the country (see Wettstein, 1994). Historically the Swiss VET system developed out of out of legislations concerning the recruitment of qualified workers and by the 1870s the concept of using a plurality of environments to support training had gained ground in order to put greater emphasis on the value of work-based training (Gonon, 2002). Vocational education in Switzerland begins after the completion of compulsory schooling, i.e. 9 years of primary and lower secondary education, most frequently at the age of 15 or 16. It then continues to higher non-university-education. Vocational education in Switzerland has two principal goals: to impart vocational qualifications and general knowledge

Switzerland tends frequently and over-hastily, to be classified as having adopted the German vocational training model, with no regard to the western (French-speaking) and Italian-speaking parts of the country (Tabin, 1989). As a result use is often made of the term “dual system“, which itself in Switzerland is used mainly when different types of learning environments – school and firm – are combined in a vocational training system. At first glance this might seem to hold few problems but closer scrutiny demands clarification.

As in other countries that run a dual system, there is a never ending debate about the future of Vocational Education and Training (VET)-system. A “Dual System“ means a dominance of the apprenticeship form within the VET-System: youngsters work and learn about 3 or even 4 days in an enterprise and join school classes for 1, 1 1/2 or 2 days. In fact the Swiss system might be better described as a triple system in that it involves three sites for learning: the factory or business place for three or four days, the vocational schools for one or two days a week and the introductory courses (normally for 3 months in a special centre or workshop). Apprenticeships last from one to four years. The most popular skilled occupations are commercial employee, electrician fitter, cook, polymechanic, hairdresser, computer scientist, car mechanic, carpenter and medical assistants. The certificate obtained at the end of an apprenticeship is normally a solid basis to find a qualified work in industry and trade. It is also the basis for further education and training within the enterprise or a first step for higher professional education. Until recently apprenticeships were the foundation of quite long careers within the enterprise.

However, there is no longer such a clear divide between school-based learning and learning in the enterprise. Whereas, historically, vocational schools were intended as a means of supplementing the training provided by employers, they have gradually increased in status.

During the last years the importance of school-based learning has grown, due to the fact that work with much higher quotas of female apprentices, such as caring and social work, is now integrated in the VET-System, or due to new programmes which stress more theoretical work and offer chances of continuing to programmes at a tertiary level.

1 Vocational Training as a System

As Greinert puts it, a system of vocational training is not just characterized by one or several learning environments but as a somewhat more complex construct. For German-speaking countries – or in the Swiss case much better regions – we can speak of a state-controlled market model. It is a system which:

“... is not the outcome of conscious planning and development but has come into being as an integral whole by a complex historical process. For a long time on the job training and instruction provided by the vocational schools evolved more or less independently of one another, only becoming intentionally linked to form a systematic route to a qualification – (...) at a very late date“ (Greinert 1993, p.19).

Greinert discerns beside this German- (speaking) system a more bureaucratic and school-based system and market-oriented training models.

Swiss vocational training is similarly not the result of a forward-looking initiative and planning process; it only came into being in the course of the 20th century on a large scale.

The concept of the system was born out of a historical, political and reform-driven debate. However, the relatively loose connection between vocational school and work-based training and the lack of coordination and cooperation with the rest of the education system has resulted in its nature as a system being denied by some involved in vocational and industrial training; the use of the term “dual system“ is regarded as confusing). Instead the persons’ occupation both structurally and functionally is regarded as the decisive point of Swiss VET (see also Gonon et al. 2001). As Deissinger puts it for Germany, but as is also the case in German-speaking parts of Switzerland, occupation (Beruf) is a function of typically national historical factors and a cultural shaping of the relationships between training and employment, which has ensured that a specific design of framework of economic policy and organisation corresponds with a curricular shaping of vocational qualification (Deissinger 1998, p. 254).

Occupation and the duality of learning environments as typically national modes of control come up against their limits when a country allows different forms of vocational training forms to coexist. This is exactly what has happened in the case of Switzerland. Switzerland therefore has a widely range of diverging regional, cantonal and occupation-specific features. In particular there are a number of hybrid forms extending beyond linguistic frontiers, such as the institutionalised arrangement of school education in combination with work-based training, with a view to provide access to higher education, vocational or otherwise, as well as to employment.

1.1 History of Vocational Education

In the 19th century factories did not provide training for skilled or semi-skilled occupations. When the upsurge in industrial activity and free trade resulted in plummeting sales volumes due to lack of competitiveness, firms took a long time to realise that they needed to enhance the quality of their products to withstand foreign competition, partly by improving the skills of their workforces through training provision.

The road to reform of vocational training was long and arduous. In the late 1820s the “Schweizer Gemeinnützige Gesellschaft“ (SGG) , a public benefit organisation, was already discussing social and political participation and integration and further training in what were known as “Fortbildungsschulen“ (continuing schools – schools which provided a certain amount of general knowledge in order to keep alive the skills and literacy learned in primary schools). On the other hand, business and industry and local trade associations and the Schweizerische Gewerbeverein (Swiss Trade of Association), that was founded in 1879, were originally in favour of hard protectionism against the industrial products of other countries. Some years later, however, they became more open to training reform. This was due to an investigation of international comparisons and a nation wide recruitment examination of youngsters before entering to the army. This early kind of PISA-testing made people aware of the fact that a well educated workforce is important for business, industry and society (see Gonon, 1998). On- the- job training was to be supplemented in the *part-time* further training schools, later known as vocational schools, and in some cases *supplementing this by* training by full-time schools, often called “ateliers publics“ (“öffentliche Lehrwerkstätten“) (Gonon and Müller, 1982).

In 1884 a funding law was enacted in Switzerland, which allowed the federal authorities to fund vocational schools and other institutions like public workshops. In 1930 the first legislation on a national level was introduced. The “Bundesgesetz für berufliche Ausbildung“ defined the professions in arts and crafts in industry. It was now compulsory for every apprentice to frequent the school courses for one day.

However the “take off“ of the predominant dual system in Switzerland and its role for most youngsters after the compulsory schooling occurred after the Second World War. In 1963 there was a small reform of the legislation of 1930. In 1978 a new “Berufsbildungsgesetz“ was created. This law regulated the education in a majority of occupations. The most recent legislation was introduced in 2004 – each piece of legislation can be seen as the answer to perceived new challenges.

The amendments made were designed to underpin and expand vocational training while retaining its existing variety. The dual training model predominant in German-speaking Switzerland owes its existence to the efforts of a number of bodies ranging from occupational organisations and the government to schools, manufacturing firms, parents and apprentices. This kind of development proved to be successful in that it continued to exist with modifications and with an increasing amount of classroom instruction – well into the age of large-scale industry and services.

Moving beyond the opposition between school and workplace learning there is mentioned in the new legislation a third type of learning environment. The idea is a synthesis of learning and work. The new Swiss law on vocational education expressly refers to this third learning environment as a means of combining the advantages of on-the-job-training and classroom learning. In addition, for nearly all occupations there are now introductory courses for young people beginning their vocational courses.

1.2 Educational reform through improvement

An evolutionary perspective on educational reform is key to understand why the Swiss system requires stability and continuity but is at the same time surprisingly dynamic. A variety of models and solutions on a cantonal (regional) stage make it possible to view varying features as experiments being conducted in a sort of large laboratory as a basis for decisions on further innovation.

Generally speaking, a cautious attitude is adopted as regards innovation, so that far-reaching changes have little hope of realisation. For example, during the 1960s the advocates of comprehensive schools and those wishing to increase the proportion of pupils obtaining the Matura equivalent of the German Abitur found progress hard. Plans announced for reform, therefore tend not to have the aim of radically changing the status quo but of improving the existing system.

To date Switzerland stand out as the European country with the lowest proportion of students going on to university in any academic year and one of the highest proportions of young adults achieving a vocational qualification. Upper secondary education is consequently divided into two streams a vocationally oriented one attracting most pupils and a general education stream which, though expanding, accommodates only about 20 % of the Upper Secondary age group. Until 10 year ago general and vocational education were separate and this basic architecture, whose rigid separation probably makes it unique in Europe, has even today been little challenged.

What has happened over the last few years is that the VET system has become more closely aligned to the education system itself. The main reason for this development is rooted in an attempt of political and economic actors, who seek to strengthen vocational education by establishing a “parity of esteem“.

2 International Perspectives on Switzerland

Switzerland tends to be left on the sidelines in the international debate on educational reform and rarely receives a mention in comparative international studies carried out in vocational training research. Only one British study, that by Bierhoff and Prais (1997), attempted to compare some work-related aspects of primary school teaching and vocational training in Switzerland with those in the UK, although even they tend to focus on only one region, the Canton Zürich. A more recent study of German-speaking countries by Rothe (2001) makes

some comparisons between Switzerland, Austria and Germany, but his analysis is not entirely systematic. Yet the surprising scope of reform undertaken in Switzerland over the past few years would justify taking a closer look at the situation from an international perspective.

Also in Switzerland there is a trend towards more academic education and a slow decrease of choices related to vocational education programmes (Borkowsky and Gonon 1998, p. 372).

As in other countries, policy makers are trying to make vocational education and training more attractive. The British Sociologists of Education Michael Young (2000) and David Raffé have discerned several strategies in order to make VET more attractive.

3 Strategy Matrix

Table 1: **Types of System/Strategy**
(Strategy Matrix: Young 2000, p.149)

Strategies for improving parity of esteem (Lasonen & Young, 1998)	1. Vocational enhancement	2. Mutual enrichment	3. Linkages	4. Unification
	Germany Austria Denmark*	Finland Norway	England France Spain*	Scotland Sweden
Substrategies for improving upper secondary vocational education				
1) Improving links with HE	Reforming and expanding vocational HE	(i) Improving access to existing HE (ii) Creating a new vocational HE system		Creating a single system of post-compulsory education
2) Improving links with employers	Strengthening dual system partnerships	Strengthening partnerships between providers of VET and employers		Strengthening links between employers and VET and general education teachers
3) Raising the status and qualifications of vocational teachers and trainers	Equalising the status of vocational and general education teachers	Providing some common courses for VET and general education teachers		Common training and degrees for general education and vocational teachers
4) Improving				

the VET curriculum	Improving vocational education knowledge	More general education on vocational programmes	More integrated learning
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* New partner

Switzerland was not included in this matrix but it is quite obvious that Switzerland belongs to the group of countries that include Germany, Austria and Denmark. The main focus is on vocational enhancement. Thus, the vocational matura opens the way for progression opportunities to Higher Education. Also the third and the fourth elements of the matrix are driven by state-led and school-based reforms: vocational teacher education and new regulations, all facilitated by the new legislation, are intended to enhance over the next few years the quality of vocational education and training in Switzerland. Most critical, however, is the second point: partnerships with the firms. This is traditionally a strong element of the Swiss VET-system. However, economical and cultural challenges have led to a reduction in the engagement of firms.

4 Conclusion

The Swiss education and training system consists basically of two distinct pathways of general and vocational education, which traditionally involved very few crossing points.

In 1993 a “vocational matura“, today called the “Federal professional baccalaureate“ was introduced. The central idea behind this innovation was to make available through the provision of supplementary instruction running in parallel with vocational education, a nationally regulated means of access to institutions of higher education, the so called “universities of applied sciences“. The technical matura thus immediately entitles its possessor to admission to a technically-oriented, generally three-year-course of higher education; the business matura to a one-year-period of practical training in business or administration and then to a three year course in business economics. Alongside these two dominant types of vocational matura there also exist craft, art and design, social work, care and agriculture.

This Professional Baccalaureate was the starting point for a number of additional reforms in VET during the 1990s. This ended with the introduction of the New Vocational Education Law in 2004. The new legislation allows more flexibility in designing pathways and apprenticeships, and integrates further vocational education and also professions like health care and social work.

Despite all of the reforms, introduced over the last few years, the challenge for the Swiss vocational education is quite obvious: the apprenticeship market is in a crisis. There are simply not enough apprenticeship places being offered. Only 30 % of the enterprises run apprenticeship-programmes. Until recently big providers offered places every year for youngsters. New trends, however, show that they hesitate to offer new programmes or are closing existing programmes, due to economic factors or due to a reorientation towards

recruitment of young people with academic qualifications. Especially in occupations like computing or other prestigious work there is an inadequate supply of apprenticeship places. In addition, an increasing proportion of school leavers are opting for the academic track.

All these elements lead to a debate about the future of VET in Switzerland. Most policy makers and researchers are (as in Germany) optimistic about the future. They believe that like every market the apprenticeships have their ups and downs but in the long run the market will reach anew equilibrium of supply and demand at perhaps a slightly reduced level.

Others, however, are quite sceptical that it is possible to maintain in the current industrial world and in a knowledge economy this model of two or three places of learning. Qualifications – they argue – are changing so quickly that it is not possible to provide them thoroughly apprenticeship-schemes. So general education is the best way to prepare for future labour market demands. This trend will be also reinforced through the choices of the youngsters themselves.

Perhaps it is wrong, however, to present these two alternatives as exclusive models. It is quite possible that both positions are right and that the future of VET is an integrated model in the educational system, with some sectors still providing apprenticeships and others being more strictly school-based. In this perspective dual systems and mainly school-based systems will merge to an integrated model, not only in Switzerland but everywhere in Europe.

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Vocationalism and the decline of vocational learning in England

Introduction

Over the last thirty years the English Government has undertaken a series of policy initiatives that aimed to improve the vocational learning system and increase participation in it in order to meet the perceived labour market demand for intermediate and technical skills. These policies embrace a number of purposes, are directed at different age groups, and are intended to support delivery of vocational learning programmes in a broad variety of institutions. One consequence is that the English vocational learning system is still in a state of flux, as recent changes in the institutional architecture and new policy initiatives are still being implemented, and new ones, as suggested by the Tomlinson Review, are forthcoming.

In part the current concern with vocational learning can be attributed to the expansion of the education and training system that took place throughout the twentieth century. The ‘education gospel’ (Grubb & Lazerson, 2004) has been one of mass schooling and more education for all. Such expansion has been financed primarily through general taxation, with the justification for this expenditure from the public purse being that the skills and knowledge learnt in schools, colleges and universities would transfer to productive activities outside of educational institutions, especially the workplace. Over the last thirty years policy makers have questioned whether this is happening, or happening to a sufficient extent to warrant the continued expenditure on general education for all. In addition, there is a growing concern over those who leave school with few if any qualifications and, as a result, are at risk of social exclusion. The upshot has been a turn to an instrumental form of Vocationalism, the over-promotion of the work-related aims of secondary and tertiary education at the expense of the civic, aesthetic and moral purposes of education.

Vocationalism is a poorly defined and rather vague term, However, in the UK such developments are typically traced to the Ruskin College speech given by the then prime minister James Callaghan in 1976:

“(...) parents, teachers, learned and professional bodies, representatives of higher education and both sides of industry, together with the government, all have an important part to play in formulating and expressing the purpose of education and the standards that we need. (...) There seems to be a need for more technological bias in science teaching that will lead towards practical applications in industry rather than towards academic studies. (...). Then there is the concern about the standards of numeracy of school-leavers. (...) To what extent are these deficiencies the result of insufficient co-operation between schools and industry? The goals of our education, from nursery school through to adult education, are clear enough. They are to equip

children to the best of their ability for a lively, constructive, place in society, and also to fit them to do a job of work. Not one or the other but both. For many years the accent was simply on fitting a so-called inferior group of children with just enough learning to earn their living in the factory. (...) There is no virtue in producing socially well-adjusted members of society who are unemployed because they do not have the skills. (...) In today's world, higher standards are demanded than were required yesterday and there are simply fewer jobs for those without skill.”¹

However, Vocationalism is much older than this and there is a long tradition of regarding education as the route to economic success. Ryan (2003, p. 147) argues convincingly that ‘[t]he past century can be termed the century of Vocationalism, an era in which the expansion and vocationalism of school-based education went hand in hand.’ Thus, in the UK the vocationalist imperative can be traced from at least the Samuelson Commission on Technical Instruction (1882-84) to the present day. However, the last thirty years, since the oil crises of the 1970s and the acceleration in the decline of UK manufacturing industry, have seen an intensification of vocationalism. The outcomes of this have been the increasing number of vocational learning opportunities and qualifications at upper secondary and tertiary level in the UK (and to some extent in all developed economies across the world). But to what extent have these reforms been successful in meeting the twin policy objectives of boosting the supply of intermediate vocational and technical skills and increasing social inclusion?

This paper focuses on the impact of these changes on the vocational learning system for 16-19 year olds and argues that both the total quantum of vocational learning has decreased and that the quality of that learning has declined. The paper is divided into four sections. The first sets out the basic framework of qualifications and institutions that deliver education and training for 16-19 year olds. The second focuses on ultimate and proximate policy priorities. The third section investigates changes in the patterns of participation amongst 16-19 year olds over the last twenty years. The fourth, and concluding section, provides a critical overview of the changes in patterns of participation.

1 Qualification Frameworks and Institutions

In England qualifications are a key driver of vocational education and training reform (Stasz and Wright, 2004) and, as we will see in the next section, policy imperatives to increase the skills of the work force typically take the form of setting targets for achieving an increased supply of qualifications at different **levels**. This language of levels is taken from the National Qualifications Framework (NQF) and for the purposes of this paper we are mostly concerned with qualifications at Levels 1, 2 and 3 in the NQF (Figure 1).

¹ Callaghan (1976).

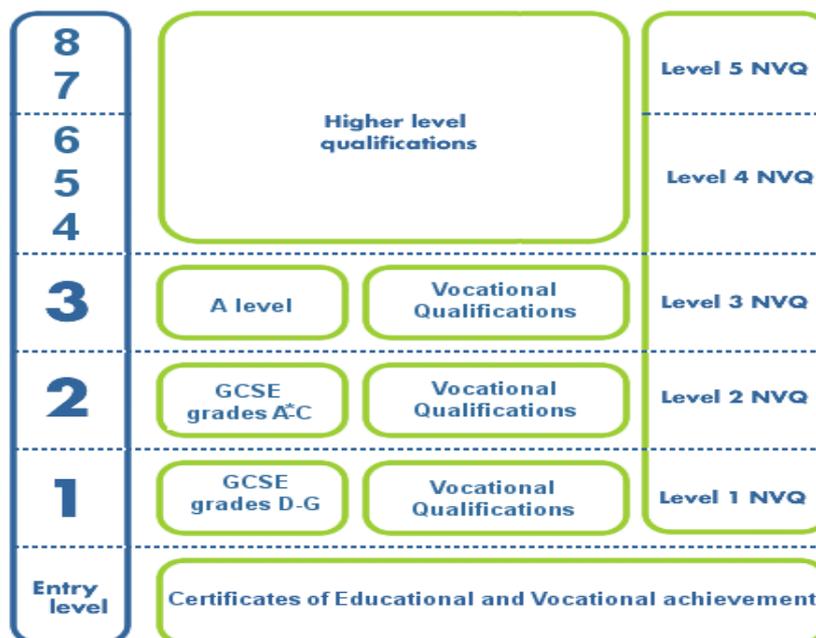


Figure 1: The English National Framework for Recognising Achievement

Qualifications at these levels are loosely grouped into three broad tracks (Figure 1):

- The **general or academic track**, with General Certificates of Secondary Education (GCSE) and GCE AS/A levels. The former are normally taken by young people at the end of compulsory schooling and are graded from A* - G. Obtaining five of these qualifications at grades A*-C is equated with achieving a Level 2 qualification.
- The **general vocational track** contains a variety of different types of vocational qualifications including Foundation (Level 1) and Intermediate (Level 2) General National Vocational Qualifications (GNVQ) and Vocational Certificates of Education (VCE) a Level 3 qualification that replaced Advanced GNVQ in 2000;
- The **occupational track** consists of learning certificated by the award of National Vocational Qualifications (NVQs).

In addition, to the qualifications contained with the National Qualifications Framework there are several thousand vocational qualifications in common use in England that lie outside the regulatory framework, for example vendor qualifications. We know very little about the uptake of these qualifications (see Hayward, forthcoming; Unwin et al., 2004).

The end of compulsory schooling in England occurs at the age of 16. At this juncture young people need to decide whether to stay in education or training or to leave, typically to enter the labour market. For those who decide to stay there are a number of different ways of participating in 16-18 education and training:

- A school² sixth form can offer both academic and vocational courses
- Sixth form colleges
- Tertiary and General Further Education (Further Education) Colleges
- Work-based learning including government supported apprenticeship programmes with or without day release. Such study can be overseen by either an employer (about 5% of apprentices) or by a private training provider which can be either a Further Education college, a group training provider, a community provider or a private for profit organisation.

Participation in vocational learning in Maintained Schools and Sixth Form Colleges is usually undertaken on a full-time basis. Most students in Further Education colleges now participate on a full-time basis though there are still a proportion of 16-19 year olds who participate on a part-time basis through, for example, day release from apprenticeship programmes. Using this framework as a background the next section sets out the policy aspirations for the 16-19 phase.

2 Qualification supply and skill demand

The ultimate goals of the further expansion of the vocational learning system in the United Kingdom are economic growth, to be achieved by raising productivity, and social inclusion to be achieved through increasing the employability of those with few if any qualifications. Of particular public policy concern is the perceived deficiency in intermediate vocational skills in the UK economy. For example, the National Skills Task Force (DfEE, 2000) reiterated a long-held belief that the UK was deficient in the area of intermediate occupations (technician and higher craft level) whilst the LSC's (2003, p. 17) *Skills in England* report commented that 'basic literacy and numeracy, and intermediate vocational and technical skills, may account for the UK's comparatively low productivity compared to its competitors.'

In public policy the lack of workers with intermediate vocational skills is usually equated with a lack of people with Level 3 vocational qualifications. Using this metric, Steedman et al. (1998), for example, argued that an inadequate supply of people holding intermediate vocational qualifications was the main cause of the poor productivity record in most sectors of the UK economy. There is some evidence to support this view. For example, rates of return analyses consistently find a positive return for those holding Level 3 vocational qualifications relative to those holding no qualifications. By contrast, there is no measurable return for those holding Level 2 vocational qualifications compared to those holding no qualifications. This suggests that holders of Level 3 vocational certificates have skills which increase their productivity and for which employers are willing to pay a premium. In terms of meeting policy objectives to increase the supply of intermediate skills the vocational learning system must, therefore, deliver an increasing number of people with Level 3 qualifications. For

² There are a wide variety of school types in England with a large and influential private sector of public schools. In this paper we are only concerned with Maintained Schools which are publicly funded.

example, the final report of the National Skills Task Force predicted that by 2010 70% of all workers would need a Level 3 qualification in order to meet the growing demand for intermediate vocational skills. However, this begs two questions of importance for this paper: what are intermediate vocational skills and how do qualification levels in the National Qualifications Framework relate to such skills?

2.1 What are intermediate vocational skills?

Two main categories of intermediate occupation are identified by Mason (2001: 8):

- **higher intermediate:** for example, technicians in manufacturing or ‘associate professional’ occupations in service industries (typically requiring high-level vocational qualifications and training which nonetheless fall short of degree standard);
- **lower intermediate:** for example, craft-level occupations typically requiring an apprenticeship (or equivalent) training.

This classification alerts us to the difficulty of producing a definition of intermediate level vocational skills that could be applied across the whole economy: the definition will vary between sectors and occupations. This problem is implicitly recognised in the specification of National Vocational Qualifications which, at the same level of qualification, vary in both size and demand depending upon the industrial sector and the occupation. In some sectors, Level 2 qualifications may suffice to meet demands for intermediate levels of vocational skill. In others, the need may be for people holding qualifications intermediate between current Level 3 qualifications and a degree, a need that Foundation Degrees are intended to meet.

Thus, equating an increased supply of people holding Level 3 vocational qualifications with meeting the perceived intermediate skill needs of the UK economy is more problematic than it seems.

2.2 Technical and generic skill demands

In addition, it is necessary to consider not just the level but also the type of skills in demand in the labour market. On the one hand, employer skill surveys consistently identify major skills shortage vacancies³ resulting from the inadequate supply of craft and technical skills to meet replacement demand in sectors such as engineering and construction. Such skills have traditionally been produced through apprenticeship, which allows for the long learning process needed to develop the requisite level of competence in skilled craft occupations. Skills gaps⁴, on the other hand, are predominantly the result of a perceived lack of generic skills, such as communication and customer handling skills (Mason and Wilson, 2003). The available evidence suggests that such generic skills are both context dependent and difficult

³ Skills shortage vacancies are vacancies that employers find hard to fill for skill related reasons.

⁴ Skill gaps are defined as occurring when employers regard some of their staff as not being fully proficient to meet the requirements of their job role.

to deliver and certify via a school based VET system (Hayward and Fernandez, 2004; Stasz et al. 1996).

Thus, the distribution of skill shortage vacancies and skills gaps across different sectors of the economy suggests that the vocational learning system should be focusing on developing high levels of technical and practical skills in some areas, for example construction and engineering, but devoting greater attention to generic skills in other areas, such as the retailing and hospitality sectors (Hogarth and Wilson, 2004; Mason and Wilson, 2003; LSC 2004a).

The next section of the paper relates how far changes in participation in different types of qualification and in different types of institution over the last twenty years have met these policy goals.

3 Participation 16 –19

This section examines broad trends in participation in order to characterise the current 16-19 education and training system in England relative to the position in the mid 1980s and to other OECD countries.

3.1 Overall participation rate

Between 1986 and 1993/94 the rate of participation in the 16-19 education and training system in England increased rapidly but participation rates have now remained more or less static for a decade (Figure 2). Participation rates for 16 year-olds are highest, and range between 80-90% of the cohort. Rates for 17 year-olds increased more sharply, from about 58% to 80% by the early 1990s, declining slightly by 2002. In 1985, only 40% of 18 year-olds participated, a rate which rose steadily until 1993 to about 60% and subsequently levelled off. Provisional figures for 2003 indicate that in England 87% of 16 year-olds, 80% of 17 year-olds, and 60% of 18 year-olds were participating in some form of education and training during the course of that year (DfES, 2004). Over the entire 16-18 age cohort this means that 75% were involved in some form of education and training, 16% were in employment without formal training leading to qualifications and 9% (about 177,000 young people) were not in education, employment or training (NEET).

The 16-19 system in England appears, therefore, to have reached a new equilibrium position in the early 1990s, with increased rates of participation amongst all age groups. However, rates of participation still remain below those found in most other OECD countries (Table 1). Thus, the system still cannot be characterised as being a high participation one. This is primarily due to the progressive loss of learners between the ages of 16 and 19 resulting in a medium participation system with a high rate of attrition.

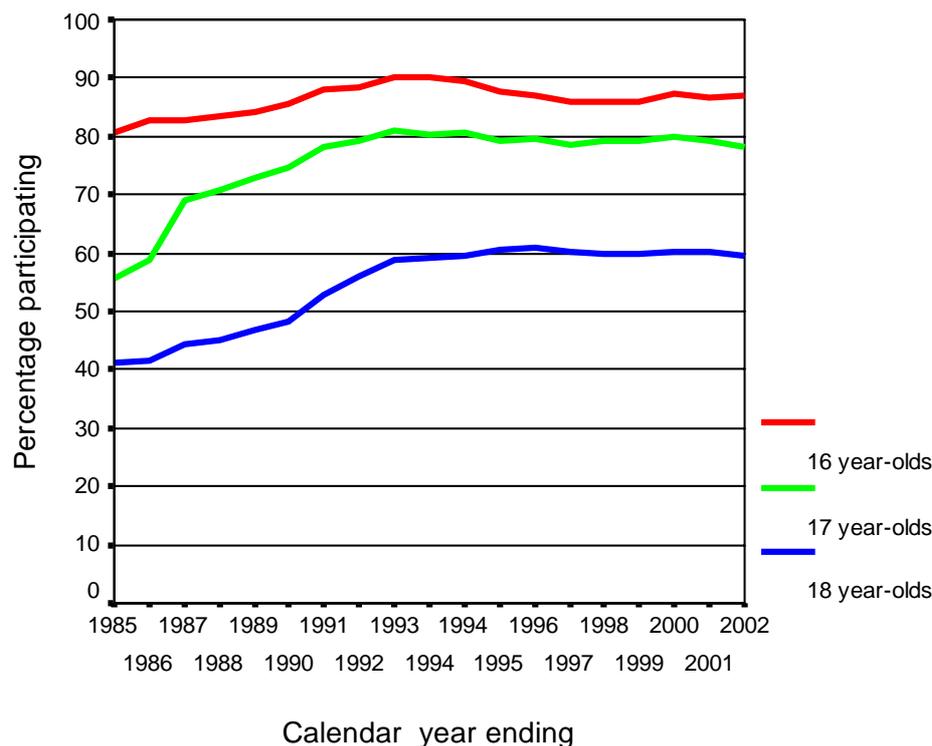


Figure 2: Total participation in education and training by 16-18 year-olds in England: 1985-2002.

Table 1: **Enrolment rates of 15-19 year olds in OECD countries: 2001. (Full-time and part-time students in public and private institutions)**

Country	Percentage of 15-19 year-olds enrolled	Country	Percentage of 15-19 year-olds enrolled
Australia	81.1	Luxembourg	78.1
Austria	76.9	Mexico	41.0
Belgium	91.0	Netherlands	86.2
Canada	75.0	New Zealand	73.0
Czech Republic	87.8	Norway	85.3
Denmark	82.9	Poland	85.5
Finland	85.3	Portugal	73.3
France	86.6	Slovakia	74.6
Germany	89.4	Spain	80.1
Greece	77.0	Sweden	86.4
Hungary	79.0	Switzerland	83.3
Iceland	79.2	Turkey	30.0
Ireland	80.9	United Kingdom	74.7
Italy	72.2	United States	77.6
Korea	79.3	Country Mean	77.7

Source: OECD (2002) *Education at a glance*. Paris: OECD.

3.2 The Demography of the 16-18 Age Cohort

Interpreting changes in percentage participation rates alone can obscure the fact that there were considerable changes in the size of the 16-19 age cohort between 1985 and 2002 (see Figure 3). The importance of this demographic change should not be under-estimated as an institutional driver in a marketised education and training system where money follows the learner. The educational policy framework and institutional incentives established by the Conservative governments of the 1980s and 1990s, combined with the changing size of the age cohort, provide strong institutional incentives to change recruitment processes and criteria. Comparing figures 2 and 3 it is clear that overall participation rates increased at the same time as the size of the age cohort was decreasing. Put crudely, this suggests that, as the size of the age cohort declined, institutions could not afford to be as selective if they were to maintain student numbers and the associated levels of funding. As student numbers rose again in the mid 1990s, with an increasing proportion of 16 year-olds achieving 5+ A*-C GCSEs, institutions could afford to be more selective.

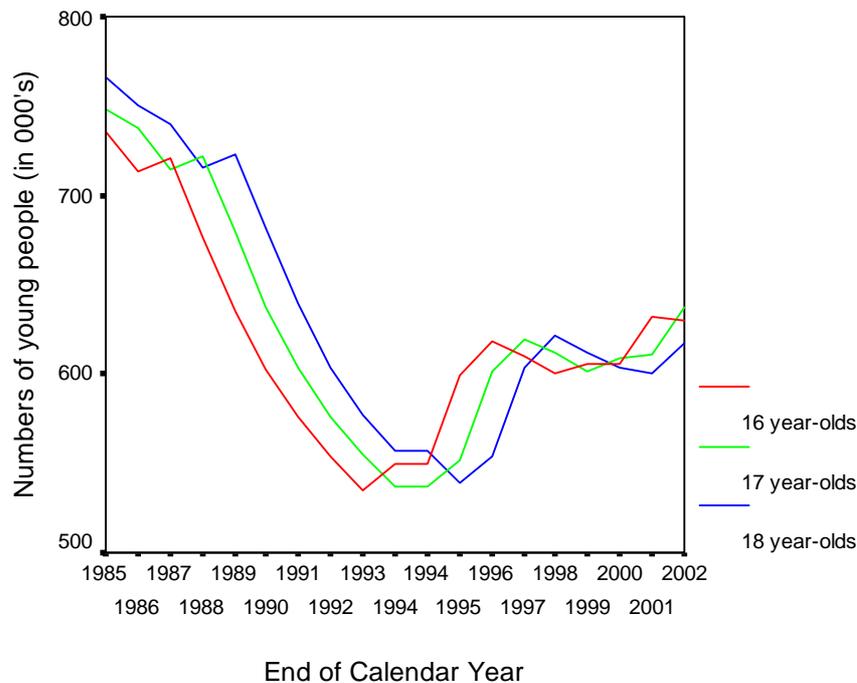


Figure 3: The number of 16-18 year-olds: 1985-2002.

An additional implication of the increase in the size of the age cohort since the mid 1990s is that, despite static participation rates from the early 1990s, institutions providing education and training for 16-19 year olds will have experienced an increase in the number of learners from 1994/5 onwards. Thus for these institutions the situation over the last decade will have felt like one of growth rather than one of stasis.

The mode of participation has changed over the last decade

In the early 1980s, the UK was characterised by the OECD (1985) as having a ‘mixed’ model of post-compulsory education and training. Such a model was intermediate between the ‘dual system’ of the German speaking countries and the school⁵ based model of most other OECD countries. ‘In the mixed model, schools represent the largest form of provision but participation is low; schools are complemented by a less formal sector of mainly work-based education.’(Raffe, 1999, p.39)

The validity of this categorisation is confirmed by examining participation data from the 1970s. For example, in 1975/76⁶ only one quarter of 16-18 year olds in the UK were attending either school or college full-time. Of the remainder, 65% were employed (with a proportion of these attending further education colleges on a part-time basis) with 8% unemployed. The collapse of the youth labour market in the late 1970s and early 1980s resulted in both an increase in unemployment and an increase in participation in post-compulsory education and training, primarily through Youth Training. Thus, by 1984/85 27% of 16-18 year olds in the UK were participating in full-time education, 42% were in employment, 18% were unemployed and 10% were in Youth Training programmes. This is the epitome of the mixed model:

- low overall participation in post-compulsory education and training with most of that participation concentrated in schools and further education colleges;
- backed up by a more informal sector represented by Government Supported Training, such as the Youth Training Scheme, and a declining apprenticeship system, which emphasised on-the-job learning supported by some day release to further education colleges.

Underlying the overall increase in participation seen in the late 1980s and early 1990s (Figure 2) was a large increase in the proportion of young people choosing to follow the full-time education route. This was accompanied by a decline in participation in work-based training routes sponsored by the government and employers (Figure 4). Consequently, the mode of participation in post-compulsory education and training changed radically as participation rates increased, so that the system shifted towards a more school based model.

⁵ School is used here in a wide sense to include both schools and various types of further education college.

⁶ At this time data was presented by academic year, i.e. from September in one year to the August of the following year.

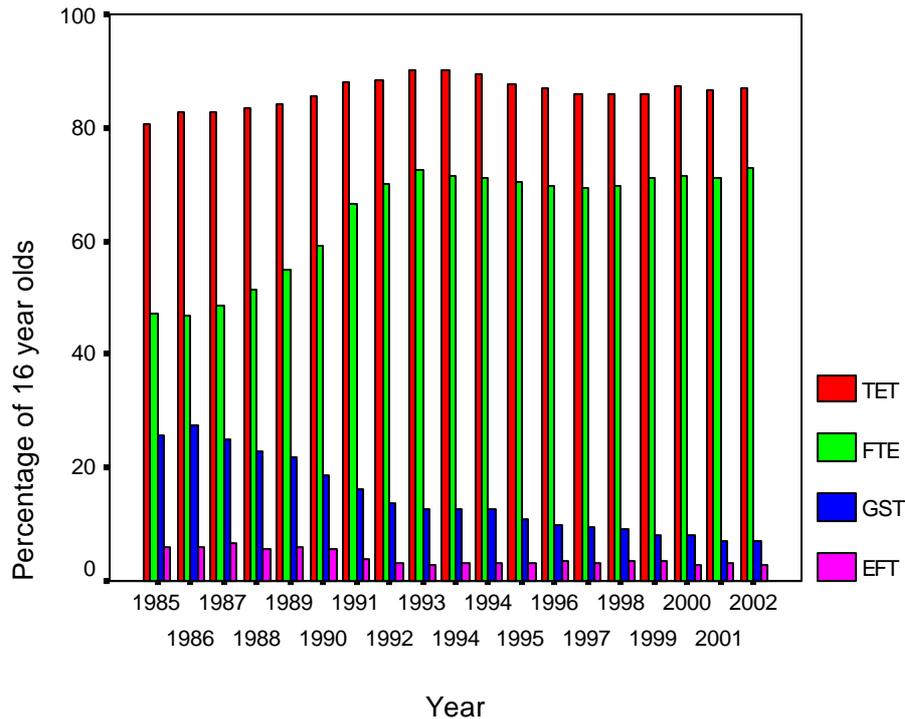


Figure 4: The percentage of 16 year-olds participating in different modes of education and training. TET = Total Education and Training; FTE = Full-time education; GST = Government-supported training; EFT = Employer-funded training. Source: DfES (2002, 2004)

The provision made for government supported training⁷ for 16 year-olds changed several times over the time period, for example from Youth Training to National Traineeships, the introduction of Modern Apprenticeship (MA) and then Foundation and Advanced Modern Apprenticeship (FMA)⁸. However, none of these policy reforms and revamping of provision has completely halted the decline in the proportion of 16 year-olds participating in Government Supported Training, which fell from a quarter of 16 year-olds in 1984/85 to just under 7% in 2002/03. There is some evidence that this proportion is currently increasing, albeit slowly.

Institutionally, England has moved towards a more school based 16-19 education and training model. The work-based route still exists, its virtues are still actively promoted by government policy, and it is clearly important as a means of participating for some 16-19 year-olds. However, viewed in the long run, its popularity has declined considerably, whereas the popularity of participating via the full-time route has continued to increase. The implications of this for the type of vocational learning experienced are potentially quite profound, as

⁷ Now called Work Based Learning for Young People.

⁸ In England, FMAs were renamed Apprenticeships and AMAs Advanced Apprenticeship in May 2004. In addition to apprenticeship programmes a variety of other work-based learning opportunities exist in England including Entry to Employment (E2E) and NVQ Learning. In addition, there are active labour market policies such as the New Deal for Young People which also provide access to learning opportunities.

young people increasingly engage with weakly vocational school-based programmes, such as GNVQ and AVCE, rather than stronger forms traditionally associated with, for example, apprenticeship and BTEC National Diplomas (Stanton, 2004).

3.3 Participation in full-time vocational learning

At the end of compulsory schooling young people who decide to stay on in full-time education and training have to choose the level and type of programme they wish to follow and the institution in which they wish to study. It is the exercise of this choice that has produced the greatest changes in patterns of participation amongst 16 and 17 year olds in the last decade. Overall participation in Level 3 programmes, both GCE A level and the vocational alternatives, amongst 16 year olds more than doubled from 20.7% in 1985 to 45.3% by 2002. Some of this increase occurred during the period of expansion between the mid 1980s and the early 1990s. However, over the last decade, when overall participation rates have been static (Figure 2), participation at Level 3 amongst 16 year olds increased by nearly 16 percentage points.

At Level 3 three quarters of sixteen year olds studying full-time are taking GCE AS/A levels. The majority taking vocational qualifications at this level are in Further Education and Tertiary colleges. However, the proportion of sixteen year-olds studying for Level 3 vocational qualifications in Maintained Schools has quadrupled in the last decade to almost 13% of 16 those on Level 3 provision by 2002. The proportion of sixteen year olds participating via this route has also tripled in Sixth Form Colleges to 17% of those on Level 3 provision. By contrast participation rates in this pathway have increased by only 10% in Further Education and Tertiary Colleges to 60% of those on Level 3 provision.

Participation rates in Level 1 and 2 programmes amongst 16 year olds also increased at the time of expansion, from 10% in 1985 to nearly one quarter of 16 year olds by 1995. There was a particularly sharp increase in the proportion of 16 year olds taking Level 1 and 2 programmes in 1992/93 following the introduction of Foundation and Intermediate GNVQs. These qualifications substituted in part for academic GCSE retake provision, with the result that the proportion of 16 year olds taking GCSEs in the first year of post-compulsory education declined steadily, from 11% of the age cohort in 1991 to slightly more than 2% by 2002. However, the proportion of sixteen year olds taking Level 1 and 2 vocational qualifications also fell from the mid 1990s, reaching 16.6% of the age cohort by 2002.

This decline in the participation rate in Level 1 and 2 programmes amongst 16 year olds has occurred primarily in Maintained Schools and Sixth Form Colleges rather than in Further Education and Tertiary colleges. In Maintained Schools, for example, the proportion of sixteen year old learners on Level 1 and 2 provision has declined by nearly 70% over the last decade, whereas in Further Education and Tertiary colleges this proportion has declined by only 1%. This is largely the result of the proportion of 16 year olds on Level 1 and 2 vocational provision in Further Education and Tertiary colleges remaining relatively constant

compared to Maintained Schools, where the proportion of such learners has halved in the last ten years.

Underneath the apparently static post-compulsory participation rates since the mid 1990s there has been, therefore, a range of more subtle shifts in participation taking place in England. These have included

- a shift to a more school-based model;
- an increase in participation at Level 3 with a concomitant decline of participation at Levels 1 and 2, which is symptomatic of both increasing GCSE attainment and the ongoing challenge of attracting less well qualified learners to participate;
- an increasing proportion taking Level 3 vocational qualifications, particularly in schools and sixth form colleges following the introduction of Advanced GNVQs;
- a growing division of labour between Maintained Schools and Sixth Form Colleges on the one hand and Further Education and Tertiary Colleges on the other with, in particular, Level 1 and 2 vocational provision becoming concentrated in Further Education and Tertiary Colleges;

All of these trends are indicative of a system of education and training still in a state of flux. But to what extent have these changes resulted in an improved vocational learning system that meets the twin aims of renewing the nation's stock of intermediate and technical skills and promoting social inclusion?

4 Performance against policy targets

This section considers the current performance of the system against the twin policy targets of increasing the supply of intermediate and technical skills and increasing social inclusion.

The skilling agenda

The growth in participation in Level 3 vocational provision should be, at first sight, good news for policy makers. However, the extent to which this growth has qualified young people for jobs (Green and McIntosh, 2002; Fernandez and Hayward, 2004) by providing them with the skills needed in the labour market needs to be assessed.

The development of a more school/college based model of vocational learning, and the pattern of differential growth in Level 3 vocational learning across institutions, can be attributed in part to the introduction of GNVQs in 1992/93. These new qualifications provided Maintained Schools and Sixth Form Colleges with a weak vocational pathway at Level 3 that they could offer to young people who had attained some GCSEs at A*-C by the end of compulsory schooling but not enough to progress onto an academic A level programme.

Strong vocational programmes are those where the expressed intention is to ensure that young people develop the necessary skills and knowledge needed to enter the vocation in question. Such programmes would include traditional forms of apprenticeship and programmes associated with certain qualification such as BTEC National Diplomas and Certificates. The delivery of such programmes requires considerable investment in both resources and staff, who must have the necessary occupational skills and knowledge to support the learning of young people. Weaker vocational programmes are more associated with learning about a particular occupational area, which can be delivered with far fewer resources and less specialised staff. Qualification such as General national Vocational Qualifications and Advanced Vocational Certificates of Education take this form, the latter qualification being criticised by the education inspectorate (Ofsted) as being neither very advanced nor very vocational (Ofsted, 2004).

In addition, the Foundation and Intermediate GNVQs provided an alternative to GCSE retakes. This provision could be implemented relatively cheaply because its weakly vocational nature meant that only a moderate investment was needed in new plant and staff development. Consequently practically all of the growth in Level 3 Vocational learning in Maintained Schools and Sixth Form Colleges involved these new qualifications though, as we have seen, the popularity of Level 1 and 2 vocational provision has subsequently declined in these institutions. As the number of 16 year olds increased from the mid 1990s onwards (Figure 3), Maintained Schools and Sixth Form Colleges have increasingly focussed their attention on Level 3 provision, leaving Further Education and Tertiary colleges to offer the bulk of Level 1 and 2 vocational provision.

Within Further Education and Tertiary Colleges Level 3 vocational provision based upon GNVQs/VCEs has always been less popular than provision based on stronger vocational qualifications such as BTEC National Diplomas and City and Guilds certificates. However, there has been only a 7% increase in participation in these stronger vocational programmes at Level 3 over the last decade. Thus, whilst participation in Level 3 vocational learning amongst 16 year olds has increased, it has been primarily in the weaker vocational programmes offered in Maintained Schools and Sixth Form Colleges. The extent to which this sort of expansion in Level 3 vocational learning will meet the demand for intermediate and technical level vocational skills in the labour market is open to question.

This becomes even more obvious when we examine the proportion of 16-18 year olds taking different VCEs⁹. Across all types of VCE award IT is the most popular subject with, for example, 58% of entries at VCE AS, 33% in the six unit award and 20% in the double award in 2002/03 (DfES, 2004). However the four VCE subject areas that map most closely to the sectors in the labour market reporting skills shortage vacancies – construction, engineering, manufacturing and science – accounted for only 3% of entries amongst 16-18 year olds in the six unit award and 6% of entries in the double award. By contrast the 4 subject areas that map to service sectors which reported few if any skill shortage vacancies – business, health and

⁹ VCEs come as either 3 unit (AS), 6 unit (A level) or 12 unit (double) awards.

social care, leisure and recreation, and travel and tourism - accounted for 56% of all entries to the six unit award and 60% of entries to the double award in 2002/03. This is not to decry the value of these programmes, or the achievement of young people, but merely to highlight that there is not a good match between the subjects being studied on these weakly vocational courses and the actual pattern of skills shortage vacancies in the labour market. Thus, even though participations in Level 3 vocational learning amongst 16-19 year olds is increasing it is not doing so in a way that is likely to satisfy labour market needs or remedy the long standing shortage in intermediate and technical skills.

Research also indicates that young people pursuing these weakly vocational options at Levels 1 and 2 may be doing so in order to provide themselves with a general education rather than through any particular commitment to the vocational area they are studying (Wahlberg & Gleeson, 2004). For those requiring a second chance learning opportunity at 16 arguably what is needed is a purpose built programme of general education to enable the development of, for example, literacy and numeracy skills. Without the development of such skills there is little chance of progressing to and being successful at Level 3. Yet all that is on offer (in the main) are Level 1 and 2 vocational programmes which have no discernible return in the labour market (Dearden et al.,).

For those studying at Level 3 there is also the welcome opportunity to use these vocational programmes as a stepping stone to Higher Education rather than using the qualifications as a means for entering the labour market at 18 years of age. Indeed to reach the 50% Higher Education target will, on current performance, require every person achieving a Level 3 qualification of whatever type to progress into Higher Education. This would result in a hollowing out of the skills profile with an increasing proportion educated to Level 4 and another group with Level 2 qualifications and below. This suggests the possibility at least of an acceleration of the trend for intermediate and technician level positions being filled by graduates (see Mason, 2001; Keep and Mayhew, 2004).

The social inclusion agenda

The full-time 16-19 vocational learning system has become more inclusive as the range of provision has diversified (Hayward et al. 2004). Nonetheless, certain groups of young people – boys, those with less skilled and less qualified parents/guardians, and white young people – remain significantly less likely to participate at 16 and 17 years of age. An indicator of low efficiency is that the system still has difficulties retaining learners as they age. In addition, the post-compulsory vocational learning system still appears to be relatively ineffective at attracting the least well qualified. Substantial improvements in participation at 16 amongst those with the poorest levels of academic attainment and with weakened learner identities will, therefore, be needed to meet the various targets and public sector agreements set by the English government.

However, reducing the size of the key target groups, those that leave the system at 16 and 17 years of age, seems to be a difficult policy objective to realise. Despite several reforms and

initiatives, the proportion not in education or training at 16 and 17 actually increased between 1992 and 2002, largely as a result of the decline in the popularity of Government Supported Training.

The effect of this decline in the popularity of Government Supported Training on system performance is most acute for those with the lowest levels of academic attainment at the end of compulsory schooling. For example, in 1989 55% of those who achieved 1-4 GCSEs at grades D-G were in some form of post-compulsory education and training – 14% in full-time education and 41% in government supported training¹⁰. By 2002, only 47% of such youngsters remained in education and training after the age of 16, 32% in full-time education and 15% in Government Supported Training, whilst 30% were in a job (either full- or part-time) without formal training leading to qualifications and 22% were in not in education, employment or training. By contrast, participation rates from those with 5+ GCSEs at grades A*-C consistently exceed 90% throughout the time period.

5 Conclusion

The descriptive analysis presented above demonstrates that over the last twenty years England has witnessed a major restructuring of the educational careers of 16-19 year olds. Participation rates increased sharply from the middle of the 1980s to the early 1990s and then stabilised. Underlying this overall trend was a large increase in the proportion of young people choosing to follow the full-time education route. This resulted in a continuing decline in participation in work-based training routes sponsored by the government and employers. Further Education and Tertiary Colleges continue to be the main providers of vocational learning opportunities at all levels.

Participation in vocational learning at Level 3 in full-time education has increased. However, three quarters of 16 year-olds who choose to stay on and pursue Level 3 qualifications opt to study for GCE A/AS levels rather than vocational courses. Furthermore, the decline in participation in the work-based routes means that fewer learners were engaged in vocational learning in 2002 compared to 1989 (Payne, 2003).

The evidence also suggests a significant shift in the quality of vocational learning being undertaken. The increase in participation in vocational learning is mainly due to an increased proportion of the age cohort studying for weakly vocational school-based Level 3 vocational qualifications. Such qualifications map very poorly to the distribution of skills shortage vacancies in the English economy. The more popular full-time vocational qualifications do, however, reflect the growth in employment in certain sectors of the English economy, notably the service sectors. However, these sectors primarily identify generic skills as their major skill need and the extent to which weakly vocational qualifications develop these skills is also open to question.

¹⁰ These data come from analysis of the Youth Cohort Survey.

The decline in the work-based learning route has differentially affected those with lower attainment at the age of 16. Many of these young people now enter the labour market at 16, taking jobs that seem to offer little if anything in the way of training. The effect of thirty years of vocational education and training policy in England, spurred on by the rhetoric of new Vocationalism, has not strengthened vocational learning or offered a meaningful vocational education for lower attaining students. Rather the outcome has been the development of a largely school based system of weak vocational learning which serves its clients and the economy poorly. Time will tell if the new reforms proposed by Tomlinson will have any impact on this sad state of affairs.

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“AFTERWORD” (or: EDITORIAL 2 ?)

Issue 7: Six questions: no easy answers?

It has been a great pleasure to edit this volume of *bwp@* “Berufs- und Wirtschaftspädagogik – online”. Our initial intention for this volume was to obtain a snap shot of what was happening to the structures of Vocational Education and Training (VET) within Europe at a time of unprecedented economic and social change. Other sources of information, such as OECD country reports, while helpful are often out of date by the time they are published. The speed of online publishing has enabled us to provide a more recent picture of what is going on within different countries written from the perspective of internal experts. The exercise has surpassed our most optimistic expectations, and we are extremely grateful to all of our authors for the work they have done and their willingness to be bullied to respond to deadlines.

However, we felt the need to capitalise on all of that effort by trying to stimulate an ongoing dialogue about European VET. To that end we have written this very brief ‘afterword’. Our intention is not to summarise all that has been said in the various papers – that would be an impossible task in two pages. Rather our intention is to pose a number of questions, six in all, which we hope might serve as a means of stimulating further discussion. These are provided in the belief that an important outcome of any research endeavour is a better class of questions not just answers to existing questions. With each question comes a short paragraph of justification. However, these might not be the right questions, or they may be the right questions but not stated in the correct way, or there may be more pressing questions. If you feel this then let us know and we will circulate additional questions.

1. In what ways and to what extent do the historically and locally constructed responses to the pressures of globalization militate against the development of a European Vocational Qualifications Framework?

A striking feature of all of the papers is that change to VET is endemic in all of the countries included in this edition. Pressures for change are both endogenous and exogenous, they typically stem from the perceived pressures of globalisation (however that term is interpreted) with the solutions to such pressures being locally (the idea of glocality) or nationally constructed. By and large the changes are to structural features of VET systems, particularly the qualification structures and modes of delivery. However, what is apparent from practically all of the submitted papers is that such change is always highly path dependent drawing upon the particular historical and cultural traditions of either a nation state or regions within a nation state. This seems to us to raise interesting questions about the possibility of a European Vocational Qualifications Framework which we have tried to capture in the question above.

2. What, in addition to clearer qualification structures, is needed to support the initial transition into, and subsequently mobility within, the labour market?

Another dominant feature that emerged from the papers was the idea of transparency of qualifications. A good qualification provides a clear signal both to the individual acquiring it and to an employer, say, viewing it as to a person's capabilities and competence. A view is that VET qualifications in the past have not achieved this or achieved it only to a partial degree. Thus new qualifications embedded within ever more complex qualification structures and frameworks are needed to provide clear signals. However, it seems to us that signalling requires more than clear frameworks and new types of qualifications. It also requires complex communication channels between for example, central administrators and employers that provide feed forward and feedback about VET qualifications and their interpretation within the labour market. Without such recursive communication, which tests the validity of the signals supposed to be conveyed by a qualification, much effort can be expended and much money wasted in constructing qualification systems for which there is a lack of demand from both employers and learners.

3. What are the relative roles of the state, employers and individuals in paying for vocational learning that leads to qualifications?

Most of the papers focussed on the role of the State in developing new forms of VET qualification systems. But a qualification system is only useful to the extent that people use it. In part such usage is the outcome of economic decision making, in particular who is going to pay for training. Without a clear understanding of roles and responsibilities between social partners in relation to who bears what costs no qualification system is going to be successful. This is territory that has been well trodden in the theoretical labour economics literature with the expectation that employers will pay for job specific training and individuals for more general training. However, the growing recognition that initial education funded by the state will be unable to provide the generic skills for a lifetime raises important considerations as to who will pay for continuing VET, how such VET provision might be linked to active labour market programmes, and how market failure can be avoided.

4. To what extent does a shift away from work-based forms of initial VET towards more school-based forms entail a weakening of the vocational curriculum and experience?

Another feature that emerged in some of the papers was a gradual shift away from work-based VET, for example through apprenticeship programmes, towards more school-based forms. In part this can be attributed to the growing shortage of training places for young people as firms and other organisations restructure their budgets in the face of growing competitive pressures. In part it is also due to the decision making of young people and their families who increasingly, it seems, place value on progression to Higher Education as the key outcome of their educational career. Such progression, especially to more elite universities is viewed as being more certain via the general rather than the vocational

education route. However, it seems to us, that such a shift could lead to the weakening of the vocational experience as learning becomes more divorced from workplaces and actual work activity. In addition, the increasing use of VET to provide further learning opportunities for those at risk of social exclusion could exacerbate this trend.

5. How do we integrate the different modalities of vocational learning – initial, continuing and occupational – to produce a genuine lifelong experience?

A number of papers raised the issue of how to produce a system that seamlessly links together different phases and modalities of VET provision. In part this is a technical problem: how to construct a coherent qualification system from, in many European countries, several unconnected systems serving different fractions of the population usually differentiated on the basis of age. However, it is also a moral question too. Adults are clearly in a position where they have the right to choose what sort of education and training provision they participate in. However, towards the younger members of the population, especially those still in compulsory education, society has an especial duty of care. This raises a potential source of conflict between qualification systems constructed for younger learners engaged in initial VET and those taking part in adult VET.

6. What are the pedagogical principles and practices that underpin the development of powerful vocational learning environments?

Finally, what really matters at the end of the day is the quality of the learning experiences we provide for learners engaged in VET provision. If qualification systems encourage teachers, for example, to train young people to pass tests rather than engaging them in deep and critical learning about the vocation they are interested in, then qualification reform may be counterproductive. However, while we are becoming clearer about the design principles that might underpin the development of powerful vocational learning environments, and the role of new digital technologies within those environments, much remains to be understood. This area seems likely to be a suitable one for exploration in a future volume of this journal.

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