EDUCATION REFORM IN RELATION TO THE NEEDS OF THE LABOUR MARKET

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FOREWORD

The "Seminar on Education Reform in relation to the Needs of the Labour Market" was held in Bled, Slovenia on 28-29 June, 1995. The seminar, which took place in the framework of the Centre for Co-operation with the Economies in Transition’s (CCET) country-specific programme for Slovenia, was organised by the Directorate for Education, Employment, Labour and Social Affairs in co-operation with three Slovene governmental departments: the Ministry of Education and Sport, the Ministry of Labour, Family and Social Affairs, and the National Employment Office.

Building on work undertaken within the CCET activity on Education and the Economy in Central and Eastern Europe, the Bled seminar covered issues such as the social and economic demand for education and training of young people and adults, and new links in the design, implementation, financing and evaluation of vocational and technical education. Experiences from OECD countries were presented to demonstrate both the interlinkages that develop between education and the labour market and evolving educational structures in market economies.

The following collection of papers, which served as a basis for discussions at the seminar, will be of interest to officials engaged in educational reform in the transition economies. The seminar report outlines a number of issues that were identified as meriting further attention, these include: the development of education policies and systems that take account of labour market trends; access to learning; accreditation that is recognised both nationally and internationally; and flexibility in higher education.

The seminar proceedings are published on the responsibility of the Secretary-General of the OECD.

Salvatore Zecchini
OECD Assistant Secretary-General
Director of the CCET
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SEMINAR REPORT

Anne Jones

The broad agenda for education in the Central and Eastern European countries is to encourage decentralisation, develop more flexible teaching and learning styles and to encourage participation in decision-making. Students need to develop management skills and to participate actively rather than passively in learning. Competency based learning systems are developing fast. Education, and in particular life-long learning, is now seen as having a key role in combating unemployment and building economic prosperity and social well-being. There needs to be more investment in people through education and training. "Blue-print planning" or manpower planning is an outmoded concept, given the fluidity of the economy and the shifts in the labour market. New markets are emerging, but there is a skills gap between the opportunities created by the new technologies and the existing skills supply. Short-term contracts are replacing "jobs for life".

This means that adults as well as young people need opportunities to update their skills and knowledge to meet the demands of the new economic reality. To achieve this, partnership and co-operation between the State and Employers is essential. These include communication skills, creative skills, problem-solving skills, the ability to work in teams, inter-personal effectiveness, managerial and entrepreneurial skills. However, to achieve this, in each case, a massive staff-development programme has to be put in place. First, the teachers and lecturers have to learn the skills for themselves through practical workshops which give them direct experience of the processes and an opportunity to reflect on their learning. They are then able to work together to adapt the curriculum itself and their teaching methods. In all this, they are helped by close contact with local employers who are able to give feedback and provide case-studies and examples. These are some of the benefits of local partnerships, which reflect local needs. The learners (teachers and students) need to work on the questions and answers for themselves for the learning to be effective. It is not a 'top-down' process. The broader, more flexible curriculum which is emerging is much more responsive to the needs of the individual, the community and industry. It not only helps economic prosperity, but it also helps to equip people to live and work in the rapidly changing society of today and tomorrow.

It is relatively easy to introduce reforms without actually changing the fundamental culture: this gives a feeling of making progress, but in fact, may not bring about the culture change which is needed if economies in transition are to make that transition fully. There are three kinds of reform: modernisation, structural reform, and systemic reform. "Improvements" to existing systems are relatively easy to make, but to meet the real needs of the emerging economies, it is important to re-examine fundamentally the system as a whole and the inter-relatedeness of the parts.

International studies show that the profound shifts in culture being experienced by economies in transition are happening all over the world. Education and training systems world-wide are not adequate at present. "Narrow" jobs are disappearing, new multi-skilled jobs are emerging. Societies can no longer
depend on 25 per cent of the population to produce a stable economy. Higher level knowledge and skill are needed in the workforce as a whole: that means raising the skills level of the "forgotten" 50 per cent.

Issues arising from the group discussions

1. The importance of understanding labour market trends

   The nature of work itself is changing. In future, there will be less employment and more self-employment. Unemployment will increase for those who have not developed the skills needed in the new, emerging economies. At the same time, there will be vacancies for the most skilled jobs because of the mismatch between supply and demand. "Jobs for life" are a thing of the past. Numbers of large enterprises are declining, numbers of SMEs (small and medium enterprises) are increasing. The effects of new technologies, particularly information and communications technologies, have not yet been fully realised. Mobility of labour in a global market means that both migration and immigration effect patterns of employment in unexpected ways. Homeworking and teleworking offer both threats and opportunities. Demographic trends, in particular the declining number of young people and the increasing number of old people across Europe as a whole, need also to be taken into account.

2. The need for more guidance and counselling

   As new teaching and learning styles are introduced, with more emphasis on empowering students and teaching them to learn for themselves, so the role of the teacher changes to that of facilitator and mentor. Students need to manage their own learning, to reflect on that learning, to make choices about what to do and how to do it. To do this well, they need support and guidance from their teachers. With the demand for high achievement, some students drop out when the pressures become too great. These students need particularly skilful counselling so that they do not give up. For all students, it is important to recognise and reward progress, however small. The students themselves also need to understand the changing nature of work so that they are equipped for the rapidly changing job market. Their own self-esteem and sense of individual worth will be as important in this as their knowledge and skills.

3. Access to learning

   In order to mobilise the latent talent in the adult population, particularly amongst women and the disadvantaged, systems and structures need to be improved further to make it easier for those wishing to return to learning. Support and guidance is needed at the point of re-entry and some specific training in how to learn in new dynamic ways. In this, local partnerships between educators and employers can be very helpful, to ensure that labour market needs are met. Flexible systems built on networks are likely to be appropriate. Information and communications technologies can speed the processes. It is worth noting the success of women returners in setting up small businesses. Adults in the workforce who are already qualified also need access to further education and training, partly to update their previous knowledge and partly to develop their enterprise skills.
4. **Certification/accreditation**

Qualifications become more important in a global labour market. Recognition and credit needs to be given for all learning which is relevant to labour market needs, and therefore should include academic qualifications, vocational competencies, the accreditation of prior learning, and a record of achievement. Modular accreditation, that is credit for each unit of learning, helps those who cannot, for whatever reason, take a whole qualification at a time: qualifications can then be built up at a pace that suits the learner’s circumstances. Recognition of prior experiential learning helps adults returning to learning build up their credits more quickly. Formal accreditation systems can also be useful in helping to quality assure the work of private training organisations. However, whatever systems are put in place, it is vital that the qualifications should be portable and transferable so that they have currency in the international labour market.

5. **The role of government departments**

To achieve systemic change, it is very important for the various government departments to work together. If a single government department takes an initiative without this being part of a co-ordinated governmental strategy, then it may not have the desired effect. For example, sometimes employment department initiatives prevent education departments from changing. There needs to be overall commitment to a strategy and to genuine transformation, not superficial reform.

6. **A flexible Higher Education system**

The delivery of Higher Education to the learner needs to be much more flexible and to take account of the needs of the learners and their employers or sponsors. Partnerships between Higher Education Institutions and Employers (both public and private sector) can ensure that the curriculum and the teaching methods reflect these needs. Flexible learning systems need to provide the learning at a time, pace and place which suits the learner: for example, this might mean recognising and accrediting on-the-job experience, providing some distance learning materials, offering some workshops on the employers’ premises, using inputs and examples from the organisation to make the learning materials more realistic, and setting up projects and action research to be done in the work setting. In addition, there is enormous potential for using information and communication technologies to support this kind of learning. There are examples world-wide of Universities which have taken the initiative in setting up partnerships with employers. This extra business for the Universities has proved to be an important source of revenue and decreased dependency on State funding. Universities can themselves set up small businesses to run short course programmes, training consultancy and research.

7. **Staff development programmes**

To make these shifts in the culture of learning, there need to be sensitive and well thought-out programmes of staff development for teachers, lecturers and trainers. They may need to experience the more participatory and inter-active learning methods that they are now being expected to use in their teaching. It is important that they learn these for themselves so that they are not resistant to the changes, but are confident about and committed to the processes. Active participation in workshops, training programmes, dialogue with employers, feedback from students, reflection on learning, these are among the
methods which can be useful. The best way of developing teaching and learning styles which are participatory, which encourage the learners to take responsibility for the management of their own learning and develop a range of practical transferable skills, is to do this for oneself.

8. **Equal opportunities**

Equity is an important principle which needs to underpin all developments. Not only is there an obvious need to help women and the physically handicapped to fulfil their potential, but in addition, care needs to be taken to support those with learning difficulties, the late developers and those who are or who may become alienated from the education and training systems and indeed from society, in part because they fear failure or lack confidence. These people need extra help and encouragement so that they themselves are not disenfranchised from society but also have the opportunity to contribute to that society and to feel and to be valued.

9. **Small and Medium Enterprises**

Given the enormous growth in the number of SMEs, many of which do not survive very long, there is a need, at local level, to support and strengthen their endeavours. A serious problem is that most SMEs do not have the resources, the systems, the finances or the time to buy into education/training. Yet they do need a lot more support in order to grow their businesses and flourish. This question is one which is universally difficult to solve, but nevertheless needs bearing constantly in mind and urgent action.

10. **A Strategy for action**

Above all, there is a need at governmental level for a strategic framework which builds long-term strategic change rather than responding to immediate short-term needs. Such a strategic framework needs to be designed in such a way that it can be interpreted flexibly at local level to reflect local needs and circumstances. Both at national and at local levels, partnerships need to be established involving the public sector and the private sector, employers and education/training providers, the voluntary sector and the local community, employees and local people. The learners can be at any age or stage. What is important is that they themselves are able to go on learning and developing, to the benefit of themselves and their families, their community, the local employers and the economy. The purpose of the partnerships at national and local level is to ensure that developments are coherent, flexible, responsive, and effective. Lifelong learning is the key to economic prosperity.
When observing the relationship between education and the labour market, a fairly simple model can apply. There are two main determinants of labour demand: economic growth and technological development. The first influences the quantity of labour demand, i.e., the creation of new production units and new jobs or their phasing out, while the second influences both the quantity and the quality of labour demand. New technologies generally create more demanding jobs although there is no full agreement on this (e.g., Braverman, 1974). On the other hand, they influence the type of production which can be more or less labour-intensive, thus creating or killing jobs.

Labour demand is expected to be met by an adequate labour supply, in terms of sufficient numbers of properly educated workers. Although labour supply is determined by many different factors such as population growth, migration flows, labour force participation, age, etc., its quality can be primarily described in terms of education. Education should be understood in a wide sense, not only as a level of formal education, but also in terms of skills that can be acquired in a less formal way, or on-the-job.

Education is generated by the education system, itself shaped by differing proportions of public or private schools, industrial and other training centres, all of which run various programmes for young people and adults. There are also variations in the overall capacity of the education system (i.e., how many students can enrol), in its effectiveness in terms of the dropout rate (or the number of graduates compared to the number of those who start attending educational programmes), and in the quality of education provided to students. This model will be taken as a framework for the description of the situation in Slovenia.

This paper will discuss the influence of labour demand on the labour supply and the role of both in the transformation of the education system. Of course, the relationship is not that simple. It would not be true to say that labour demand is the only factor determining labour supply and thus, influencing the education system. The reverse might in fact be the case, namely that a certain type of education and created knowledge influences the creation of new jobs. This relationship will be considered as well. To understand the present issues, however, a short description of the pre-reform situation in Slovenia is needed.

Education and the labour market before the reform

Until 1989, when economic reform started, the labour market in Slovenia was a seller’s market. It functioned extremely asymmetrically. Graduates who finished educational programmes found their way into employment without much difficulty. Full employment was declared as an autonomous goal and one
of the main political tasks was to create enough jobs for the ever increasing number of school leavers and other job seekers. Therefore, open unemployment rarely exceeded 2 per cent. On the other hand, employers could not make employees redundant for economic reasons, because employment was protected by law. Workers were fired only for serious disciplinary matters and of course, under the system of workers’ self management, workers could hardly be expected to fire themselves. Only in cases of extreme economic difficulties and losses were firms closed down. The workers, however, had to be provided with new jobs. In most cases, losses were covered by means of a redistribution of funds from profitable firms to those in difficulties.

In such circumstances the education system played a relatively autonomous role. Graduates found jobs that had practically no relation to their studies. Readjustments were made by means of on-the-job training and occupational flexibility. Occasionally, educational and industrial policies reacted to the inconsistencies between labour supply and demand. They did so mainly by means of a grant system partially based on social criteria, in order to support students from the lower classes, and partially on economic criteria, in order to attract students into less popular occupations. Because of the prevailing low unemployment, several enterprises offered grants to students as a means to attract new employees.

A radical attempt to reconcile the inconsistencies between labour demand and labour supply was made at the beginning of the 1980s, when a reform of the education system was introduced. However, it was based on three problematic assumptions. Firstly, it was assumed that a precise matching of labour supply and demand was possible. Enterprises were supposed to report the number of different graduates needed over a period of two to eight years. On that basis, schools were expected to enrol just the right number of students into various programmes. It is quite easy to observe how unrealistic these expectations were. The fact that technological cycles were becoming ever shorter -- and educational cycles ever longer -- was not taken into account. The main reason why enterprises did not report their long-term manpower needs was simply because they were unable to make long-term plans in an environment that was becoming ever more turbulent. As a consequence, some of the inconsistencies actually increased.

The second assumption was that the educational structure should follow the existing structure of economy and technology, and that investment in levels of education higher than those currently needed was unnecessary. This assumption was partly based upon the anti-intellectual attitude prevalent in political circles (Županov, 1970) and partly upon practical considerations. At that time, industrial production was labour-intensive and technologically rather undemanding, while the aspirations of young people for higher levels of education were increasing. Therefore, there was a great demand for semi-skilled and skilled industrial workers which was met by immigrant workers brought into Slovenia because of the lack of locally available manpower. However, instead of challenging the technological structure of the economy, which was losing its competitiveness in the developed markets, the education system was to be adapted to it. An ever increasing number of secondary school students were sent on short vocational programmes at the expense of longer, more general programmes intended to prepare students for university.

Thirdly, it was assumed that schools could, by means of regular education, provide sufficient knowledge and skills for graduates to -- after a few months or perhaps a year of practical placement in a company -- become fully productive workers. This assumption was naively accepted by many managers. Quite a number of well functioning enterprise training centres were dissolved and some were integrated into the regular education system. The philosophy of life long education was far removed from its practical implementation in this context.
The system described above led to an increase in labour hoarding on the part of enterprises which was not economically justified. There were more and more employees without real jobs. Their number was estimated at about 20 per cent (Mencinger, 1983). Since there was no possibility of making workers redundant, productivity began to fall and the overall economic crisis started to deepen.

A lack of real jobs and work challenges, the abolishing of training centres and training practices, the influence of the educational reform of the 1980s on the educational structure and a system of remuneration according to which employees were paid for their jobs and not for their abilities influenced a gradual devaluation and a degradation of skilled labour and education in enterprises. Employees neither used nor sufficiently developed their work capacities. Enterprises were increasingly less able to face new economic and technological challenges.

Although the educational reform of the 1980s assumed that the labour force was too highly qualified, it became obvious at the beginning of the 1990s that the reverse was true in the majority of cases. This is apparent from Table 1. It can easily be observed that in all cases, bar one, the number of under-qualified exceeds the number of those who are over-qualified. This was the situation at the beginning of the implementation of economic and political reform.

<table>
<thead>
<tr>
<th>Demanded education</th>
<th>Actual education</th>
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<tbody>
<tr>
<td></td>
<td>L P SCH.</td>
</tr>
<tr>
<td>L P SCH.</td>
<td>35</td>
</tr>
<tr>
<td>P SCH.</td>
<td>60</td>
</tr>
<tr>
<td>S SKIL.</td>
<td>12</td>
</tr>
<tr>
<td>SKILL.</td>
<td>24</td>
</tr>
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<td>S SCH.</td>
<td>6</td>
</tr>
<tr>
<td>U EDUC.</td>
<td>0</td>
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</tbody>
</table>

Note: L P SCH. less than primary education
      P SCH. primary education
      S SKIL. semi-skilled; 1-2 years of vocational education
      SKILL. skilled; 2-3 years of vocational education
      S SCH. 4-5 years of secondary education
      U EDUC. college or university education

The economic reform and the reaction of enterprises

The reform of the labour market started in 1989 as a part of the overall economic and political reform. The aim was to deregulate the labour market and to liberalise it in order to achieve a more balanced relationship between sellers and buyers. New labour legislation allowed for redundancies in cases of economic difficulty, although not without restrictions, and was less prescriptive with respect to the personnel policies of employers. Within the framework of new labour legislation, a rather turbulent process of economic changes began.

The Slovenian economy lost approximately half of its markets (Gospodarska gibanja, No. 226). This was in part due to the internal economic crisis, but can be ascribed mainly to the loss of markets in the former Yugoslavia and in other eastern European countries, where economic crises and reforms were also under way. Due to economic difficulties, several big industrial firms collapsed, particularly among those producing for these less demanding markets. There were very few new jobs and already employed individuals were losing their jobs in great numbers. While, until 1989, job losers had accounted for an insignificant fraction of the unemployed population, by the beginning of the 1990s they represented nearly half of the total figure. The unemployment rate rose from 2.6 per cent in 1989 to 9.1 per cent in 1993 when it reached its peak (Zavod, 1994).

Nevertheless, Slovenian management did not take a fatalistic view of the situation. Three main reactions can be identified in this respect. Firstly, there has been an intensive search for new markets, especially in more developed countries. At the moment, about two-thirds of Slovenian exports are to the European Union (EU) countries.

Secondly, there has been an explosion of new production units. On the one hand, the collapsed enterprises have been transformed into smaller new enterprises which continue to produce profitable goods and services. On the other hand, tens of thousands of new enterprises have been created. Although some of them have not yet started trading, the rest are creating an increasing number of new jobs.

Thirdly, there has been a sharp decline of employment in the agricultural sector, a rapid increase in services and a steady fall in industry. From 1991 to 1993, the percentage of the active population employed in the agricultural sector dropped from 15 to 10.7 per cent and in the industrial sector from 45.1 to 44.2 per cent. In the same period the percentage of those employed in the service sector rose from 39.9 to 45.1 (Zavod, 1994). The process of privatisation which is now in full swing will intensify these changes, speed up structural changes and bring about new challenges for the education system.

Due to the relatively high standard of living in Slovenia -- which is well above that of eastern European countries and is comparable to the less developed EU countries -- neither management organisations nor trade unions are ready to compete in the developed markets by means of cheap labour. The alternative is to develop highly flexible organisations which are responsive to structural change and technological development. The implementation of this strategy implies the following changes:

-- the creation of internal, enterprise labour markets, i.e. enterprises should carefully select a sufficiently large group of core workers, promote them, invest in the development of their skills and careers and remunerate and protect them in order to secure economic and technological development for the enterprise;
the application of the strategy of labour market flexibilisation, meaning that enterprises favour flexible work arrangements such as temporary work contracts, part-time work, casual work and similar employment strategies, so as to decrease the market risks. With the same goal in mind, they could also externalise certain peripheral production programmes via subcontracting or the purchase of services;

-- a combination of both strategies.

The first strategy is necessary for the medium-sized and larger firms which operate in the field of high technology and want to take an active part in competition. The second strategy is more appropriate for smaller firms, subcontractors and the like. It seems that at present, in Slovenia, only a few firms in the pharmaceutical, electronic, metal, furniture, service and other industries have taken the first strategy. Quite a number of larger firms have collapsed, lost their core workers and dissolved their technological and marketing centres.

Many firms have noticed the potential advantages of employment flexibility. This is especially true for the thousands of new small enterprises. The consequence of this strategy is that the share of flexibly employed workers in Slovenia is increasing quite rapidly, reaching approximately 12 per cent in 1994 (Svetlik, 1994). It also seems true that the grey economy is becoming a significant factor. This is indicated by the difference between the unemployment figures obtained from a survey of the labour force and totalling 9 per cent in 1994 and the figure for the registered unemployed which was 14.4 per cent at the same time (Republiški zavod, 1995).

The enterprises which create internal labour market sectors have a need for better educated and qualified labour, supported by in-company training and development. However, the situation with the flexible employment arrangements is not much different. Only in some cases are low-skilled workers involved. Available data shows that flexible work arrangements are practised most frequently in services and are most widespread in occupations such as technical experts, teachers and workers in personal social services. Workers with higher educational qualifications are over-represented among the flexibly employed. The exceptions are work for direct pay and casual work (Svetlik, 1994).

If this is the case, even greater inconsistencies must be expected between labour demand and labour supply, in terms of the under-qualification of employees, than is shown in Table 1 for the year 1990. Owing to the reasonable economic growth which occurred in 1994, unemployment started to fall. However, the employment offices report an increasing number of demanding jobs for which there are no appropriate applicants. The proportion of posts to job seekers in 1994 was 1:3 and 1:5 for people with university and college education respectively, while it was 1:8 to 1:20 for people with lower educational qualifications. Relative unemployment rates in 1994 were 13.5 per cent for the least educated workers and 4 per cent for the university-educated (Republiški zavod, 1995). Increasing structural unemployment in which both occupational and educational inconsistencies play an important role is therefore a real possibility.

**Insufficient level of education**

The problem of structural inconsistencies in the labour market is specifically the problem of the educational structure not being adjusted to match changing labour demand. The inappropriate level of education of the Slovenian labour force can also be observed, in comparison to the competitive countries
with which Slovenia has the most intensive economic relations. Data shows that the population in Slovenia is better educated than in Italy, but much less than in Germany, its main economic partner, and other developed countries. According to the 1993 labour force survey, the average number of years of school attendance of the Slovenian population aged 15 and older was only 10.1. The percentage of people with vocational training was 53.3, with secondary education 42.5, and with college or university education only 10.8 (Smonkar, 1994).

Assuming that capital and technology are universally available in open economies, the competition is increasingly shifting to the labour market. However, with its existing educational structure, Slovenia could become a loser rather than a winner. Its economy could reach the point where most economic units would only be able to operate as second-class subcontractors to European core firms. The situation is worrying because the educational structure is changing very slowly. For instance, the average duration of school attendance was 10.1 in 1993, as compared to 10.0 years in 1984 (Svetlik, Trbanc, 1991). Only 78 per cent of 19-year-olds finished secondary education in 1993 (Statistical Yearbook, 1994). Of this group, a certain percentage attended only short courses lasting one to two years without real vocational training. The other 22 per cent joined the ranks of unskilled or semi-skilled workers.

The census data, shown in Table 2, gives a slightly more optimistic picture. The situation could be described as better with respect to the trend towards more education, but not concerning the educational structure of the population: the quickly-changing labour demand cannot be met through the present structure and it proves to be worse than that of competitive economies. Of particular concern should be the large number of individuals without vocational training -- this number may even be underestimated -- and the small number of college and university-educated. The trend clearly shows that new generations receive more education than the generations that preceded them. However, it warns that the educational structure should also be improved in terms of adult education, which is far from encouraging. In 1993 only 4.7 per cent of adults aged 25 to 34 were attending educational programmes. Participation in education by older individuals is not even worth counting. In other words, only 2.4 per cent of the working population and 4.5 per cent of the unemployed were in educational programmes (Smonkar, 1994).

<table>
<thead>
<tr>
<th>Year</th>
<th>Educational grades</th>
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<tr>
<td></td>
<td>Primary and less</td>
<td>Secondary</td>
<td>College and University</td>
</tr>
<tr>
<td>1971</td>
<td>70.7</td>
<td>25.4</td>
<td>3.3</td>
</tr>
<tr>
<td>1981</td>
<td>58.4</td>
<td>34.6</td>
<td>5.9</td>
</tr>
<tr>
<td>1991</td>
<td>47.0</td>
<td>42.8</td>
<td>8.8</td>
</tr>
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How can the level of education be raised?

If the labour supply is to be adjusted to labour demand, the question remains as to which adjustments are needed and how they are to be made. What is beyond doubt is that many more individuals should receive a higher level of education. Therefore, the enrolment of the younger generation in educational programmes should increase and the dropout rate should be sharply reduced.

The responsibility for youth education clearly belongs to the public sphere. The state has taken certain steps which are framed by the new legislation on education. This has been partially implemented, although some elements are still going through the legislative procedure.

There are plans to increase the length of primary education from eight to nine years. This will not decrease the labour supply, since children will start attending school one year earlier than at present. However, the standard of primary education would increase and would thus contribute to the quality of the labour supply. Another gradual change in primary schools has been an increasing amount of group work. More attention is paid to individuals and to creative activities and less to classical teaching and learning by rote. This could in the long run also raise the quality of education.

The secondary and post-secondary education systems follow a dual model. It is expected that this will affect the overall level of education by attracting a larger proportion of young people into educational programmes and by decreasing the dropout rate. Offering more vocational, and shorter programmes which require and develop practical skills, could attract those students who have an aversion to education in general. It has been noticed that especially at the post-secondary level there has been a lot of interest in vocational programmes.

In the last six years, the number of post-secondary students has increased significantly both in absolute figures and with respect to the share of the generation enroled. In 1988-89, there were 31 055 students, while in 1994-95 their number rose to 42 961. From 1990-91 to 1994-95, the share of school-age students in the overall population in Slovenia rose from 9 per cent to 12 per cent and is approaching the share in more developed EU countries, where it varies from between 14 per cent and 16 per cent (Zgaga, 1995). It is unclear exactly how much these increases have been caused by the tight labour market situation and how much by the changed aspirations of the younger generation. In any case, they demand efforts to extend the overall capacity of the education system. Therefore, new educational programmes have been introduced and a special programme of investments in educational facilities has been launched by parliament.

The new legislation on education permits the establishment of private schools. Slovenia now has its first private secondary school, run by the Church, and its first accredited private vocational school for tourism and hotels. New programmes and facilities enhanced by privatisation can be expected in the future.

The responsibility for adult education is less clear. It could be expected, according to the labour market segmentation theory (Loveridge, Mock, 1979), that firms would invest in the education and training of their core workers. It could also be expected that professionals in the primary external labour market sector would use their own resources to invest in their knowledge and career development. In practice, however, firms tend to replace workers whose skills have become inappropriate, rather than retrain them. This is particularly true for workers in the secondary external sector, which is expanding due to the flexibilisation of the labour market (Atkinson, 1986). The responsibility for the education and training of these workers and that of the unemployed must surely lie with the state.
The situation in Slovenia is characterised by the small number of large enterprises which have developed their internal labour markets. The majority of companies, especially small, newly-founded companies, count on flexible adjustments to the economic situation. They do not take much responsibility for their employees and prefer flexible employment arrangements. Therefore, the state should take much more responsibility for adult education than in other countries.

It should be noted that the provisions for adult education, which were well developed until the middle of the 1970s, were later mostly abandoned. Community-based "workers' universities" were losing public support and either moved over to commercial programmes or were closed down. Corporate training centres were losing their role because technological renewal had slowed down, because of the educational reform of the 1980s, which tried to integrate them into the monolithic education system, and because of the deepening economic crisis. Some training centres reduced the number of their staff, and others were closed down.

The turning point in this respect has been the establishment of the Adult Education Centre, founded as a public institution at the beginning of the 1990s. Its role is to develop and promote adult education by means of study circles, programmes designed to increase functional literacy, animation programmes for young people, etc.

At the same time, a new active labour market policy was launched by the Ministry of Labour, Family and Social Affairs. An important part of the new policy has been the establishment of training programmes for the unemployed, which have for the most part been run on a contracting-out basis. In the period between 1991 and 1994, nearly 48,000 people, either unemployed or facing unemployment, participated in various educational and training programmes in order to increase their chances of stable employment. In addition, training for over 28,000 workers already in employment was subsidised (Republiški zavod, 1995). The National Employment Office has become the main adult education agency.

In spite of the educational activities of the National Employment Office, the Adult Education Centre and the reformed people’s universities (previously workers’ universities), adult education remains rather weak and uncoordinated. In its existing form, it cannot contribute significantly to the upgrading of the educational level of the Slovenian population. Much greater involvement of the state, particularly of the Ministry of Education and Sport, is needed. Generations of unskilled and semi-skilled workers should be vocationally trained or even sent to school to acquire higher educational qualifications.

How to regulate the structure of educational programmes?

Adjusting the labour supply to labour demand in terms of the type of education and skills needed seems a much more delicate task than what is required to adjust the level of education. The attempt made at the beginning of the 1980s (during the educational reform) to regulate education by means of blueprint planning was a failure. It should have been clear at the time that it would be impossible to forecast the number of workers needed across the employment spectrum for several years ahead. The production system is too complex and technology changes too quickly to allow for a stable labour demand and a mechanically adjusted education system. Because of the individualisation of production, the increasing turbulence of the business environment, a shift from centralised to free forms of organisation and a shift from reactive to interactive leadership (Rasmunsson, 1992) blueprint planning has become totally obsolete. It is not only ineffective, but it also violates the freedom of the individual to choose an occupation.
In Slovenia, the school and employment authorities, as well as employers, acknowledged the limits of blueprint planning before the educational reform of the 1980s was fully implemented. They did not force individuals to enter occupations against their will, in spite of the excess demand. They took a pragmatic approach, allowing free choice, providing information about the situation in the labour market and hoping that individuals would react to increasing wages in the sectors where labour demand exceeded labour supply. Grant making was losing its regulative role owing to increases in the labour supply.

The economic reform which started in 1989 confirmed the advantages of a pragmatic approach over blueprint planning. However, it also amplified some of the illusions about the possibility of market regulation. The limits of market regulation could be described in the following way:

-- new technologies generate a new structure of labour demand;
-- employers raise wages for new jobs;
-- if new jobs differ only marginally in comparison to the existing ones individuals compete for them by means of self-education or short retraining courses;
-- however, if new jobs differ more substantially, radical retraining and new educational programmes are needed;
-- this should be observed by education authorities and schools, e.g. they should react to the demands of employers and individuals for new education programmes;
-- it takes some time to create new educational programmes;
-- it takes years before the first graduates can take the new jobs.

The more radical the technological changes and the shorter the technological cycles, the more inadequate the automatic market reaction. Before the first graduates finish the new educational programmes and take the new jobs, technology may change again.

Perhaps a segmented, rather than a merely pragmatic, approach is needed. This would mean that in the areas where labour demand is stable, employers and schools could create more profiled vocational programmes. The employer’s responsibility for the creation of educational programmes, for the practical placement of students and for the employment of graduates, is substantial. This is also the case in “dual” education systems such as that of Germany. The Slovenian education system follows this pattern. In secondary and higher education, some vocational programmes have recently been introduced. For higher education, the number of students seeking places significantly exceeds the capacity of the vocational programmes.

The situation is very different in the sectors where stable labour demand cannot be expected, and in the case of students who do not want to opt for a particular vocational programme. It seems that in such situations individuals know best. Educational institutions can make their programmes sufficiently general and raise their quality as much as possible in order to prepare graduates for a wider range of potential jobs. On the basis of a good general education, employees can easily be trained or retrained for specific jobs. However, the distribution of responsibilities between the state, employers and individuals remains unclear.
Employment offices and career planning centres can provide information and guidance to individuals who are trying to decide about educational programmes or have lost their jobs. The information given concerns issues such as expanding and contracting occupations, long-term technological trends, available educational and training programmes and the situation in local labour markets. They also create, carry out and subsidise training programmes. The development of these functions in Slovenian employment offices has been quite fast. In many cases they promote education and training "on stock", i.e. unemployed workers are offered language courses, computer and similar courses, in order to increase their general knowledge and their chances of finding employment even if there is no specific employer in mind. In the future, employment offices could adjust their education and training activities to the economic cycles by enroling larger numbers of workers during times of crisis and preparing them for the upswings. This way they could combat not only structural unemployment but also demand-deficiency unemployment.

The role of the state is not limited only to its direct involvement in education. Its responsibility is also to create a supportive environment for education and training. Besides direct investments in educational facilities and programmes it should also promote such investments by employers and individuals. Various kinds of subsidy and tax policy could be appropriate. For the moment they are rather limited.

In those enterprises which have created internal labour markets, employers provide training for both new employees and for those who need retraining. In other companies, these activities are much more limited. Since the majority of enterprises in Slovenia are small, it is unlikely that they take much responsibility for the training of their workers. One of the possibilities for small enterprises might be to co-operate in the setting up of branch-training centres. Incentives provided by the state could speed up such a development. The alternative is for the state to remain much more directly involved.

Well-educated individuals are eager to take responsibility for the updating of their knowledge and for their own retraining. The higher their education, the higher their involvement in further education programmes. This has proved to be true in Slovenia also (Smonkar, 1994). However, the responsibility of the state and employers is to offer enough relevant programmes and to promote the continuing education of individuals by means of tax incentives.
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21
Restructuring secondary curricula through business-education partnerships

Project Awareness: an introduction

In June 1991, Chesterfield County, (Virginia, U.S.A.) public schools graduated over 2,600 high school seniors. Full of expectations, these students marched out into their futures. Left behind were a growing number of uneasy school administrators all too aware of the findings of Workforce 2000, A Nation At Risk and of What Work Requires of Schools, a SCANS report. They were not alone in their concerns about the preparedness of students entering post-secondary education or the workforce. Business leaders also were confronted with the difficulties involved in hiring these potential workers lacking necessary skills or abilities, and unable to meet new world-class standards. An unskilled workforce affects both the individual quality of life of its members and the status of the nation in a competitive global economy.

Project Awareness, a business-education partnership between Chesterfield County Public Schools and a major manufacturing corporation was developed as a response to these concerns. Begun in September 1991, the Project was funded for three years for the amount of US$400,000 to be used for staff development and instruction materials. The Project incorporated needed workplace skills (communications, computer, mathematics, science, and critical thinking skills) into existing high school curricula. Project Awareness channelled the efforts of teachers, parents and business resource personnel as it incorporated interdisciplinary approaches and integrated academic and vocational instruction. The goal was to make education more relevant by showing students the need for workforce skills in the future and providing the instruction to teach them those skills. The two schools involved in the restructuring process were Thomas Dale High School, a comprehensive high school, and the Chesterfield Technical Center, which provides technical training to students from grade 9 to grade 12 for all nine high schools in the Chesterfield County Public School Division.

Implementation

Implementation of the Project depended upon three critical components: personnel, training and funding. The personnel responsible for implementation of the Project were the faculties and administrators of the two Chesterfield County pilot schools. Additional support personnel included a Steering Committee, Project Coordinator, and Curriculum Review Team members. Staff development training needs required to implement Project Awareness goals were identified by teachers and administration. Training was delivered in both formal and informal sessions through workshops, conferences and meetings between individual teachers in the same schools or between schools.
The immediate impact of Project Awareness was seen in the restructuring of current high school course content and in the instructional methods used. Long range results are best explained by the Project’s three goals, namely that:

-- students develop the attitudes, knowledge and skills (computer, mathematic, scientific, communication) necessary to be successful employees in today’s workforce and to succeed in post-secondary education;

-- students become proficient in the higher-level thinking skills necessary to be successful employees in today’s workforce and in post-secondary education;

-- a model be created for business and education to work together towards the integration of vocational and academic education, making both relevant to the students’ career development.

To achieve these goals a three-year implementation plan was developed and a budget, to be revised annually, was determined.

**Staff development**

At the start of the Project, computer applications, communication skills and critical thinking activities were not part of secondary curricula and it was obvious they would not be included until teachers understood the necessity for them. This prompted an extensive staff development programme, which continued throughout the Project (Table 1). A two-week visit programme for teacher representatives was funded by the corporation. The purpose of the visit was to introduce teachers to the current business world, a sector previously unknown to many of them. Given insight concerning the needs of the business community and the expectation levels students would encounter, faculty members realised the urgency to incorporate new skills into the curricula.

Once teachers accepted that students should develop workplace skills within content areas, they also recognised that faculty was not equipped to teach many of these skills. Clearly, teachers could not incorporate the skills into individual course areas until they knew which information they should impart to their students. A faculty survey was conducted in order to determine priorities for staff development. As a result of this survey, it was determined that lack of computer training was the biggest concern for the teachers. Workshops were set up, conducted by knowledgeable in-house staff as well as university and community college faculty members and business representatives. The objective was that all teachers, and ultimately all students, be familiar with a variety of software and be able to use computers as writing tools.

Additional staff development programmes were also provided at the Chesterfield Technical Center to meet other identified teacher needs. Workshops on technical writing, critical thinking, problem solving and total quality management were used to inform teachers and upgrade their workplace skills. Corporate resource personnel were involved frequently in professional development activities. The impact of the successful staff development training was almost immediately discernable in terms of classroom instruction. At the Chesterfield Technical Center, computer writing labs were created and scheduled so that students in all twenty-six technical courses received training and used the computer as a writing tool in each specific content area.
**Table 1. Chesterfield Technical Center Staff Development Process**

<table>
<thead>
<tr>
<th>1992-93</th>
<th>Introductory Staff Development</th>
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<tbody>
<tr>
<td></td>
<td>Computer applications and DOS</td>
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<tr>
<td></td>
<td>Co-operative learning</td>
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<td></td>
<td>Problem solving (with corporation)</td>
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<td>Leadership (with corporation)</td>
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<td>Critical thinking</td>
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<table>
<thead>
<tr>
<th>1993-94</th>
<th>Emphasis: Computer Skills and Technical Writing</th>
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<tbody>
<tr>
<td></td>
<td>Technical writing: Introduction and application</td>
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<td></td>
<td>Technical writing: Editing and mechanical errors</td>
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<tr>
<td></td>
<td>Introduction to microcomputers and DOS</td>
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<tr>
<td></td>
<td>Computer applications: MSWorks, Modems, VAPen</td>
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<td></td>
<td>Computer applications: Wordperfect</td>
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<td></td>
<td>Content and thinking skills: Introduction to Infusion</td>
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<td></td>
<td>Multimedia technology (with corporation)</td>
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<tr>
<th>1994-95</th>
<th>Emphasis: Critical Thinking and Computer Skills</th>
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<tbody>
<tr>
<td></td>
<td>Summer business internships for teachers</td>
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<tr>
<td></td>
<td>TQM training (with corporation)</td>
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<td></td>
<td>Teaming workshop (with corporation)</td>
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<td></td>
<td>Introduction to critical thinking</td>
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<tr>
<td></td>
<td>Infusing critical thinking: Dr. Robert Swartz, University of Massachusetts (with corporation)</td>
</tr>
<tr>
<td></td>
<td>Critical thinking: Observation and evaluation by Dr. Swartz</td>
</tr>
<tr>
<td></td>
<td>Computer technology (Multimedia, Intermediate MSWorks: Spreadsheets and Database, Windows, Working with Network Menus, Powerpoint, AutoCAD)</td>
</tr>
</tbody>
</table>

**Applications in training and technology**

Since the inception of Project Awareness in 1991, the original partnership concept has included the opportunity for education and business to share expertise, training processes and concepts for the improvement of both organisations. In most business-education partnerships, the assumption is that only education can benefit from this association. What has occurred with Project Awareness and with the other CTC partnerships is that training has been designed and shared by all partners. The areas of training which have been implemented are co-operative learning (teaming), critical thinking and problem solving, technical writing, Total Quality Management, cross-training and multi-craft development for trade employees, and the use of multimedia technology.
Instances of jointly designed training occurred early in the beginning stages of Project Awareness, when teachers were hired by the corporate partner to provide instruction to their employees in co-operative learning. On many occasions teachers have participated in corporate training seminars when training was determined to be directly related to classroom instruction, environmental concerns and use of new technology. The training related to multi-craft development has been of special interest to teachers of the construction and building trades.

On 20 February 1995, Dr. Robert Swartz, Co-director of the National Center for Teaching Thinking provided a two-day seminar on infusing critical and creative thinking into content instruction for both teachers and corporate training employees. Corporate trainers attended the in-service meeting and discussed the application of this information with teachers after the seminar. The training was designed by the Project Awareness Steering Committee to meet the needs of both partners.

In addition to the corporate partner, Chesterfield County government offices have worked co-operatively with the Technical Center in implementing the concepts of Total Quality Management. An administrator from the Center participated in the county’s “Train the Trainer” programme and provided training for other county government employees. In turn, county government employees provided Total Quality Management instruction to teachers and served as a resource when students received this instruction.

For the past four years, corporate employees have met with the School Technology Committee. The school technology plan reflects the goals and standards of its corporate partner. In 1990, the Technical Center had one computer laboratory. Today, in addition to personal computers in classrooms, there are seven computer laboratories with one dedicated to multimedia technology. The use of multimedia technology as a training aide has been a major focus of the Project Awareness partnership. The ability to provide sound and video to enhance computer-aided instruction has redefined the training model for business and industry in the United States. Representatives from both the corporate partner and the Technical Center attended a national conference, Interactive ’95, which featured multimedia applications. Following the conference, teachers and corporate employees co-operatively developed a multimedia course curriculum for the Technical Center. They continue to share expertise as they move forward in this new field of technology application.

The Project Awareness corporate partner is currently restructuring its training facility and revising its training materials to incorporate instructional strategies used by the Technical Center as a result of the Project.

Restructuring of curricula

Thorough staff development prepared the Chesterfield Technical Center teachers to begin incorporating workplace skills into their existing curriculum (Table 2). New instructional strategies were developed as a result of industry-education joint efforts in curriculum planning, which focused on student-driven and hands-on approaches with the teachers as facilitators. As technical writing was integrated into the curricula, the computers became writing tools. The steps in problem-solving and technical writing procedures were taught and reinforced in all content areas.
<table>
<thead>
<tr>
<th>COMPETENCIES</th>
<th>FIRST YEAR</th>
<th>SECOND YEAR</th>
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| **Technical Writing** | 1. With competent usage and mechanics, the students demonstrate the ability to write:  
-- Formal and Informal Sentence Definition  
-- Paragraph/Multi-Paragraph Extended Definition  
-- Problem Solving Reports  
2. With competent usage and mechanics, the students demonstrate the ability to write:  
-- Instructions  
-- Process Writing  
-- Self-Evaluations/Progress Reports | 1. With competent usage and mechanics, students demonstrate the ability to write:  
-- Formats listed for 1st year:  
-- Description of mechanism or concept and its operation  
-- Interpretations of data with given criteria  
-- Periodic self-evaluation  
-- Process report  
-- Informational report using reference materials |
| **Oral Communications** | 1. Speaking. Students will demonstrate the following:  
-- Structure oral messages clearly  
-- Organise ideas for oral communication  
-- Make an oral presentation  
2. Listening. Students will demonstrate the following:  
-- Analyse, compare, evaluate delivery of oral messages for diverse purposes and audiences. | 1. Speaking and Listening. Students will demonstrate the following:  
-- All skills listed for the 1st year  
-- Acknowledgement of audience needs by evaluation of verbal language, body language, and level of topic complexity  
-- Participation in group presentations  
-- Appropriate selection method for conveying messages to a particular audience (i.e., explain services to a customer) |
| **Technology Use**     | 1. Students will exhibit proper skills in handling, maintaining, and using the computer for word processing skills.  
-- Use of software package to work process, create and complete; charts, tables, and/or line graphs.  
2. Students will demonstrate proper utilisation of peripherals (i.e., mouse, printer). | 1. Students will demonstrate the following:  
-- All skills listed for 1st year  
-- Ability to use an integrated software program using word processing, spreadsheet, and data base. |
| **Interpersonal Relationships** | 1. Students will participate as an effective member of a team.  
-- Exchange ideas in a small or large group  
-- Demonstrate socially correct behavior in serving clients, customers, and supervisors.  
-- Participate in problem solving activities exhibiting effective use of time, full development of ideas, ability to decide issues, and adequate group productivity. | 1. Students will demonstrate the following:  
-- All skills listed for 1st year  
-- Ability to co-operatively teach and demonstrate new skills to others  
-- Leadership communicating ideas/opinions; justifying position; persuading and convincing others; responsibly questioning policies; negotiating; showing ability to work towards an agreement and resolve differences; working with persons of diverse backgrounds. |
| **Higher Level Thinking Skills** | 1. Creative Thinking. Students will demonstrate the ability to observe and remember, recognise assumptions (differ between fact and opinion), summarise important details, collect and organise data, and be creative in decision-making situations.  
2. Problem Resolution. Students will apply decision-making and problem-solving techniques to solve problems. | 1. Students will demonstrate the following:  
-- All skills listed for 1st year  
-- Ability to compare items and draw conclusions; classify; hypothesise; criticise; collect, analyse, synthesise and interpret data. |
During the 1991-92 school year, teachers and administrators realised, through the implementation process, that changes needed to occur within the curriculum. To provide a forum for teachers and corporate representatives to meet, Instructional Strategy Workshops were scheduled during the summers of 1992 and 1993. The two-week workshops provided time for teachers to discuss how they had infused workplace skills into subject-specific curricula. Corporate representatives confirmed the continued need for these skills and offered current examples of skills and technology applications.

Teachers used the writing workshops to create new instructional units emphasising computer, communications and critical thinking skills in all courses. These units were published in an Instructional Strategies Guide made available to, and used by, all faculty members. Continued revision of the Instructional Strategies Guide reflecting current business needs is ongoing, in order to provide students with the most up-to-date information on workplace skills.

**School reorganisation**

In addition to the expected benefits, such activities as staff development and summer writing workshops produced some unexpected results. These new experiences required teachers from very mixed background to rely on one another for counsel, expertise and moral support. As a result, teachers came to realise the significant advantages of interdisciplinary approaches. The process was formalised as the 26 courses at the Chesterfield Technical Center were grouped, because of similar curricula, into four divisions: automotive and electronics, business and communications, human services, and manufacturing and construction. Division members were empowered to address not only instructional issues, but also technological concerns and financial decisions pertaining to the courses.

**Student evaluation**

As students were taught new skills through new instructional methods, the traditional evaluation process formerly used to grade them no longer applied. To reflect more clearly the multiplicity of classroom instruction and content, student grades were ranked as follows: 33 per cent content (based on specific course work), 33 per cent process (practiced knowledge using the computer, critical thinking, technical writing, etc.) and 33 per cent application (demonstrated knowledge such as laboratory or hands-on experience).

Targeted areas such as computer skills, critical thinking and problem-solving were also evaluated twice a year through school-developed tests given to all students as part of semester and final examinations. During the spring semester of each year, a school-developed test on technical writing was administered to the student body. The results of these tests were made available to teachers and students. Based on test results, teachers were able to adjust areas of instructional emphasis to meet established outcomes. As in the case of computer skills, the test was revised after one year as students exceeded school expectations.
**Project assessment**

The progress of the Project was monitored, beginning in September 1991, by the Virginia Department of Education. In addition to school-developed tests and student grades, other assessment data was gathered using a number of evaluative tools. The Student Attitude Scale, Senior Survey and Post-Grad Survey were used to measure the students’ success in college or at the workplace regarding course work, teachers, work attitudes and overall preparedness. Through co-operation with the corporation, a test battery for entry-level employees was obtained. This test was administered each year and provided a comparison of student abilities with those of workers in the national workforce. Skills tested included reading comprehension, practical arithmetic, following oral directions, space visualisation and manual dexterity.

As the Project completes its third year, the goals have been fully attained in all courses at the Chesterfield Technical Center and in the departments of English, science and mathematics at Thomas Dale High School. Because of the impact of the Project, technical writing has been incorporated into the division-wide English curriculum and training for all English teachers in the division began in the fall of 1994. In addition to the Virginia Department of Education evaluation of the Project, the Metropolitan Educational Research consortium and Virginia Commonwealth University are evaluating the Project until 1997.

Based on the evaluation of the Project to date, the corporate partner has indicated that it will provide support indefinitely for the Project.

**Communication**

Communications regarding Project Awareness were initiated with the formal announcement of the programme in September 1991. This announcement received attention from both the press and local media. Throughout the Project, every effort has been made to communicate with teachers, parents and the community at large through newspaper articles, corporate newsletters, school newsletters, and the School Division’s annual report.

Presentations were given to various groups concerning both the progress and the goals of the Project. Among these groups were the division instructional specialists, high school principals, the School Board, the Chesterfield Economic Development Council and various civic and business organisations.

In addition, the Project was presented at the National Association of Partners in Education Conference, Washington, D.C. in November 1992 and 1993, and to the United States Department of Education in September 1991. Also, the Project was by invitation, a feature presentation at the Second Annual International Model Schools Conference in Atlanta, Georgia (1994) and at the Third National Conference -- Integration of Academic and Vocational Education, in Vail, Colorado (1995). Presentations were also made at the First International Business Education Conference, in Birmingham, England in 1992, while a follow-up presentation was given at the Second International Business Education Conference, Paris, France in 1994. In 1992, the Project was chosen as a case study in Business-Education Partnership by the Organisation for Economic Co-operation and Development (OECD), in Paris, France.
Local television has aired four-minute “infomercials” about Project Awareness and the Chesterfield Technical Center. Since its inception, the Project has also been recognised with several awards:

-- The Virginia Governor’s Partnership in Education Award (1993);
-- The Richmond First Club Annual School Partnership Award (1993);
-- The Virginia Council on Vocational Education Partnership Award (1994);

Project replication

One of the original goals of Project Awareness was to create a model demonstrating that business and education could work together to improve workplace skills. As a model, Project Awareness outlines a process for restructuring any secondary curricula. A second Chesterfield county comprehensive school, James River High School, began incorporating the Project Awareness goals this year. Furthermore, this model has been shared with communities and school divisions in other states by the corporate partner.

The International Teacher Development programme

In April 1993, representatives of Project Awareness visited Chester, England, to explore possibilities of establishing teacher internships between Project Awareness and a partnership with similar goals, known as The Personal Effectiveness Programme Initiative (PEPI), and sponsored by the Wellcome-Burroughs Pharmaceutical Corporation. The ensuing programme was designed to provide teachers from Chesterfield County Public Schools the opportunity to expand their knowledge of the global community, through exchange of instruction materials and internship experiences in both educational and business settings. This project is an outgrowth of Project Awareness. As a result of the teacher’s exchange, students will receive an education relevant to workforce needs and understand the implications of a global economy.

During February 1994, the first teacher exchange took place with five teachers from Chesterfield County leaving for Chester, England. Corporate support for this programme was provided by the Central Fidelity Bank, ICI Films and the Chester Rotary Club. Teachers were chosen through an application and interview process ending in June 1993.

One of the major criteria for selection was involvement and participation in Chesterfield County’s commitment to incorporate workplace skills into the curricula. The selected teachers had also been involved with parents and business representatives in summer writing workshops which had produced 120 instructional units designed to incorporate the skills. Several of these units were the instruction materials used by the teachers as they taught in British secondary schools for two weeks. For the next two weeks, the teachers were assigned to British industries. These companies included Rolls-Royce, Genus, Europa Scientific, and the Nantwich Town Council. At each of these locations, teachers observed the skills needed by employees and were informed of future business trends likely to affect today’s students as they move into the workplace.
In June 1994, six British teachers sponsored by British industry came to the United States and were teamed with their American colleagues. Business internships were arranged with the Central Fidelity Bank, ICI Films, and Philip Morris USA.

As a result of the International Teacher Development Programme, over 1000 students have been directly taught by teachers who had become knowledgeable about needed workplace skills. As the 1994-95 school year opened, it was determined that the exchange should continue with England and expand to France. Teachers have participated in a teacher exchange with South Cheshire, England and Nice, France. In addition to sharing instruction strategies and materials as well as technological applications, teachers have also investigated how school systems in England and France foster the transition of students from school to work.

**School-to-Work Transition, a Virginia Department of Education pilot programme, 1995-96**

The Chesterfield Technical Center is currently in the second year of a School-to-Work transitional programme. This programme enables second year students to be placed in related employment prior to completing their course of study. Students attend the Technical Center for content and process instruction and are required to work at partner companies for the applied part of their grade. The goal of the Center is to achieve the transition of all students into the workplace prior to graduation.

A state-approved pilot programme has been established with Chesterfield County Public Schools and at the Chesterfield Technical Center to enable first year students at the Center to work in occupations related to their course of study during the summer months and receive an additional one credit. This would be accomplished by requiring students to enrol in a summer school internship programme in their particular course of study. Training plans developed co-operatively by employees and teachers would be periodically evaluated, on-the-job supervision would be provided and related instruction would continue especially in Project Awareness skills (computer applications, problem solving, critical thinking, technical writing and verbal communication).

Students returning to the Center as second year students and participating in the School-to-Work transitional programme would be eligible to receive an additional credit, towards a maximum total of four, by completing a combination of related instruction and work experience for a minimum of 720 hours. Instruction in Project Awareness skills would continue to be provided and assessed during the school year. In addition to students completing a summer internship programme, teachers from the Center would also participate in business-industry internships specifically designed for them.

**Youth Apprenticeship-Workforce Development programme**

In the Spring of 1994, representatives of the Chesterfield Technical Center and the Virginia Chapter of Associated Builders and Contractors began discussions concerning the establishment of a business-education partnership. The purpose of the partnership is to develop an institutional training programme in the construction trades to meet the needs of manufacturing and construction students at the Chesterfield Technical Center and the requirements of area contractors.
Associated Builders and Contractors, Inc. (ABC) is a major organisation located in Washington, DC. The national office and 80 local chapters, including one in Richmond, Virginia, work to develop a trained workforce for the construction industry. ABC is a joint venture regrouping general contractors, sub-contractors, suppliers and trade associates.

ABC offers contractors the most comprehensive array of services available in the construction industry today. Throughout the country, ABC is an effective force in business development, education, labour and industry relations. Training programmes are offered for various construction trades, enabling companies to further career opportunities and training for employees. ABC’s instruction programme, Wheels of Learning, approved by the United States Department of Labor, includes 16 separate crafts.

The Association and CTC have formed a business-education partnership to provide CTC students the opportunity to complete a Technical Center course with one year of apprenticeship training. In this partnership agreement, the first of its kind in Virginia, all aspects of the planning, design and structuring of the programme are being produced locally by the Associated Builders and Contractors and the Chesterfield Technical Center teachers and administration. The Association will provide already developed apprenticeship course training guides for the first year of training. The Association will train CTC teachers, ensuring reinforcement and practice of targeted skills for students in the courses. In addition to trade-specific training, the students will receive instruction in the workplace skills targeted by Project Awareness: computer usage, technical writing, communications, teaming, critical thinking, problem-solving, and decision-making.

Chesterfield Technical Center students, as a result of the partnership, will receive a one-year state credit toward an apprenticeship for related instruction during the first year. Those students who maintain 80 per cent proficiency throughout the first year of integrated training will have the opportunity to be placed with a member company for the following year. Hours worked during that second year will then be credited as work experience toward a completed apprenticeship. Unlike co-operative education, this programme provides intensive training jointly designed, delivered and monitored by a teacher-trainer team and certified by the state of Virginia.

Association members will work together in identifying appropriate employment sites for qualifying CTC students, providing on-going supervision along with CTC teachers, and developing the programme as it evolves. The Association’s involvement with Chesterfield Technical Center students in such a programme promotes full-time employment with member companies for students who successfully meet the requirements of both years.

Plans for this business-education partnership programme target three construction trades: carpentry, electricity, and plumbing. During 1994-95, CTC teachers will be working closely with Association members and trainers as the content curriculum for each construction trade involved is restructured. Such a restructuring is essential to complete the first year of the apprenticeship programme and to prepare the students for their future apprenticeship training.

Other areas of the partnership include the opportunity for Associated Builders and Contractors to provide training on Chesterfield County Public Schools’ sites and the possible allocation of resources toward upgrading CTC training equipment. The Associated Builders and Contractors will provide expertise, time, equipment, teaching personnel, and co-ordinated site supervision. Students will have an exceptional
opportunity for advancement toward a journeyman’s license. CTC teachers will benefit from the ABC training and the input from local contractors. The partnership demonstrates the following benefits of business-education co-operation:

-- shared training;
-- personal growth in the industry through additional training in supervision and management;
-- a mutual concern about the future workforce;
-- utilisation of materials, expertise, and manpower to offer excellent training and ensure a quality workforce for the county’s future;
-- a model for replication of the project;
-- successful employment of Chesterfield County students following completion of the two-year instruction programme.

This partnership is designed to be the future model of school-to-work transition for all courses at the Technical Center.

**Promotion -- media partnership**

Research indicates that the employee of the future will need, in addition to skills associated with Project Awareness, an extensive technical background. The problem in the United States is that technical education is perceived by the general public to be less valuable than a liberal arts university or college degree. The graduation rate from college and universities in the United States is less than 25 per cent. Additionally, young adult liberal arts college graduates constitute one of the largest unemployed groups in the country.

Perceptions can be changed and to this end a partnership was formed in 1990 with the media (National Broadcasting Co., local NBC affiliate Channel 12). The partnership focused on developing a television commercial about the Technical Center and the value of secondary technical education. To support the project, local business and industry were contacted with a proposal which would include their business logo in the advertisement. NBC Channel 12 also agreed to match any advertising time purchased by business and industry. The school was responsible for the production of the video.

The media campaign was received very positively by the business community. A total of $US8 000 was provided for the purchase of advertising time and matched at no cost by Channel 12. For four weeks in February and March of 1991 the advertisement was aired on local television. The response was so favourable that the campaign is held annually to this day. A second video was produced in 1992. Both videos received *The National School Public Relations Association Award of Excellence*. 

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Future implications for partnership -- human resource development

The Technical Center, in conjunction with local post-secondary education institutions, is pursuing the area of contract and customised programmes for employee training and development. Corporate America spends $US200 billion a year on the training and retraining of its workforce and at least $US35 billion on remedial training. The Technical Center is currently working on new and creative approaches in training adults for employment. As American business and industry continue to downsize and restructure their organisations, employees are required to assume additional responsibilities and to make more management decisions. A significant need for the integration of technology into the workplace has been created. The needs of small business in this respect are especially high and consequently, small business appears to be a market with great potential. A future goal of the Technical Center is to tailor training for specific business and industry needs especially as it relates to technology applications.
STRUCTURAL AND ORGANISATIONAL ARRANGEMENTS
OF VOCATIONAL EDUCATION AND TRAINING
IN RESPONSE TO THE CHANGING NEEDS OF THE LABOUR MARKET

Peter Grootings

Introduction

In many central and eastern European countries (CEECs), attempts to introduce changes in the education systems go back long before 1989. As a matter of fact, changes have been on the agenda of educational decision-makers since the beginning of the 1960s. Due to worsening economic conditions, on the one hand, and the weak bargaining positions of Ministries of Education on the other, none of the long-wished changes has, however, ever been implemented. Consequently, as a result of failure to introduce the necessary modernisation, the overall situation in education has steadily worsened. This has been especially true for secondary education, both vocational and general.

With the final collapse of their economic and political systems, CEECs have been faced since 1989 with a double challenge: to initiate this long overdue modernisation and to introduce reforms in their education system to bring it in line with the new economic and political realities. This double challenge had to be met at a time of severe economic crisis during which, again, educational change was not high on the priority list of politicians and business people. A major part of the financing of educational change has come from bi-lateral and international assistance programmes, the latter being either European Commission (EC) PHARE grants, or from funds borrowed from the World Bank. This has been attended by considerable influence on the part of donors on both the design of new education structures and the process instituted to achieve these.

This paper suggests that a more systematic analysis of reform needs is required if the CEECs wish to develop education systems which can be of use in the future. More particularly, it argues that a distinction should be made between three different aspects of educational reform: modernisation, structural reform, and systemic reform, each of which having its own strategic value, time horizon and each having a bearing on the role of foreign assistance.

The paper also suggests that an analysis of debates on educational reform in most CEECs shows that many of the actors in this issue tend to concentrate on aspects of modernisation and structural reform and that there is as yet only little awareness of the need for systemic reform. While systemic reform is probably the most difficult to accomplish, since it concerns fundamental aspects of education systems as a whole, it is also the most urgent. It makes sense, therefore, to design the process of educational change as a learning process for all actors involved, rather than as a top-down introduction of new education models or, even worse, the quick introduction of models borrowed from abroad.
Modernisation and reform of vocational education and training (VET)

What should be understood, in the context of this report, by modernisation, structural reform and systemic reform?

**Modernisation** refers to policies aimed at updating contents and delivery systems in vocational education and training to levels reached elsewhere, and as required by the employment system. This especially concerns curricula, school equipment, teacher qualifications (both professional and managerial), educational approaches, definition of educational profiles, occupational standards and relevant assessment, testing and certification procedures.

**Structural reform** refers to policies aimed at changing the internal structure and decision-making mechanisms of the education system. This particularly concerns the structure of qualifications, schools, streams and flows of students, relations between types and levels of education, possibilities of transferring from one type of education to another, etc. It also concerns the shift from input to output control and the accompanying decentralisation of decision-making within the educational system.

**Systemic reform**, then, refers to policies aimed at adapting vocational education and training to the requirements of a changing socio-economic system. This concerns the "inner logic" of the education system, and more particularly its relationship with the employment system. In the case of the CEECs, this concerns the need to change vocational education, presently based on a logic of guaranteed and stable employment, to one designed to cope with insecure and unstable employment mediated by labour markets. Systemic reform implies organisational and institutional changes, especially with regard to establishing efficient communication between the education and the employment systems. However, it also goes beyond these, requiring as well basic changes in people’s expectations, attitudes and learned behaviour.

While the issues related to systemic reform are particular to the so-called transition countries of Eastern Europe, modernisation and structural reform can be witnessed in VET systems of West European countries as well. As a matter of fact, an increased policy attention to the modernisation and structural reform of vocational education and training has been observed over the last fifteen years in many OECD countries, a consequence of dramatic changes in employment systems on the one hand, and, on the other, of sometimes drastic cuts in public expenditures for education. As a result, policies to increase the internal efficiency and external effectiveness of vocational education have been developed, be it with different levels of success. Thus, while in OECD countries policies have been developed within societies that were already characterised -- although in varying degrees -- by a market-economy orientation, many CEECs, such as Slovenia, are faced with the challenge of combining an increased need for the modernisation and structural reform of their education systems with a simultaneous systemic reform of the underlying logic of their VET systems.

It is clear that, in practice, the different aspects of modernisation and reform are very much interrelated. In many OECD countries, for example, the perceived need to continuously update curricula has led to increased decentralisation of responsibilities, to a change in the roles of teachers, who are no longer simply providers of education but developers as well, and -- more generally -- to a change from so-called "input control" (control of curricula contents and teaching materials) towards "output control" (quality control of the results of education). This in turn has necessitated the development of generally accepted standards for qualifications, the inclusion of social partners in setting such standards in order to secure their recognition on the labour market, and has further increased freedom (and competencies) for schools and teachers to organise the provision of vocational education.
In many countries, this has also led to discussions about changes in educational structures, such as a growing importance given to forms of alternating training (combination of theoretical and practical training), with the aim of making vocational education and training more effective and increasing its relevance. In order to raise the general attractiveness of vocational education for young people, many countries have also improved the possibilities for educational mobility, and, in particular, access to further studies. Several countries first opened up their higher education systems and subsequently introduced non-academic forms of higher education.

Since the various elements of modernisation and reform are so much interrelated, an overall policy approach is called for also in Slovenia. It should of course be pointed out that the modernisation (by definition) and the structural reform of vocational education systems in OECD countries, firstly, have yet to be finalised and secondly, have followed different paths and directions, due to differences in the starting points of VET systems in each country. Both these observations have important implications about what foreign experience -- for example, through technical assistance -- can offer to educational change policies in other countries:

-- With regard to modernisation, access to, and organisation of a certain transfer of "best practice" can be provided by countries which have already undergone modernisation over a longer period.

-- With regard to structural reform, the lessons and experiences made elsewhere, both in terms of results and in that of the management of change processes can be contributed. However, the final evolution of the structure of vocational education and training will remain, and has to remain the choice of Slovenia.

-- In terms of systemic reform, foreign technical assistance will have to basically be oriented at "coaching" the principal actors involved in vocational education in the development of the institutions, attitudes and modes of behaviour necessary to cope with a climate of insecure and unstable employment. The main contribution will be to provide confrontations with "best" or simply "other" practices, through exchanges of experience between actors from different countries.

-- Most importantly, however, foreign assistance will have to ensure that the above are not treated as isolated activities but form part of overall and integrated modernisation and reform strategies.

Experience from many countries has shown that curriculum change is one of the most strategic areas for educational modernisation and reform and that a "bottom-up" approach through pilot schools provides the best opportunities for the transfer of knowledge and for organised learning to take place; this, provided that wider dissemination of outcomes can be secured and if a link with strategic policy-making can be established. Modernisation of curricula within pilot schools offers opportunities to develop, at the local level, new relationships between schools and the labour market and its institutions. It should not be forgotten that it is not only educational institutions, such as schools and school inspectorates, which have to learn to cope with new situations, but that this is equally true of labour-market institutions, such as labour offices and enterprises.

In short, foreign experience from OECD countries, can best be used through a combination of transfer of knowledge and experience, on the one hand, and the organisation of a learning process, on the
other. This has nothing to do, therefore, with the implementation of ready-made models of vocational education and training.

The debate about educational change: old habits or new clothes?

It has been argued very often, that although, officially, it is recognised existing education systems in Central and Eastern Europe are antiquated and should be radically changed, in practice, only a few people are really interested in any change at all and those changes which are wished for are rather limited compared to what is really required. Those presently advocating educational change are the same who have been recommending it for more than 30 years already: teachers, administrators and policy makers, that is to say, all insiders to their education system. For them, now is the opportunity to finally realise their long frustrated call for change.

Their claims are fairly well known: there is a much too large proportion of primary school leavers entering basic vocational education schools; vocational education is too narrow and much too orientated at traditional industrial occupations; too few students complete full secondary education; too few students enter higher education; resources for education (textbooks, materials, equipment, teachers’ qualifications) are poor and do not provide sufficient quality. These claims can easily be illustrated with run-down school buildings, outdated textbooks, low salaries for teaching staff, absence of computers and other modern teaching equipment, traditional knowledge-oriented learning strategies, an academically-trained and highly feminised teacher corps, etc. As mentioned earlier, the present state of education systems in most -- if not all -- of the CEECs is the result of failed attempts at modernising and reorganising education in the early 1960s.

The structures and contents of education in the late 1980s reflected an educational system designed to play a major role in building a socialist society during the 1950s. When the phase of so-called "extensive" industrialisation came to an end, a complex mixture of political resistance, the weak bargaining positions of educational actors, and the lack of financial resources were the causes that adaptation of educational structures and contents could not be achieved, although it was advocated by many educationalists. As a result, education lost much of its innovative and pro-active power and failed to contribute to the modernisation of the economy. Enterprises, being stagnant themselves, learned how to make best use of what the education system produced and stopped pushing for modernisation.

It is against this background also that the wide gap developed between stagnating vocational secondary education for the masses and some centres of academic excellence for the few. The latter always were orientated towards knowledge of a very theoretical nature and had little relation with the productive system, apart, of course, from the military-industrial complex.

This situation forms the basis for the "calls for modernisation" and such claims normally define the major obstacle as the lack of financial resources. A lot has been done in this respect already over the past few years. With assistance from bi-lateral and international funds (EC and World Bank), a beginning has been made to cure some of the problems: curricula and other resources are being modernised; full secondary vocational and general education are being expanded; access to university education is expanding as well, combined -- in some countries -- with an attempt to set up a new type of higher vocational, non-university education. Higher education is gradually becoming internationalised.
The main driving force for change among most educationalists at the moment is that numbers of students in full secondary and higher education should become comparable with numbers reached in Western countries. The underlying assumption is, of course, that it is what will be required by the employment system. One of the implications of these policies is that the number of students entering basic vocational schools (into which, in some countries, between 50 and 60 per cent of all primary school-leavers used to be channelled) are being reduced radically. However, the impression prevails that this is rather the result of attempts to increase numbers in full secondary education than the result of a conscious policy directed at improving basic vocational education itself. As a consequence, basic vocational education risks becoming a wastebasket-type of education for all who do not manage to enter secondary education. Sometimes, it is even suggested that this form of education will be faded out completely.

From the experiences in many OECD countries, it is well known that the medium and long-term implications of a one-sided policy towards higher education are not always positive. The employment systems of the future will continue to require mixtures of qualification levels. Indeed, most of the latter countries have invested considerably in improving structures and provision for basic vocational education.

Developments in OECD countries demonstrate that there are different conceptions as to the desired architecture (or structure) of the educational system being implemented. Simplifying matters a little, what can be discerned is a typical Anglo-Saxon approach, aiming at establishing secondary general education -- eventually with broad-based vocational preparation -- to be followed by vocational specialisation and training inside enterprises. This view is very much propagated by the World Bank, and PHARE programmes have sometimes tried to prepare larger World Bank programmes or have been used as a substitute financing mechanism for vocational education. Another approach which can also be found is a more continental European one, advocating modernised forms of basic vocational education with transparent transition possibilities to higher -- not necessarily academic -- education. This concept also assumes a greater role for schools in vocational preparation, at least during a transition period where enterprises do not show any interest in contributing to vocational education and training.

There is a third option, which claims that the architecture of the education system should be kept as open as possible during the transition period, in view of the many uncertainties regarding the development of the employment system. This option takes into account that the situation in most CEECs is characterised by the absence of a developed employment system and labour market institutions. Proponents of this view therefore argue that this is not the moment to focus on the overall structure of education, but that what is needed is a pragmatic and flexible approach using educational resources to develop or to respond to local employment development initiatives. It is suggested also that the prime focus should rather be on developing modern forms of adult education rather than to attempt now to fundamentally change initial forms of education. Experiences made with innovation of adult education -- which is by nature much more open and flexible -- could then gradually be brought into the formal initial education system. In order to avoid that such local developments become too diversified, there should be close monitoring and guidance, and a constant feedback with national policy-making. Important in this approach is that a local training cum employment infrastructure be developed and not simply a particular type of school.

Educational authorities have great difficulties in defining their own clear policy objectives. They are understandably caught between the urgent need for modernisation and the implicit policy objectives of donors and donor institutions, since these are the ones who presently provide necessary financial resources. Modernisation has been requested by educationalists for years and there is an almost natural alliance between educationalists and donors at this level. A second drive is the attempt to "become more alike"
Western countries. This is being seen as the best guarantee that education will develop in the direction of what will be needed by the employment system, once the latter has come to full development. The question, however, is what this exactly means.

**Vocational education and the labour market**

Vocational education does not operate in a vacuum and it never did so in a socialist economy. However, the relationship between educational and economic institutions was a particular one, and was largely -- if not exclusively -- based on political and administrative principles. The system had its own logic. There was strict input control over schools, but students had guaranteed access to employment. Most schools educated young labour for specific enterprises and relations between schools and enterprises were well developed, although of a particular nature.

Enterprises did not treat labour as a cost factor but as a scarce good. Part of the education was organised inside the enterprise, but in practice this was more characterised by becoming acquainted to work in entry-level employment rather than practical training. Enterprises themselves were organised along the principle of extreme division of labour and the narrow profiles provided by vocational schools fitted well in this structure. There was little external mobility and the particular work organisation offered workers a possibility to develop into experienced and valuable workers for their individual enterprise. Work experience and the ability to cope with recurrent production problems caused by scarcity of resources, rather than initial training, determined the position of the workforce. Political criteria were very important for careers.

Practically all the above elements have lost their value as soon as labour became a cost factor itself and enterprises had to compete for quality and cost on an open market. Employment guarantees disappeared and schools suddenly had to educate for an anonymous and uncertain labour market. Traditional links between schools and enterprises collapsed. Crisis-ridden firms lost their interest in financing vocational education as soon as they lost their soft budgets from their ministries and had to stand on their own feet. Vocational profiles proved outdated and of hardly any use to firms looking for new market opportunities. Clear guidelines as to alternatives were not available. Some urgently needed commercial qualifications were not provided by schools at all. Teachers had their own problems understanding what was going on. The role and status of vocational education and schools changed completely: a new logic was in place, but there was no experience to deal with it.

As opposed to much of what has been called modernisation and structural reform issues, the above systemic issues do not refer to internals of the school system, but primarily to the relations between the school as an institution and its environment of labour markets and employment system. The main problem, of course, is that the employment system itself is undergoing structural and systemic changes. The administratively regulated relations between schools and enterprises have been broken up and no alternative links of a more substantial nature have as yet been put into place. Neither have educational actors been able to develop alternative forms of behaviour and action. Nor do most actors from the business community see any priority need for involvement in vocational education.

A successful reform of both the VET and the employment system can only be achieved when Central and East European societies recapture the value given to education and training. Concretely, this means that individual investments in education -- in terms of time and money -- will have to be reflected in occupational positions, and in income and salary levels. This is true for the privately organised sector.
of the economy, as well as for the state-organised sector of public services, including education itself. Obviously, this will imply a fundamental reversion of developments which occurred over the last 40 years.

Western countries have also made the experience that higher levels of education invoke dissatisfaction with traditional forms of work organisation and contents of work: people want to be able to make use of the qualifications and skills achieved. This again shows that simply increasing the levels of education further is no solution for current education and employment problems.

The reform of vocational education and training can only be achieved in relation to that of the employment system. However, most individual enterprises believe that they do not need vocational education institutions for their own reforms. In the short run, therefore, and this is completely different from the situation in OECD countries, schools are faced with the difficult challenge of taking first steps towards establishing new relationships with enterprises.

Relationships between education and work have become extremely complex in modern societies and these relationships can no longer be institutionalised through strictly separated and static systems of education and employment, as used to be the case in many Western countries; nor can their complexity be denied through an administrative system of formal one-sided dependencies, as used to be the case in the CEECs. The development of continuous mutual communication and adaptation between education and employment has become crucial.

The point to be made here, in a situation where the employment system is undergoing fundamental changes, both in its structure and in the way it is functioning, is whether there is any sense about trying to design an overall architecture for the educational system, covering its internal structure as well as its external relationships with the employment system. Would it not be more advisable to give schools and enterprises the time to adjust to each other under the new circumstances? However, will this adjustment develop spontaneously, for example, through the working of market forces, or does this process need some guidance and coaching from outside? Moreover, are the perspectives really completely open, or are there already some indications about basic principles of modern education, for example, from experiences gained from the educational reforms of the past ten years in OECD countries?

Educational change as a collective learning process

Nobody will, at this point of time, be able to present a detailed blueprint of how vocational education and training systems will have to look like, nor to give detailed and precise instructions as to how to achieve their successful evolution. It is possible, however, on the basis of experiences made elsewhere in Europe, to indicate the core issues which have to be addressed in order for vocational education and training to be able to cope with their future tasks. This may be disappointing for those policy makers who expect definite proposals and clear examples which will immediately lead to predictable success. It is necessary to be frank and open, however, and underline that, apart from a number of recommendations concerning changes in vocational education which have been put forward for a long time already by many experts, immediate solutions for the more basic problems are not readily available. A change in the "logic" of the system can only be realised gradually by those who are involved in vocational education and training themselves, especially at the local level. Like any learning process, however, this particular process will not develop spontaneously and needs to be facilitated and intensified through proper intervention and guidance.
The reform of vocational education systems should be seen as a process-in-time and not as a single policy act. While, in the case of the latter, institutional reform would do, the position underlined here has almost opposite implications. It means above all, that a "final" architecture remains largely open for a considerable time, and that educational systems most probably will be characterised by the "living together" of different organisational solutions. At different moments and in different places different problems will occur, for which -- in the short term -- different resources will be available.

Reform of vocational education and training systems -- both structural and systemic -- will have to start from presently available resources and with full involvement of existing local actors. Realistically speaking -- aside from the absence of any comprehensive reform concept -- neither the vast financial means nor the human resources needed to develop and implement a fundamental reform are available at this point in time. On the other hand, initiatives, resources and capacities present at the local level (including those supported by foreign assistance) are not fully or not efficiently used. One reason for this may exactly be the desire to find a quick overall reform which avoids to look at and monitor carefully what is developing on-site.

However, not only uncertainty about the future and lack of basic resources make it unwise to set all hopes on a grand reform. It seems especially important, after a long period of central regulation and bureaucratic administration, to depart from a traditional "top-down" conception of reform. Instead, the guiding principle should be to improve and promote self-responsibility and self-initiative on the part of local actors. Observers have noted the "learned helplessness" among local actors and their widespread waiting for guidelines and directions from "above" during the initial stages of the process. Even in cases where initiatives have been developed, the chances of success are frequently hampered by the lack of supporting infrastructures. It is an illusion to believe that local initiatives in modernisation and reform can be achieved by relying only on the operation of the spontaneous forces of the market. A "bottom-up" strategy asks for well designed and planned projects within an overall framework, for the realisation of which public support is needed, in terms of finances as well as in terms of professional advice and co-ordination.

In discussions about the future challenges to vocational education and training in OECD countries, some directions and tendencies have gradually become accepted. These developments will undoubtedly become also relevant for countries in Central and Eastern Europe. However, how and under which conditions these tendencies are -- or can be -- adapted and implemented can only be worked out during the practice of the modernisation and reform process. No definite time schedules or deadlines can be given.

This does not mean that vocational education has to take a passive stand and wait until things are clearer. On the contrary, one of the major lessons of the past 20 years from OECD countries shows that educational institutions can indeed play a very active role in social and economic development, both by making people capable to take employment initiatives and by simply creating demand for qualifications that previously were not available. Vocational education is not only an agent providing for (new) technical and economical skills and qualifications, but it also transmits and develops individual aspirations and types of social behaviour.

In times of radical economic and technological change vocational education and training systems are confronted with the problem of how to develop practice-oriented education in the absence of clear points of reference and with uncertain future employment perspectives. The only way to deal with such situations of uncertainty, is firstly to bring vocational education closer to the existing reality of enterprises and regional labour markets, and secondly to secure that in the training programmes and training methods
sufficient attention is being given to developing skills -- both technical and social -- which enable people to cope with uncertainty.

This would mean, first of all, that instead of the traditional practical work periods (which have been largely characterised by the execution of simple work tasks), a real participation of enterprises in practical learning has to be developed. Practical work has to be changed into practical learning. Following the trends and experiences from Western countries, the long-term aim should be to achieve an "integrated dualism", where vocational schools function as the site of general and technical theoretical education, and enterprises as the site of practical vocational training, and where theoretical subjects and practical exercises are well integrated.

One of the conditions would be to have available, inside the enterprise, professional trainers with sufficient pedagogical skills. Where enterprises are not, or not yet, in a position to play such a role in vocational education, or where there are not enough enterprises with training capacities -- such as in rural areas -- Regional Training Centres could be established to cater for various kinds of practical training.

In order not to limit the occupational mobility of students and trainees to the local or enterprise-specific labour market, educational programmes and curricula should be developed according to the principle of "progressive specialisation". This would mean that in the first phase of education, basic knowledge and skills (technical, professional and social) of a more general nature are to be transmitted at the level of broad occupational areas such as "engineering", "construction", "electro-technics", "commerce and trade", etc. The second phase would aim at a first specialisation at the level of related occupations. Only in a third phase would the special skills and qualifications for a specific occupation (which should not be defined too narrowly and at a too low level) be developed with a major share of practical learning. The principle of "progressive specialisation" is relatively independent from the overall organisation of the learning process, i.e. whether this is school or enterprise-based, or whether this is structured more traditionally on an annual basis, or according to modules.

Such a broadly designed vocational education takes into account that vocational education cannot serve any longer for lifelong employment in one single job, but has to provide the necessary foundations for both occupational activity and continuous education and training. Initial vocational education is no longer final education but only the first phase of a continuous lifelong learning process.

Especially during the transition period, there will be a tremendous additional need for retraining the existing workforce. The great efforts needed to develop within a short period of time a well functioning system of retraining offer good chances for the simultaneous development of both initial vocational education and further education. The market seems to react at present mainly to the needs for management training and business services; the equally high need for the retraining of the unemployed and of those who are living and working in crisis regions requires the provision of public support. Regional Training Centres would provide the opportunity to very quickly realise new forms and contents of training. Experiences made in retraining, and with the developing regional labour market could easily enter into programmes for initial education. As much as possible such Regional Training Centres should therefore be multi-occupational, accessible to all vocational institutions from the region (including the schools which have no other access to practical training places) and make use of existing facilities and resources (including teaching staff). It may even be possible to physically locate Regional Training Centres on the premises of existing schools.
Besides the renewal of educational contents, methods and forms of education and training play a crucial role in the achievement of modern vocational skills. For trainees to learn such elementary skills as to be able to act independently, to communicate, and co-operate with others, they necessarily have to be involved actively in the educational process. This means a fundamental departure from traditional classroom and teacher-centred forms of education. Many forms of such active learning have already been developed, such as project work, group learning, simulation games, etc. However, and this should not be forgotten, these new methods of education presuppose new roles for teachers and trainers. Teachers and trainers cease to be the vocational and technical experts of encyclopedic knowledge or practical skills and become rather competent organisers of experience and learning processes. The learning process can be further supported by the interactive use of new media. Undoubtedly, this will have implications for the training and recruitment of teaching staff.

Organisation of vocational education and training: local flexibility and national standards

Besides contents of educational programmes (practice-orientated and based on progressive specialisation) and methods of education (aimed at the promotion of new technical and social skills), the problem of recognition of educational qualifications has to be solved in a new way. The traditional approach has tried to exert central control on the quality of education through curricula programmes and contents and has resulted in the contradictory situation where bureaucratic administration and inflexibility concerning "input" go together with a wide diversity of "output" quality levels across the country.

Instead, and following the recent experiences of several Western countries, a national framework for occupational standards and qualifications could be elaborated by educational authorities in close co-operation with the social partners. Provision of education and training (including definition of curricula contents) can be flexible and locally determined, but within a nationally agreed framework of qualification requirements. Examinations or tests lead to nationally -- and eventually internationally -- recognised qualifications. The system is to be valid for initial and further education and training and should also provide the quality standards for retraining programmes.

An additional advantage of a system of national standards is that its elaboration has to involve more than just the representatives from the education system. In most OECD countries, industry and trade unions, representing the principal "users" of educational programmes, discuss and elaborate basic occupational profiles which then form the basis for national qualification standards. The latter can be translated -- in different ways and with the assistance of education professionals -- into educational and training programmes. The role of national education authorities is to ensure that standards are consistent -- nationally and internationally -- and that mobility between different types and levels of education is secured. Education authorities can make use of the large number of experiences already made with such forms of organisation of vocational education, both at national and international level. However, it is not the system as such which is primarily of importance, but rather the joint attempt to achieve such a system. Various bodies have to be established and a constant communication has to be organised among all involved. It is this process of mobilising different actors around key issues which is important and not so much the introduction of a system of qualification standards, as developed elsewhere.

One additional note of caution should be made against the temptation to simply imitate one of these existing systems. Contrary to what developers of such national systems may occasionally want to convey, experience with the development of a European system of qualifications has shown that these national frameworks indeed reflect national systems of occupational qualifications, which differ considerably
from one to the other. It should also be pointed out that the development of national standards requires a huge amount of work, implying major investments and the availability of a professional research and evaluation infrastructure. However, the challenge of developing national standards may be used to restore such research capabilities and a lot can be learned from others who have gone through the exercise already.

**Conclusion**

This report is voluntarily devoid of concrete examples concerning structural and organisational arrangements of vocational education and training in response to the requirements of the labour market. This is not due to the absence of such examples or, indeed, through ignorance of their existence. On the contrary, each individual OECD country has its own arrangements, developed in response to its own particularities. Involvement in comparative research in this area, as well as in implementing modernisation and reform in vocational education systems in several CEECs, quickly brings to light the country-specificity of all these arrangements and thus, the difficulty -- if not impossibility -- of their transfer to other countries.

On the other hand, most of the reform discussions in Central and Eastern Europe are very restricted and focus almost exclusively on what this report describes as the modernisation and reform of educational structures. The challenge, however, lies in linking these necessary elements to a gradual change in the logic of the functioning of vocational education in society at large. This is what is meant herein by "systemic reform"; this paper points out the need to establish a new communication between the education system and the employment system (itself undergoing systemic reform) as a sine-qua-non for the success of any modernisation. Since a change in logic goes much beyond the creation of institutions or organisations and, indeed, also implies changes in people’s thinking and behaviour patterns, systemic reform can only take place as a learning process and cannot be implemented by law. It is for this reason that a particular reform strategy is advocated here, which makes use of experiences made elsewhere in the world without uncritically copying these.
BREAKING THE TRADITIONAL MOULD IN HIGHER EDUCATION:
NON-FORMAL EDUCATIONAL STRATEGIES AND MODELS

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Introduction

The traditional image of a British university is one of dreaming spires, blossomed College gardens and sherry on the lawn. There is no doubt that the British Oxbridge model of higher education has been successful and has become world famous for the excellence of its graduates and research. Nevertheless, it is a deeply flawed model for the start of the new millennium, since it is based, not on the need for mass education, but on a form of elitism. This statement must be mitigated immediately in that Oxford and Cambridge, during the second half of this century, have attempted to shift the rules of their entry from a class or wealth-ridden selectivity to one of intellectual excellence and in this they can rightly take some pride. Nevertheless, of the students entering Oxford in 1992, 46.6 per cent were from independent schools and 43.7 per cent from state schools. At Cambridge in 1993, the admission figures were similar: 45 per cent from independent schools, 45 per cent from state schools. Those statistics apart, Oxbridge’s first-year entrance is nevertheless small, only totalling 3 157 in 1992 at Oxford, and 3 068 in 1994 at Cambridge, in the context of an education participation rate in the United Kingdom which has risen from 13 per cent of 18 year-olds in 1984 to 30 per cent in 1994.

In the ten years between 1981 and 1991, there was actually an increase of 52 per cent in the student population in higher education institutions in the United Kingdom (from 831 500 in 1981 to 1 297 900 in 1991). This massive increase in university education raises pedagogic issues for most universities outside Oxford or Cambridge. For Oxbridge, however, the lecture, seminar, tutorial method of support for the student, who "reads" for his or her degree, remains as it has been for many years. Outside its portals, the Oxbridge tradition of university teaching and structure cannot cope financially and educationally with the vast increase in numbers entering higher education, as required for the economic progress of the country. As the former Warden of Keble College, Sir Christopher Ball, notes, Oxford’s College system and tutorial teaching:

"...in today’s conditions are more appropriate to the taught master’s programmes than basic undergraduate education. In combination, they represent so expensive a model of education that they have proved non transferable and cannot survive long in their present form."

The following report is intended to demonstrate, using De Montfort University as a model, how a modern university develops its programmes and its mission to meet with the demands made upon it by government and society to provide professional higher education learning and training for a large number of students. Some brief observations need to be made about the historical development of universities in Europe and their original intrinsic link with professional development and training, before the following topics are addressed:
In examining these areas a model for education provision will be described. This, it is believed, is one which is responsive to the needs of the economic development of its society and which provides a wide accessibility for students in various age groups.

**Historical development**

The concept of university education in Western Europe grew out of the origins of capitalism in the Middle Ages and the early Renaissance. The competing Italian City States, with their economies strong on the development of trade, recognised that a trained professional workforce was required for the success of society. A moral and legal framework, an artistic culture and even a form of learning called the "studia humanitatis" were fundamental to the economic well-being of Italian cities such as Venice, Florence or Milan. As Paul Kristeller, for example, has demonstrated, rhetoric, the professional practice of speaking and writing, was at the heart of the development of university education. Even the Humanities, which originally concentrated on such aspects, began life therefore as a vocational discipline:

"In medieval Italy, this profession (of rhetorical teaching) was strongly represented from the late eleventh century by the so-called dictators who taught and practised, on the basis of text books and models the eminently practical art of composing documents, letters and public speeches ... the humanists of the Renaissance were the professional successors of the medieval Italian dictators and inherited from them the various patterns of epistolography and public oratory, all more or less determined by the customs and practical needs of later medieval society. Yet the medieval dictators were no classical scholars and used no classical models for their composition. It was the novel contribution of the humanists to add the firm belief that, in order to write and to speak well, it was necessary to study and imitate the ancients. Thus, we can understand, why classical studies in the Renaissance were rarely, if ever, separated from the literary and practical aim of the rhetorician to write and speak well. The achievements of a given nation or period in particular branches of culture depend, not only on individual talents, but also on the available professional channels and tasks into which these talents can be drawn and for which they are trained." 4

Thus, according to Kristeller, the Renaissance University, even in an area now not considered to be vocational as such, was founded on the practical and professional needs of the community. The differentiation which tends to be made between the "academic" and the "vocational" would have been anathema to this civilisation. The British system of university education, which first developed in the wake of the Italian, has traditionally been concerned, however, with a marked differentiation between the academic and the practical. Within the class-rooted culture of the British psyche, there has been a tendency to consider universities as a place for academic, non-vocational studies. Where professional training has been undertaken, it has been done only in professions of a particular respectability -- medicine, law, engineering. Doctors would be educated at the university, but nurses would be trained in hospitals. Barristers would have come from Oxbridge, but solicitors would have taken articles through a local firm. This differentiation has been near the heart of a class-rooted educational culture. Slowly, over the twentieth
century (following the founding of the civic universities -- Birmingham, Liverpool, Leeds, Manchester -- at the end of the nineteenth century) such divisions have blurred but, nevertheless, the notion of class has remained within the British system and can still be seen to a significantly large extent at the present time.

During the mid-twentieth century the potential workforce -- those undertaking the majority of "low level" engineering and technical jobs -- were mainly "trained" at local technical colleges, now called Colleges of Further Education. To a certain extent they still are. Leaving school at fifteen, students would enter these colleges to take vocational training programmes, often in the context of apprenticeship schemes funded by the business where they were engaged. Yet, the advent of the microchip revolution in the latter part of this century has gradually eroded the easy distinction between the academic and the technician. Modern technology has insisted on an highly educated workforce, equipped to deal with a range of computing sciences and with a knowledge of business practice.

In the United Kingdom, some technical colleges became colleges of advanced technology in the late fifties, early sixties, and subsequently Polytechnics, first designated in 1968 and offering, through a central validation agency, the Council of National Academic Awards, high-level diplomas or degree programmes in vocationally orientated disciplines. The success of the Polytechnics in Engineering, Computing, Business, Design and Professional Law, was such that they grew in maturity and found themselves developing also faculties in the Humanities and the Arts, as well as in Education. In 1992, the Polytechnics became Britain’s new universities and a challenge was laid down to the nation’s traditional concept of university education. Would the new universities merely ape the old and attempt in essence to maintain the class system or would they break the mould and develop something new for the demands of society, thus influencing the old universities also to change in some measure?

The development of a new university and its partnership with further education: "the seamless robe"

It is still at that critical point which British higher education finds itself in the mid-1990s. De Montfort University is one of these new universities. It was described in 1992 by an executive from the World Bank as "the fastest growing university in Western Europe". Its growth pattern, by any standards, has been great. As the following chart (Figure 1) demonstrates, it has more than doubled its size between 1982 and 1995.

Figure 1. Student enrolment, 1982-97
The distribution of growth at De Montfort University shows a significant rise in female full-time students, but not an insignificant one in male full-time or male sandwich students. A further distribution chart (Figure 2) demonstrates, however, an almost 30 per cent participation rate of female students. This reflects social patterns in the late twentieth century which have encouraged women into education and into work. Indeed, the British economy is now significantly dependent on female participation in the workplace.

Figure 2. Student distribution by gender and mode, 1993-94

The distribution by subject (Figure 3) shows that of the 13 academic schools, the Business School is the largest single grouping of students, either full-time or part-time but that the School of Arts and Humanities and the School of Humanities, Sport and Education together are actually larger, accounting for nearly 5,500 students located at two sites, Leicester in the centre of eastern England and Bedford, fifty miles to the south. Computing Science is seen to be popular, as is a Combined Studies School, which provides opportunities for students across Science, Business, Law, Health and Community Studies and Computing Science. This School tends to equal out imbalances to provide a stable distribution of students across the institution.

Figure 3. De Montfort University students, 1994-95

HE/FT: Higher Education/full-time
HE/PT: Higher Education/part-time
FE/FT: Further Education/full-time
FE/PT: Further Education/part-time
By the end of the century, De Montfort University will have in excess of 30,000 students, but by European standards this is not necessarily huge. In 1994, the University of Frankfurt had around 40,000 and the University of Granada, 55,000 students. Participation rates in the United Kingdom have, until recently, lagged notably behind those in the United States, Canada and the country’s European partners. More particularly, the concept of the need for an educated workforce has been slow to develop in Britain. Hermann Schmidt and Laszlo Alex, for example, in a report for the Hamlyn Foundation state that in Germany:

"The growth in participation in education and training for each generation has brought about a considerable improvement in the structure of qualifications and competence among the working population. Those holding vocational or professional qualifications have grown from 65 per cent to over 80 per cent in the last fifteen years. By 2010 this percentage is expected to be 90 per cent of the working population."7

This has been achieved through a dual system of further education, whereby the Berufsschulen, or further education colleges, "work in tandem with companies to produce three-year programmes of vocational education and training". These colleges are expected to "be at the forefront of new developments in technology, personnel organisation and work organisation in the school sector" and "foster young people’s development by means of general education through an understanding of the theoretical basis of occupational training."8

In contrast, Mrs Vasso Papandreou, European Union Social Affairs Commissioner, noted in July 1991:

"The percentage of people in higher education in the United Kingdom between 1986 and 1987 was the lowest of all member States. For the number of 14 to 18 year olds in further education, it is last but one. This might be an explanation of why the UK has a skills shortage."

The key in Germany has been to bring together colleges, employees, unions, government and research into an organised structure, in a society which has learned to value professional training as an enterprise of standing in its own right. If 90 per cent of the population receive vocational training, then the vast majority of people respect each others’ educational acumen and elitism starts to break down.

At De Montfort University, a slightly different approach has been taken but one which offers similarities. In 1989, Leicester Polytechnic, as it was then called, in setting a course for expansion, started to build a series of partnerships with local further education colleges within a fifty mile radius of its large campus in Leicester. The concept was to:

-- allow for the growth of higher education by a regional means;
-- make aspects of higher education accessible to students at their local colleges;
-- create what was called the "seamless robe" between further and higher education training.

The reason for the first two objectives was simple. If the institution was to expand, it had to realise that the infrastructure of its City could only take a limited number of students. Leicester has two universities: De Montfort and Leicester University. The City itself has only the capacity to take slightly over 20,000 students; thus, expansion had to take place elsewhere. A new "greenfield" site was opened in Milton Keynes, 50 miles to the south of Leicester, and 27 colleges went into partnership, in a link
scheme within a 50 mile radius around Leicester (from Lincoln in the north to Bedford in the south, from Boston in the east to Birmingham in the west).

Figure 4. De Montfort University, Associate and Franchise Colleges

The demand by government for increased participation rates was also causing financial problems which the concept of a distributed university helped to solve. Simply put, participation rates had to rise at a period when the Gross Domestic Product was remaining virtually static. Consequently, it was being achieved at a time when national economic provision for higher education was declining. In March 1994, the Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom produced the evidence below (Figure 5) showing the decline, in percentage terms, between 1989-90 and 1993-94 in grant and tuition fees paid per student by government.
Through students taking some or all of their degree at a local college, under the authority of, and in partnership with, the regional university, the cost of expansion could be contained and the expense for parents or students kept under control.

Partnerships of this kind, however, brought the further challenge of the concept of the "seamless robe". It opened the avenue for the University to consider the totality of a student’s education not from the age of 18 but from 16 onwards. A student could begin to make choices at an earlier age than hitherto, so as to begin a process of study and training which could either be completed at 18 or continue into a university programme leading to a vocational diploma or degree and then onwards to postgraduate awards. The University would have the responsibility for a packaged educational provision for the student, provided simultaneously with links within its partner colleges and with industry and commerce in the design of its programmes.

Of the 27 colleges, nine entered into an exclusive agreement with the University, to plan financially and academically reciprocal educational provision. In 1994, two of these, Lincolnshire College of Art and Design and Lincolnshire College of Agriculture and Horticulture, formally amalgamated with the University, whilst Bedford College of Further and Higher Education, amalgamated its higher education provision with the University. It would not be a surprise to see further colleges seek amalgamation in due course, as the process of planning matures, allowing the seamless robe from age 16 to 18 to 21 and above to exist within the one institution. The traditional mould for British Higher Education has been broken by the existing arrangements, since a more comprehensive approach to educational provision, both for further and higher training, has been established.

The policy, however, has been developed further. The Further Education Colleges in amalgamation or association with the University receive their intake from the school system. The question was raised as to how an integrated system of education might arise through schools, colleges and university. One answer lies with the Compact system. The school pupil, at the age of 14, makes a Compact agreement with the Further Education College. Subject to satisfactory progress, measured by the school, he or she
then naturally moves to the designated college at the age of 16 to pursue a particular course, making then a Compact with the University to have automatic entry into a diploma or degree course at the age of 18. Progress is monitored by the college working to an agreed contract made with the University.

Figure 6. De Montfort University: Compacts

This allows for the enlargement of the seamless robe. It takes the pressure off students having to pass examinations at a certain grade in order to enter university, and instead puts the emphasis on the continued learning experience from 14 years onward. The system has been implemented, with 38 schools now participating and 27 pending, the University and the Associate Colleges guaranteeing places and developing the planning process.

The management structure

Such an integrated strategy, accompanied by the expansion of the University, could not have taken place over a period of five years had not De Montfort been able to establish a management and communication structure which could implement policy rapidly and effectively. The financial and academic freedoms given to De Montfort University by changes in government policy between 1989 and 1992 presented a unique opportunity to develop a management structure for the University founded on business practices, yet designed to enhance quality in relation to the interaction with industry and commerce, the learning process and research.

To effect the policy which could be summarised by the three words -- quality, accessibility, flexibility -- the University adopted a governmental structure different in kind from traditional British universities. It perceived that decision-making in the traditional structure was iterative and consensus-seeking, being achieved through covert leadership over an inevitably lengthy period. De Montfort wished it to be participatory and pro-active with overt executive leadership. The new
universities introduced a new method and structure. Whereas the traditional universities are run through a Chancellor, Court, Council, Vice-Chancellor, Senate and Deans of Faculties, De Montfort operates on a business model where there is a Board with a non-executive Chairman, to whom reports the Chief Executive, or Vice-Chancellor and his executive board of four Pro Vice-Chancellors (Figure 7).

Figure 7. **De Montfort University: Organisational structure**

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Board of Governors
   22

Senior Executive
   Vice-Chancellor + 4 PVCs

14 academic schools
Cost centres

10 support services
Cost centres
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They take advice from an Academic Board, but act as a management team. The University is then divided into Cost Centres, comprising the academic schools, the business companies marketing the vital professional expertise within the University and specialist centres. Academic heads have the responsibility for discipline leadership within the Cost Centres. The academic management structure is as follows.
Such a structure changes the emphasis of organisation. At De Montfort, there is an institutional strategic plan, with operational objectives into which all staff are fully integrated. This is in contrast to the traditional university where there are departmental plans with academic objectives and a secondary role for the support staff. Similarly, whereas the traditional university is process-orientated, the new university is results-orientated. It has an intolerance of inequity and of a tendency in the traditional structure to allow for powerful Deans or Heads of Department holding the institution as a whole to ransom for their own agendas or motives. This is largely avoided at De Montfort, where everyone in the institution subscribes to an agreed mission statement which is:

"To provide teaching, research and complementary services delivered through a distributed University which is internationally competitive, locally sensitive and everywhere excellent. To achieve this mission the University will embrace a range of activities from sub-degree to post doctoral levels within a context which values the personal and social development of all its individuals."

From this mission all the policies of the University are derived, and similarly, all proposals are questioned against its definition. It is the statement at the foundation of the University’s growth.

The economic impact on the University’s communities

The increase in the student participation, if correctly managed, allows also for a significant economic impact on the community. In a paper delivered to the 1995 Universities Association for
Continuing Education (UACE) Conference, David Chiddick, a De Montfort colleague, considered the period between 1984 and 1994 in terms of the University’s relationship with the growth in wealth of the City, noting significantly that:

"Whilst the results are inconclusive it was evident that the growth in higher education could have an impact on the economic base of the City through direct and indirect multipliers of consumption and investment. Based on comparative evidence in the USA we calculated that it was legitimate to use a multiplier of between two and three on the revenue base of the institution to determine the impact on the local GDP. It is interesting to note that, whilst the manufacturing base of Leicester has declined over the past five years and there is no evident growth in service based industry other than De Montfort University, the GDP in Leicestershire has actually risen from 1.53 per cent to 1.62 per cent share of mainland GDP between 1984-94. This University’s population has doubled in Leicester from 8 000 to 16 000 students."\(^{10}\)

If this is the case at Leicester, it is equally true in the towns and cities where the University has franchised courses or amalgamated with local colleges. In the Lincolnshire town of Boston, for example, the number of undergraduate students grew from 70 to 350 between 1991 and 1994. Using the multiplier factor, this had an economic impact on the town, in 1994, of £3.29m. In the whole county of Lincolnshire the impact was even more significant. Whilst Boston College remained an Associate College of the University, two other Lincolnshire colleges amalgamated with De Montfort University. The total growth of De Montfort Higher Education students rose in the county from 208 in 1991 to 969 in 1994, resulting in a £9.87m economic impact per annum.

A university community, however, is not just local. It is wide, serving the county as a whole in ways that are hard to quantify satisfactorily. If, as argued earlier, western universities originated because of the professional needs of their communities, so universities in the twenty-first century must focus their attention on the training of personnel for the wealth-creating markets. The new universities in the United Kingdom have gained a significant reputation for their Schools of Business Studies and Computing Sciences but the planning process goes beyond this. In 1991, the Government established local Training and Enterprise Councils, through which representatives from industry, commerce and education are able to interact in order to alert local communities to the training needs of changing markets and, indeed, to help initiate some of the changes required for a buoyant economy. From a university’s perspective, the establishment of the TECs has allowed an outside influence to come to bear on university strategic thinking in the development of curricula.

A further development has been the creation of Technology Transfer Centres or Innovation Centres sponsored by national, local and university means, to create focal points whereby the range of research work undertaken by a university can find tangible outlets within the community and where the representatives of business and industry can come to initiate research projects for commercial or social needs. Universities in this context have established arm-length companies to respond to national and international markets. At De Montfort University these include, for example, the development of a robotic means of warehouse distribution for knitted materials; research technology for tri-dimensional imaging via flat monitor screens; sophisticated financial and taxation protocols for emerging economies; water pollution remedies for the Chinese Republic; and arts administration training for the developing cultural industry in Singapore. The list is as endless as the subjects taught and researched at University. The key has been to find a means of making that learning appropriate for, and used by, the community at large.
The University, by rooting itself in business practice, has been able to appeal to national and international markets and yet, simultaneously, improve the quality of the education it provides for its 26,500 students.

**Flexible curriculum**

Such an economic and educational impact, fostered through flexible management systems, can only occur, however, if the curriculum itself is also flexible. From 1990 onwards, De Montfort changed its teaching programmes from a linear to a modular model. In the linear model, the academic programme is cohesively arranged through progressive routes and across assessment hurdles. In the modular model, each module has its own academic integrity and is selected as a building brick of knowledge by the students. Students determine what they wish to learn within certain boundaries established by the academic departments.

This is a significant change of culture. One of the strengths, and yet weaknesses, in traditional university teaching has been the control of the curriculum by traditional didactic philosophies. The lecturer or Professor was considered as the fount of subject knowledge and taught his or her (and it has always been predominantly his) subject from a personal authority in learning and research. The strength in this system lies within the quality of the lecturer as a researcher, as an expert in his or her field. Its quality control therefore depends on the academic integrity of the individual. The weakness lies in the system’s inability to respond quickly to changing demands of society and of market forces.

Modularity brings a new perspective. Instead of the curriculum being lecturer-led and orientated, it becomes student-centred. The knowledge of the lecturer is seen as a university resource selected by the student, in developing his or her learning needs. The Certificate, Diploma and Degree are built up through modules, each gaining credit. The course of study has a variety of exit points allowing for a range of qualifications as the students progress. Linearity, with the concept of final examinations as the last and largest hurdle before success, becomes something of the past as the students take responsibility in liaison with their tutor for the learning experience. Assessment is continuous and is measured by success rather than by failure. The aim is to acquire competence in a patterned manner, rather than one terminal qualification attained through the student succeeding in not failing large scale examinations.

Yet, the modular model is also flawed since it can become eclectic and idiosyncratic. The ideal is to find a mean between the linear and the modular. To do this, the subject teachers define their areas of expertise within wide boundaries, relating to their individual Schools: Arts, the Humanities, Computing, Engineering, Sciences, Law, Business and so forth. Each modular degree is owned by the School, which sets certain definitions and maps out the broad pathways. Each student selects his or her modular pattern within the broad pathway. However, each School has the responsibility to teach the modules within their pathways in other Schools. In Business, for example, the Law modules should be offered by the School of Law; in Engineering, the Maths module should be offered by the School of Computing and Mathematics, and so on. In addition, students of the Arts and Humanities, should have the opportunity to elect taking at least one module from Engineering or Science in their programme and, similarly, Engineering and Science students should have the opportunity to gain credit for their participation in Arts and Humanities modules. The choice within the pathways is with the student. Again, the culture is changed from staff-centred teaching to student-centred learning.
The challenge of new technology

The challenge with the distributed university is now how to use communication technology to allow for interactive learning across distance. Since 1993, the University sites at Milton Keynes and Leicester have had the facility for interactive video lectures and seminars and this is to be introduced, as of 1995, throughout Lincolnshire and between the Associate Colleges of the University. The next five years will see enormous developments in Computer Assisted Learning to the regional centres and even to students’ own homes. Yet, this leads to further challenges.

Firstly, it demands another cultural change on the part of academic staff. Traditionally, the emphasis of the academic has been on the delivery of his or her teaching material in the lecture hall or seminar room. The advent of the new technology shifts the emphasis from delivery to the development of the learning materials on tape, video or CD Rom for student access. It is a point simply made, but complex in the demand it makes on a teacher’s whole concept of his or her professional role. The lecturer’s primary task becomes one of developing material for student access, not to deliver it in the lecture room.

Secondly, if learning can eventually be achieved by the student through the computer in his or her home environment, what is the point of the university campus? The answer must lie in the concept of a university as a community, interacting not only in the learning process of a subject pathway, but in the social process of a cultural, sporting and generally educational environment. The university orchestra, jazz band, rock groups; its drama societies and dance ensembles; its sporting teams; its debating and political societies, are all part of the learning experience for the student. They can exist at the regional centres of a distributed university, bringing together its students in a context of identification with, and belonging to, an institution.

Breaking the traditional mould does not imply anarchy but rather demands progress in the building on the foundations of excellence which are those of the British system. It develops higher education for more people, giving them the opportunity to take ownership of their university. It allows identification with the university from an early age and through the flexibility of provision, has no upper age limits. Students can keep coming back. In 1994-95, the youngest registered student at De Montfort University was 16 and the oldest was 81. Each was as important to the University as the other, and as the 26 498 other students enrolled. In breaking the mould De Montfort has indeed created new opportunities for students.
Notes

1. Entry figures for Oxford and Cambridge are published annually in the prospectus for the appropriate University.

2. Statistics are derived from the Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom, Funding of Undergraduate and University Teaching, CVCP Briefing Note, (March 1994).


6. OECD indicators show that University participation rates for 18-21 year-olds in the United Kingdom in 1992 were only 14.2 per cent compared with 25 per cent in the United States; 23.9 per cent in Canada; 22.5 per cent in Spain; 20.2 per cent in France; 20.1 per cent in the Netherlands and 16.9 per cent in Belgium. The figure for Germany was only 7.2 per cent but this is rectified by a large participation rate in the 22-25 age group, at 17.2 per cent. See Education at a Glance, 3rd Edition, OECD Publications, Paris. The tables were reprinted in The Times Higher (14 April 1995), p. 8. The British Government is confident that it has introduced policies whereby the published participation rate will be close to 30 per cent before the end of the century.


9. CVCP Briefing Note, (March 1994).


11. Much of the information in this section was first presented as a paper by Michael Scott, Financial Management and the Curriculum to a World Bank Seminar in Washington, DC, 30 April 1993. It is based on work undertaken at De Montfort University to develop a modular programme for the School of Arts and Humanities in 1990-91 and, subsequently for a "Framework for
Modularity” for the University as a whole. In chairing the Working Parties for both these initiatives I wish gratefully to acknowledge the respective academic membership but, particularly, David Wolf, Director of Planning Support and Alan Bowles, Head of Physical Resources at the University for their detailed work on the modelling.
CREATING LINKING NETWORKS

Joan Wills

A critical question for this seminar is how can a country develop a sufficient set of "linking networks" to achieve a highly skilled workforce? The single word which comes to mind when addressing the range of issues is integration. How can the complex pieces be made to fit together? This paper will certainly not address all of the necessary integration issues or all of the various linking networks needed to make the parts of the economy work together. It will focus primarily on education and training networks.

As the Central and Eastern European countries (CEECs) address the issue of how to develop integrated systems, it will be useful to "benchmark" their efforts against those of key competitors. As choices are made, it is important to remember no one country has perfected all the necessary links between the economic development support structures of government and the array of educational institutions charged with the responsibility of helping supply the qualified workers for the economy. A benchmarking process -- this means studying the details of the most successful organisations already preforming a particular function -- allows to pick and choose among a menu of models. Benchmarking can also promote continuous improvement in current programmes and systems.

The realities of the new economy

There are some general overarching "drivers of change" which need to be considered as new systems are established.

Shifts in production processes

There are growing and global trends in production processes and quality management making the long Taylorist assembly lines that could only produce one model a story of yesteryear. These include:

-- flexible production lines to accommodate customised products based on just-in-time delivery systems;
-- ever-increasing use of computer-assisted technologies;
-- customer satisfaction re-emerging as a standard that must be given its due regard;
-- capital to labour ratios continuing to expand, and more.

These processes are the norm in a few countries (Japan and some western European nations) and the standard in the more advanced businesses in others, yet they are only materialising in other countries and businesses. For now they represent the new reality -- the new standards which both public and private sector enterprises should try to reach. These forms of production processes demand more mentally agile workers who are able to be problem-solvers, not just human robots preforming repetitive tasks.
Shifts in the impacts of technologies

The Organisation for Economic Co-operation and Development (OECD) asserts that information has upstaged land, labour and capital as the most important input into modern production systems. There is strong evidence that an infrastructural change is taking place due to the information technologies, a change substantially different than a substitutional shift.

The new technologies allow operators access to previously unavailable information and different skills are required of the machine’s user. As the technical infrastructure deepens into the workplace, an ever increasing number of blue-collar workers will need to understand more about the production systems and will be required to participate in decisions formerly reserved for occupations with higher status. There is increasing recognition that technologies are often under-utilised or used inefficiently. Successful introduction of technologies is directly tied to the organisational structure and the human factors inside the institution. However, most firms continue to justify computational technology based on the logic of substitution. Only secondarily, if at all, do firms come to grips with the attendant organisational implications.

Four characteristics of successful technology adaptation have been summarised as the four F’s: focused, fast, flexible, and friendly. The United States National Academy of Engineering identified characteristics needed of any organisation to achieve the technology adaptation required to successfully apply the four F’s. These include: employee involvement, training, incentives, fluid organisational structures, matching the technology to the problem to be solved, and committed leaders.

This list suggests that the introduction of the new technologies can provide as many human resource management issues to be dealt with as they do engineering challenges. If this list correctly identifies the right ingredients, individual firms with flexible organisational structures located in countries which promote employee involvement and support training are better positioned to make the most successful use of new technologies.

There are several international indicators suggesting that the Keiretsu Capitalism model has the most comprehensive components to assure rapid technology adaptation following this schema.

Occupational shifts

As production processes shift and technology advances, changes are also occurring among occupations:

-- Professional bureaucracies have spawned new specialised occupations and the increase of larger corporations has created more demand for professional services such as legal, accounting and medical.

-- The growth of science and its commercialisation have helped create new, highly specialised occupations.

As a result of both these trends, there has been a growth of specialists in fields representing "more valued" occupations. Additionally, experience has shown the specialisation model demands more
collaboration among a variety of workers in order to obtain the breadth and depth of expertise to accomplish the work.

Many of the new technical occupations (science, engineering, radiology, emergency medical technicians, technical writers, computer programmers) blur the attributes between the professional and the craft worker. These jobs often require specialised education, especially in science, mathematics and technology. However, it is important to note that the evidence to date clearly shows the most valuable place to obtain skills appears to be on the job, allowing the development of the "artist".

These "new crafts" provide a particular set of challenges for governments and institutions in defining competencies and skill requirements, in part because they do not yet have a strong base of professional societies, nor do many "guilds" exist for them even in strongly unionised countries. Also the jobs should not be cast in a vertical model of career progression assuming that increased supervisory responsibility is the most important ingredient. The results may end up stifling necessary workplace reorganisation.

Taken together these trends are pushing out the boundaries of skill requirements for both new entrants and current workforce members in workplaces all over the globe. Of equal significance, these boundary shifts are pushing the publicly supported human resource development infrastructures to readjust to the new realities.

These workplace trends are not the only factors pushing the boundaries of human resource development systems. Demographic and environmental realities must also be accommodated.

Production must accommodate the environment

All countries must deal with the protection of the environment in ways not even considered less than a quarter of a century ago. For several occupations, some knowledge of health and safety factors are included in the "required competencies". However, this may not be sufficient. Is it appropriate (from a public-policy viewpoint) to tie more closely the knowledge and skills required to prevent pollution into a broad range of occupations?

An example of what the United States is facing only to address the problems of environmental clean-up helps illustrate the point. For the United States, it is estimated that US$1 trillion has been spent on such clean-up in the last two decades, and estimates circulate that as much as US$100 billion a year must be spent for several years more in order to complete the task. Prevention must become a part of strategic planning processes, including that of the education and training system, and this in all countries. The figures as well as government strategies to solve the problems will vary from one country to another, but most would agree the production processes must accommodate the environment, not vice-versa. This is not a side-bar issue.

The realities of the labour pool

Almost any list of statistics used to analyse the potential labour supply pool essentially brings forth the same implications. Broadly defined, the two most important of these, for most countries, are the
necessity to build in continual preparation at the work site for those already in the workforce, and draw increasingly from the pool of the "marginal workforce".

The age structure of the active working population in the countries of the European Union provides an example of the challenge. Over 80 per cent of the workforce which will be working in the year 2000 is already at work and many of these workers will have undertaken their initial education and training during a period when higher education was restricted to a small elite in many countries. Additionally the knowledge and skills acquired during the initial education and training is declining in usefulness.

Regardless of the debates about the skilling versus deskilling of jobs, entrance into the workplace demands more than in the past, specifically for positions holding promise of advancement. It therefore follows that there is less tolerance in the workplace for low-level entry workers. Consequently, early school leavers and students poorly prepared (particularly in mathematics, sciences and communication skills) not only personally suffer but represent a cost to society that cannot be easily tolerated. Taken together these pulls and pushes exist in all industrialised societies and more so in less developed countries, although the supply of workers and the access to technologies and capital are dramatically different.

Implications for the learning enterprise

All of the foregoing trends in production, labour, capital, and environment are changing education and training systems. Based upon the recognition that education and learning can and should take place in multiple settings, including the workplace, the term learning enterprise is used for these systems. The effects on initial and continual perception are captured below.

Initial preparation -- undergoing change

In any country the quality of the initial preparatory system remains central to the effort to have a skilled workforce. The most important imperative is to ensure there are clear policies to close the educational gaps between the haves and have-nots. Without real action to bring up the "bottom" (however characterised), the current divide between these two groups will only widen and this is no longer an economically affordable option.

Few countries have not recently, or are not currently, going through some form of review of their initial preparation system (compulsory education). Curricula are being changed, vocational preparation programmes are being re-evaluated to incorporate more academic materials, governance structures are being realigned, assessment systems are being reviewed, and more emphasis and resources are being made available for the populations which have long been considered on the "margins".

Having a solid education foundation is undeniably essential, but it does represent, in itself, an insufficient strategy for any country.

Continual preparation

Arguably, the weakest link in almost every country’s strategy to assure a skilled workforce (with the possible exception of Japan) is the need for a rational set of strategies to ensure a continual preparation
for the total workforce. (Japan stands out not only due to the steady state of investment in the structured learning of a company’s employees, but also in the teaching responsibilities of the supervisors, built into the progression along the career ladder of most companies.)

A definition is in order at this point. The use of the term continual preparation is an effort to capture several different concepts used with varying meanings in individual countries. Lifelong learning, continuing education, multi-media, open or distance learning, continuing professional development and ordinary plain job training are all forms of learning included here for the purposes of this discussion. There are no easy cross-country comparisons of what is happening regarding any one specific category. Even with this important caveat, however, there is a great deal of evidence to suggest that continual preparation is a weak link in the human resource development infrastructure. There are several reasons for this.

First is the tradition of front-loading the preparation for the workplace -- regardless of the form -- such as apprenticeships or attendance at a technical institute or some other higher education institution. Another is the tradition of almost all governments to target the limited public training resources at select portions of the population in need of retraining due to major economic dislocations, or to select targeted populations such as re-entrants, the disabled, sometimes immigrants, or welfare recipients.

Factored into any of the schemes for continual preparation must be a set of decisions about who and what should drive the system for continual preparation and also, as to what role should be expected of the institutions constituting any country’s learning enterprise.

Where is integration important?

The enterprise (firm) level is where, ultimately, the integration of education and training strategies must occur. Part of the challenge for governments or the other social partners then becomes to sort out what are the least non-intrusive techniques that can be employed to promote maximum utilisation of human resources within those enterprises. Arguably, one of the most powerful tools would be to reassess the treatment of assets within enterprises. Currently, the international pattern is that human resource expenditures are counted on the expense side of the ledger, not the investment side. Until it is possible to have the corporate boardroom address the utilisation of intangible assets (people) in much the same fashion it treats capital assets, support for continual learning will be weak. Tax collectors and accounting standards bodies will, most surely, not quickly embrace such a recommendation, but the time has come for at least a serious national and international dialogue to begin concerning this.

Work in this arena may be one of the most important pre-conditions of a truly integrated workforce preparation system in any country, simply because it will place the loci of decision-making at the most important press point -- the workplace. It is also important to not assume that formal education and skills training are the only factors contributing to the economic growth of an enterprise. As part and parcel of any integration strategy to improve productivity, providing firms with assistance targeted at improving overall business strategies is an essential ingredient.

Improved business strategies are central

Business strategies need to include the development of systems to ensure continuous improvement in order to satisfy the needs of external and internal customers. Companies need strategies to address the
dual (sometimes apparently contradictory) concepts of decentralised decision-making, combined with the need to achieve integration between and among departments and systems (financial, technical, human resource management, planning and development, etc.).

Based on the experience in the United States, Western Europe and Japan, it appears the most effective strategy for governments is to provide technical support through a variety of industry-based networks that assist firms of various sizes in improving strategic or technological research, adaptation, and systems integration. Small and medium-sized firms, often the engines of change for larger firms in terms of innovations, require high levels of support. Often, post-secondary institutions are used as key linking institutions in such networks, by housing the technical experts which assist the individual firms. There is growing evidence that the most effective of these networks are those in which the members of the industry drive the agenda, not the public institutions.

The linking responsibilities of higher education institutions

All over the globe, this is a period of institutional change and system redesign, affecting human resource development services in both the public and private sectors. One of the thorny issues which all countries must grapple with, is the role and capacity of higher education institutions in the skill formation and certification of competencies. Policies exist or are being instituted in most industrialised countries to open up the access to "non-traditional" students and the "pick up" has been impressive. As important as such policies are, they fall into the category of expansion of initial preparation, not continual preparation.

Continual preparation has also been increasing over the past decade. It would not be too far off the mark to say that there has been an explosion of new offerings and services in the continuing education arena in all industrialised countries. However, continuing education services are still not in the mainstream of higher education systems in most countries. Few students exit the courses with "for credit" credentials leading to a formal diploma even where, as in many instances, the continuing education course has been explicitly designed to meet the standards set forth by an industry client. Yet, business clients consider continuing education organisations to be the most "user-friendly" portion of the post-secondary education sector.

Again, calling upon the work of the OECD and of others, several emergent issues and recommendations regarding the role of higher education institutions need to be considered.

-- Continual preparation should be shaped by the needs of the customers (enterprises and their employees).

This would represent a fundamental transformation, moving power from the producers to the consumers. It implies a transformation in pedagogy, where teaching is but one contribution towards the process of learning and a variety of technologies can be used by the student.

-- Clear learning outcomes, rather than content and duration, should drive the learning process.

Without this shift, integration of education and training with the needs of the workplace will not be realised.
Higher education institutions need to recognise and accredit learning taking place outside of the "traditional classroom".

The obvious companion strategy to this is that industry-driven skill certification systems need to be compatible to identify "clear learning outcomes" used in all types of higher education institutions for continual learning purposes and credit accumulation and transfers.

A fresh look is needed regarding who is entitled to offer training and how instructors themselves are recognised and certified.

This is only a beginning list of the issues governments and all forms of higher education institutions need to grapple with before integration of polices can occur and appropriate linking networks are established.

One form of linking institution

In order to promote integration between the demand side and the supply side within the human resource development system, several countries have emphasised the development of formal processes which link together the employers and education and training providers. At the core of these efforts is the articulation of the knowledge, skills and abilities required of workers. In several countries, this has been translated into the development of new (or modified) organisations with the specific charter to establish industry-based skill standards with attendant new or expanded forms of competency certification.

Standards help ensure quality, indicate goals, and promote change. In education, standards help decide who is admitted, who graduates, who is accredited. In the world of work, standards help decide who is permitted to sell a house, connect a power line, or perform surgery. Standards facilitate communications, protection, harmonisation, simplification and valuation. The communication value of standards is of special note because employers need to "signal" to schools, students and those already working, what jobs require in their organisations.

As with most standard-setting efforts, skill standards have to be negotiated between the various stakeholders. Many countries have formal processes for engaging employers in standard-setting. A way must be found to establish the common language and the common processes necessary for stakeholders to arrive at descriptions of what workers need to know and be able to do.

In the United States, a recently enacted piece of legislation, sets forth a vision of what a skill standards system can help accomplish. The legislative view is that skill standards should be used:

- by the nation to ensure the development of a high-skills, high-quality, high-performance workforce, including front-line workers;
- by industries to inform training providers and prospective employees of needed skills;
- by employers to evaluate the skill levels of prospective employees and assist with the training of current employees;
-- by labour organisations to enhance employment security through portable credentials and skills;

-- by workers to obtain certifications of skills, pursue career advancement, and enhance their abilities to re-enter the workforce;

-- by students and entry-level workers to determine needed skill levels and competencies for the workforce;

-- by training providers and educators to ascertain appropriate training services;

-- by government to evaluate publicly-funded training; facilitate transition to high performance work organisations; increase opportunities for minorities and women in the workforce; and facilitate linkages with other national efforts aimed at enhancing workforce skills, such as school-to-work transition, vocational technical education, and job training programmes.

In order to achieve these lofty goals the vision of an ideal skill standards system is helpful. One approach would be to centre the efforts of both education and training polices and to direct support to enterprises around the needs of individuals and employers. The overarching framework would incorporate the following characteristics:

-- It would be widely accessible to students and workers regardless of age.

-- It would respond to changes and differences in local and individual needs through flexibility in the education and training provided (e.g. types of institutions, full-time versus part-time).

-- It would be able to meet the needs of individuals regardless of the type of education and training they are pursuing (e.g. initial preparation, continual, upgrading, or remedial).

-- It would allow career paths within and between industries.

-- It would be explicit, so that firms, educators, training providers and individuals know what the standards are and where information about them can be obtained.

-- It would be competency-based.

-- It would formally assess and certify an individual’s skills, documented by a third party.

-- It would be progressive, so that people can build upon blocks of competencies and adapt to technological, organisational and market changes to improve their prospects or to explore their potential.

-- It would have a common framework and use common language when describing skill levels across industries and occupations, so that both individuals and employers can understand easily workplace expectations. The framework should progress from initial (entry) qualifications through several levels to mastery or specialisation recognition.
This ideal system assumes that a wide range of programmes and providers can adapt the content standards to their specific missions and purposes and develop specific programme performance standards accordingly. It recognizes that knowledge, skills and abilities are acquired in multiple settings -- the schoolplace and the workplace -- and therefore, that individuals have the right to have all of their learning formally recognized if they so choose. This vision of an ideal system is built upon the lessons gleaned (benchmarked) from the experience of other countries including Australia, Canada, Denmark, Germany, Japan, and the United Kingdom. Each of these countries has developed systems to meet its own purposes. These systems tend to break into three categories:

-- The "initial preparation" model represented by Germany and Denmark focuses on the school-to-work transition for young people. The Ministries of Education, in concert with well-defined industry-based organizations articulate the goals, curricula and forms of instruction for substantial portions of the students attending compulsory school in these countries.

-- The "craft certification" approach represented by Japan and Canada meets the needs of more mobile adult workers, such as construction workers.

-- The "comprehensive" model found in the United Kingdom and Australia is the youngest category, and is still emerging.

Some of the core lessons from these six countries are:

-- To promote career progression, there should be commonly recognized levels of progressive complexity based on needs identified in the workplace.

-- Competency-based equivalency levels, reflecting the common core of knowledge to be taught in the classroom and learned on the job, need to be promulgated.

-- Each broad competency level should contain internal building blocks or units that can be attained at various points in time and in different learning settings.

The current plans for the establishment of voluntary academic and occupational skill standards in the United States clearly fall into the third model, the comprehensive approach.

The Australian approach: an example

Graham Slee, head of the voluntary National Training Board (NTB) of Australia, visited the United States in 1991 and gave several speeches and seminars on the topic of developing a skills standards system. Consistently, he said that the single most important lesson to be learned from that Board’s work is the importance of developing common language and the attendant common levels of recognized knowledge and skills. One of the key reasons for Chairman Slee’s strong counsel regarding the development of a common framework and nomenclature is that skill standards should be viewed as the ties binding the various stakeholders together. Such ties allow individuals to receive recognition for what they have learned through multiple sources and over time.
The Australians rely upon industry groups to identify standards. These groups are charged with thinking about two types of standards across a number of different levels -- occupational core standards and industrial core standards.

Occupational core standards include broad-based competencies that must be achieved by all persons in an occupation regardless of their particular jobs. These competencies include abilities in numeracy, literacy, occupational health and safety, and communication, within the occupational context. In addition, these competencies may include some broad technical competencies necessary to the occupation.

Industrial core standards are technical and broad-based, and must be mastered in order for a person to work effectively in a particular industry or industrial sector. Often, these standards include the specific knowledge and skills someone must master for work in specialised areas, and thus they may have less transferability than do the broad occupational core standards or the basic industry core standards.

The NTB has established eight competency levels serving as reference points for the development and recognition of competency standards. Examples of competencies definitions for selected levels are as follows:

-- **Level 2.** Competencies mean that a person has an established work orientation and the knowledge, skills, and demonstrated capacity to perform proceduralised tasks under general supervision, and more complex tasks involving the use of theoretical knowledge and motor skills under close supervision. Preparation for Level 2 employment is generally obtained through job-specific or general training that may be certified by appropriate authorities. Level 2 training typically includes an apprentice worker within many industries.

-- **Level 4.** Competencies mean that a person has highly developed skills, knowledge, or capacity for self-directed application, including the use of appropriate techniques and equipment required to perform highly complex tasks involving substantial applied theoretical knowledge and motor skills. Many of the complex tasks would be performed without supervision, and might include supervising the work of others. This category includes advanced skilled, autonomous workers. Training for it would lead to an initial, post-trade, or equivalency certificate or to an advanced certificate.

-- **Level 6.** Competencies mean that a person can make autonomous use of a high degree of applied theoretical knowledge in combination with mastery of the theoretical bases of that applied knowledge. Tasks may require developed motor skills and significant creative, planning, designing, or supervisory functions related to products, services, operations, or processes. This level corresponds to a competent senior administrator, specialist, technologist, or para-professional. Courses of formal vocational education and training to assist in preparing for employment at this level are generally those leading to an associate diploma or a diploma. In some cases, a degree may apply.

-- **Level 8.** Competencies mean that a person has highly developed capacities to generate and use advanced levels of theoretical and applied knowledge. The tasks often require highly developed motor skills and the ability to undertake complex and major creative planning, design, and managerial functions with full personal accountability and responsibility for the output of others. This level corresponds to a competent senior professional or a manager.
The formal education and training necessary at this level of employment includes content leading to higher degrees. Professional qualifications may also include post-doctoral research, evidence of publications and contribution to advancing knowledge in particular areas.

This framework allows for transferable skills across industries, elaborates career paths within industries, and ensures a correspondence between earning a degree and acquiring the types of competencies required for working at various levels. The institutions provide the critical communications link between private and public sectors.

Key roles of the central government

Careful consideration must be given to the form of the linking structures which connect the public and private sectors together. In most countries one could find general agreement that the central government is in the best position to establish the framework of a system but not necessarily to provide the service or produce the product. Some of the core functions that can best be performed at the central level of government include:

-- collecting statistics (facts on students, personnel, facilities, and labour market trends are examples of the type of data needed to support the learning enterprise);

-- supporting research and evaluation;

-- providing support for the continuous staff development of instructors within the learning enterprise;

-- providing support to the entities responsible for establishing educational and skill standards for all parts of the learning enterprise;

-- providing support for entities responsible for assessing and certifying the qualifications of the learners;

-- establishing the accounting and taxing policies which promote efforts in the area of continual preparation.

One of the key components of developing linking institutions is that actions must be based on facts, data and analysis. Progress cannot be made without good information. An example of a central government responsibility pertinent to this discussion is the need for national occupational classifications and dictionaries (NOCD’s). Internationally, there has been a general recognition that these systems must be more sensitive to the needs of a variety of users than most past dictionaries have been, if they are going to be of any value to the users responsible for establishing skill requirements and competencies. Additionally, there will be the need to obtain a commitment to regularly update and maintain the occupational classifications. There is a general pattern not to do so. This has plagued the use of all countries classifications systems for several decades. One of the predominant patterns in the updating of NOCD’s is to collapse the numbers and establish broader groupings. In Japan, where there is a relative narrow band of occupational classifications based on a vertical model of career advancement, there is a growing recognition in some firms of the need to expand slightly the occupational classifications to accommodate specialists.
How occupations are clustered is the key to any skill standard-setting exercise. In most countries, the classification of occupations has been found inadequate to meet the needs of skills standards setting -- and in many instances not very useful for other purposes either. Occupations classification can be viewed as an arcane technical task or a documentation of the engines of change in a society.

The terminology used to define occupational groupings have evolved out of a vertical division of labour that creates cultural images defining rank in society as much as rank in the workplace. Indeed, divisions of labour according to vertical categories have long balkanised cultural and political debates in almost all societies. There has long been conflict within the professional, technical and craft classifications about how they fit into the vertical division of labour. Arguably, this conflict helps explain and justify the "external" recognition groups of workers have sought in being the most active proponents of professional certification of skills. Through such external recognition, their knowledge "walks with them" from one work setting to another. With the continuing proliferation of new professions and specialised technicians, it can be anticipated that vertical classifications of occupations will become less useful overtime and horizontal relationships more important.

A final note

Admittedly, these suggestions for creating linking institutions to integrate the needs of the workplace with the various parts of the learning enterprise are far-ranging and present multiple and complex implementation challenges. Each country here faces enormous challenges of various kinds and this must be respected. The strategies described in this paper are presented with no other objective than to provide for their consideration one possible road map of the complex maze of relationships between the worlds of work and learning.
Notes


The German Friedrich-Ebert-Stiftung and the American National Planning Association held a joint conference in 1990. The resulting publication provided three classifications of basic models of capitalism. The Keiretsu Capitalism model is characterised as having a central focus on group or corporate competition and on long-term relationships which are highly paternalistic, including the running of the social welfare system for their employees. Market forces are molded by joint efforts of public and private leaders. Another classification is the Contingent Capitalism model where the free market forces are expected to provide the correct solutions, government interventions are eschewed and heavy emphasis is placed on wage and price flexibility. The third model goes under the a debated caption call “C” Capitalism, with some advocates emphasising the word Compassionate, others preferring the word Command. In this model, government regulation of the workplace is emphasised.


Dr. Barley’s work provides very useful insights into the implications of occupational shifts.


This report provides an excellent overview of the education and training needs of small and medium-sized employers and an assessment of capacity of "traditional" post-secondary education institutions to address those needs. The listing of issues in the paper are drawn, in part, from this study because it summarises well the common themes that can be found in similar prior analysis in Europe and other industrialised countries.


New realities

At the close of the twentieth century, governments throughout the world are turning with growing intensity to education and training in search of solutions to some of their most pressing economic and social problems. In developed and developing countries, education and training are moving rapidly up the agenda, as governments focus on human resource development, on the skill levels of the workforce, on professional and social competence. The critical role of education and training in the shaping of society and its governance has been known for millennia, from ancient hierocracies and mandarinate through to its explicit examination provided by Plato in the *Republic*, in the fourth century B.C. Economic and social problems have always vexed humankind. Why then, just now, this relatively sudden and intense focus on education and training on the part of governments?

Many people believe a watershed has been reached in human history, one of those points of such enormous change that what follows will be fundamentally different. Remarkably rapid developments in science and technology, along with their commercial applications and proliferation, particularly in the fields of transportation, telecommunications and computing, are altering profoundly the substance and mode of our businesses, our economies and sources of competitive advantage, the ways people work and learn and create, how they live and interact and govern their societies, and even how they communicate and perceive themselves and others.

These changes are transforming economies from nationalistic, industrial economies into a new global economy which has been described by some as knowledge and service-based, featuring the growth of what have been called knowledge services and intelligent enterprise. In this new, rapidly changing knowledge economy, one of the most important sources of competitive advantage for jurisdictions and corporations becomes a highly skilled workforce, and among the most important qualifiers for the employability of individuals are high levels of education and skill. Consequently, education and training become instruments of economic development and advantage, not merely for governments but for individuals as well.

Schools and post-secondary institutions are thus confronted with new sets of pressing realities and expectations. In addition to the traditional roles of intellectual and personal development, the creation of new knowledge through research and the preparation of people for professional careers, institutions find a new role thrust upon them: economic development.

Governments want publicly funded institutions to bend to this new role in practical and immediate ways, to alleviate both economic and social distress, and to help individuals and society cope with profound change. Businesses and corporations want new sets of skills and higher skill levels in their workforces,
both current and future, and commercially marketable research products in order to be internationally competitive. Individuals want jobs and the kinds of skills and credentials which will prepare them for successful careers in workplace and labour markets, themselves changing as rapidly as the economy, which implies they will have to continue to learn throughout their productive working lives.

Governments, business and industry, and individuals are coming quickly to understand that continuous education and training constitute necessary, although insufficient conditions for competitiveness and employability in a global marketplace characterised by intense competition and accelerating structural change. Thus, traditional education institutions, among the most conservative and stable of human institutions over the last six centuries, find themselves facing rising and different expectations, increasing financial pressure and scrutiny, demands for greater productivity and accountability, all this in a circumstance of enormous and sudden change, change which affects even the very heart of their enterprise: the way people learn and, thus, the ways they will be educated and trained.

The institutional imperative

Institutions and systems of higher education cannot escape the profound changes in the environments in which they operate nor will they be able, as some people believe, simply to ride them out. At least three aspects of this emerging economy will make it impossible for institutions to ignore the new realities:

-- **The skill levels of the workforce are becoming the single most important source of sustainable competitive advantage.** In recognition of the importance of this factor in what governments, business and industry perceive to be global, win-lose economic competition, they have focused sharply on the critical importance of lifelong education, training and learning to prepare, sustain and raise the skill levels of the workforce in order to enable their enterprises to remain competitive, so that they can create wealth and jobs, maintaining thereby acceptable standards of living and avoiding social distress. Having recognised the critical importance of education and training, they are now turning just as sharply to its traditional providers -- the institutions of primary, secondary and tertiary education -- for response, not infrequently with mounting dissatisfaction and impatience. Consequently, governments, which fund public systems of education and training, are confronting systems and institutions with their priorities: access, quality, relevance, productivity, results, assessment, accountability. These forces alone will probably drive institutional change.

-- **Remarkable advances in science and technology which, through industrial and commercial application, are transforming very rapidly the very nature of economies, are also changing the ways people learn.** Inevitably, these changes will affect the ways institutions educate and train. Telecommunications and computer technologies are already having a substantial impact on the delivery of educational programmes and services and the administrative operations of our institutions. This impact will probably increase dramatically as new technologies and applications emerge, become more affordable and proliferate, and as institutions, under growing pressure to operate more productively and efficiently, turn to them for solutions.

-- **In a knowledge economy, education and training become critical sources of competitive advantage.** They also become, themselves, potential sources of wealth and profitability.
Knowledge services constitute one of the most rapidly growing cohorts of the service sector of the economy. Of the approximately one hundred billion dollars spent on education and training in the United States in 1990, fully half was private sector activity. Education and training programmes, services, and products will increasingly become commodities for trade or export, and in the process the traditional tension between them as public or private goods will be exacerbated and complicated for governments and institutions. This aspect of the emerging economy implies a highly competitive situation, not merely for business and industry. In education, as elsewhere, there will be winners and losers. Those institutions which fail to respond intelligently and quickly may be marginalised either by private sector competition or through diminishing government support.

These three features of the emerging economy will force higher education institutions to face powerful new market forces for which they are ill-prepared.

However, it not the point of this paper to attend merely to perceived threats. This is a period of extraordinary opportunity for education and educational institutions. There are probably very few periods in history when education and training have been so much at the forefront of the public and private mind. Only those institutions will thrive which seize the initiative and attempt to respond strategically and adroitly; which look outward and forge alliances with governments, business, industry and other institutions; which heed market forces and position themselves well; and which meet effectively the needs of their various customers and provide services of high value to them will thrive.

The new realities confronting higher education make institutional reform or, perhaps more aptly named, institutional development, imperative if institutions are to continue to serve collective as well as individual purposes.

**Institutional development**

A critical facet of human enterprise is contained in the ability to examine past experience, assess current reality, posit a better future and then find ways and means to move from the real toward the ideal. Institutional development pre-supposes herein something of this notion of progress or improvement.

Experience suggests that some conditions which appear to be of fundamental importance to the development of public post-secondary institutions can be identified: institutional autonomy; strategic leadership and management (shared vision, goals, priorities); continuous strategic and organisational planning; clear decision, implementation, information and assessment processes; strong focus on customers and what they value; organisational culture of innovation and continuous improvement; accountability based on results; openness to external collaboration and co-operation; attention to people.

Necessity for all of these conditions is not what is claimed here and certainly not sufficiency for them as a set. Institutional development will obviously be relative to institutional nature and circumstances as well as to a host of external forces. However, these may matter more than most others. It may be useful, therefore, to comment briefly on the importance of these conditions and to describe how some of them can begin to be created.
Institutional autonomy

If to have institutions which are responsive to change and developing continuously is an objective, these institutions must be given the freedom to act. Clearly, governments will want to play a significant role with respect to institutional mandates, accreditation, certification, levels and methods of funding, tuition, financial aid, audit and accountability, and system-wide policy and priorities.

However, within these broad guidelines and constraints, institutions must be free to act. The greater the degree of regulation and control, the less able institutions will be to respond to the kinds and pace of change referred to above, and the less likely it will be that they develop internally the systems they need to be strategic, adaptable, responsive, and nimble. Governments must authorise institutions to act in order to kindle in them the kind of responsiveness and initiative needed.

Before addressing the next condition, it should be made clear that the second, third, fourth and fifth conditions are strongly connected and constitute effectively an interdependent cluster of conditions. The discussion will therefore move back and forth amongst them.

Strategic leadership and management

Over the past decade George Keller, Philip Kotler, Peter Drucker and others have written highly influential works urging the adoption of sound business practices in the management of higher education institutions. In his book, Academic Strategy: the Management Revolution in Higher Education (1983), Keller makes a very strong case for the application of strategic planning methods in academic institutions.

The pursuit of academic strategy under vigorous strategic leadership is, in Keller’s view, central to institutional development. He characterises academic strategic planning and decision-making in the following ways:

-- Institutional leaders are active rather than passive about their position in history.

-- Strategic planning looks outward and is focused on keeping the institution in step with the changing environment.

-- Academic strategy-making is competitive, recognising that higher education is subject to market conditions, economic conditions and to increasingly strong competition.

-- Strategic planning concentrates on decisions, not on documented plans, analyses, goals and forecasts; it is action-oriented, asking constantly: "What shall we do? How shall we decide? Where do we put our energies and resources?"

-- Strategy-making is a blend of rational and economic analysis, political manoeuvring and psychological interplay; it is, therefore, participatory and highly tolerant of controversy.

-- Strategic planning concentrates on the fate of the institution above everything else; the vitality and excellence of the institution come first
The formulation of academic strategy in Keller’s conception results from a constant process of assessment, decision and action, based on six categories of institutional consideration: traditions, values and aspirations; strengths and weaknesses (academic and financial); leadership (abilities and priorities); environmental trends (threats and opportunities); market preferences, perceptions and directions; the competitive situation (threats and opportunities). In Keller’s view, these constitute the essential ingredients of the formulation of an academic strategy for an institution.

Keller’s work presents a useful first step because it points to matters which must be attended to if institutions are to be improved. These are only parts of the puzzle, however. Reflection on all of these categories of consideration will not yield necessarily a strategy; furthermore, it is clear that it is some particular institutional strategy which is needed as much as the development of constant processes of strategic management throughout the organisation.

Continuous strategic and organisational planning; decision, implementation, information and assessment processes

The third and fourth conditions will be discussed together because they are so closely linked.

If strategies are to lead to anything, they must be connected to other kinds of organisational planning, action and assessment. In A Guide for New Planners (1991), Donald Norris and Nick Poulton have analysed different kinds of planning and how they might be linked to provide for continuous institutional and organisational development. In addition to strategic planning, spanning all time horizons, they identify three related kinds of planning which inform the organisational planning process: long-term planning (encompassing a five-year horizon or more), tactical planning (one to three-year horizon) and operational planning (one year horizon).

Theoretically, these are connected in a cybernetic model which provides for continuous feedback based on the implementation and the assessment of results in view of key performance indicators. Creating what Peter Senge (1994) has called “learning organizations” seems right in theory, but it is difficult in practice.

Many institutions formulate plans, but fail to act on them or provide the resources to support them. Why does this happen with such frequency? A variety of reasons may be thought of, but three deserve to be highlighted, which are particularly fatal: the lack of participation in the planning by the people who must translate the plans into reality and, hence, a lack of awareness or understanding of them, or commitment to them; the failure to provide resources to support the strategy and plans in the operational or budget processes, which is a frank admission that no one takes the plans seriously; and a reluctance to translate the plans into specific goals and objectives with appropriate measures or performance indicators against which results can be assessed.

It is important for institutions to create clear, simple and, above all, practical processes for decision, implementation, feedback and assessment. Strategic management should be encouraged throughout the organisation. It should not be the province of a handful of leaders in a planning department. As important as these systems may be, it is very difficult to get them right.
For a discussion of strategic analysis in professional organisations such as higher education institutions, see Henry Mintzberg’s *The Rise and Fall of Strategic Planning*. His analysis of some common and fundamental fallacies regarding strategic planning is very useful.

**Strong focus on customers and what they value**

If the proposition that market forces will have increasingly greater consequences for institutions over time is accepted, then it will be in their best interest to improve their institutional capabilities to cope more directly with these forces. Over the last decade, several works have appeared which urge the applications of strategic management and marketing principles in the development of non-profit organisations.

In addition to his general studies on management, Peter Drucker has written recently on management in the non-profit sector in *Managing the Non-Profit Organization* (1990). In 1993, the Drucker Foundation published a set of self-assessment tools for non-profit organisations, including a useful workbook entitled *The Five Most Important Questions You Will Ever Ask About Your Non-Profit Organization*. Keller observes that the formulation of strategy and strategic decisions is participatory. This practical tool enables institutional leaders and others in the organisation to focus on fundamental questions of strategic importance which must be asked constantly at every level and by every major unit within the organisation.

These questions and the ancillary questions derived from each of them constitute a practical framework for developing the type of academic strategy for institutions which Keller urges. It is well worth to take a moment to reflect on them. They are not necessarily the kinds of questions which higher education institutions, more prone to self-assertion, are inclined to ask:

--- **What is our business (mission)?**

What are we trying to achieve?
What specific results are we seeking?
What are our major strengths?
What are our weaknesses?
Does our mission need to be revisited?

--- **Who is our customer?**

Who are our primary customers?
Who are our supporting customers?
Have our customers changed?
Should we add or delete some customers?

--- **What does the customer consider value?**

What do our primary customers consider value?
What do our supporting customers consider value?
How well are we providing what our customers consider value?
How can we use what our customers consider value to become more effective?
What additional information do we need?
-- What have been our results?

How do we define results for our organisation?
To what extent have we achieved these results?
How well are we using our resources?

-- What is our plan?

What have we learned and what do we recommend?
Where should we focus our efforts?
What, if anything, should we do differently?
What is my plan to achieve results for my group/responsibility area?
What is our plan to achieve results for the organisation?

It is possible that many people within higher education institutions would consider these questions wholly inappropriate for their work, and their resistance to them would be grounded in their objection to the provenance of the questions, the world of business, and more broadly, to any attempt to make institutions instruments of anything other than scholarly inquiry and detached judgment. However, these questions are, setting aside their particular formulation, fundamental for most human enterprise seeking to make a difference in the lives of others. Asking the right questions is as important to the improvement of a higher education institution as it is in other fields of endeavour. Higher education would do well to remember the point of the legendary dialogue between Gertrude Stein and Alice B. Toklas when Stein was facing death: "What’s the answer, Gertrude?"; "What’s the question, Alice?".

For a discussion of extending business methods, strategic marketing and management to universities and colleges, see: Philip Kotler and Alan Andreasen, *Strategic Marketing for Nonprofit Organizations* (1991) and Philip Kotler and Karen Fox, *Strategic Marketing for Educational Institutions*. This has particular relevance for institutions wishing to sharpen their skills and refine their methods of decision making in those categories of strategic consideration which focus on environmental trends, market preferences, and competition.

Organisational culture of innovation and continuous improvement

Complacency and apathy are enemies of institutional excellence. Academics are inclined to be radical in theory, but very conservative in practice. They wish to carry on in much the same way as their mentors carried on, and their mentors before them. And so they resist change, usually on the high grounds of academic freedom. These conservative practices, however, do not serve them well in a context of profound change which goes to the very heart of their enterprise. Is there any good reason not to believe that the best practices which other organisations use to ensure their effectiveness and the quality of their products and services might not also be beneficial to higher education institutions? Perhaps they will need modification to fit the particular circumstance of these institutions, or perhaps they will prove to be inappropriate for good reason, but to choose not to examine them or to try them is to choose ignorance, not excellence.

For example, a number of academic institutions are now experimenting with the application of quality management and service methods to improve their performance, some with conspicuous success.
The work of Patricia Cross (1988) on classroom assessment techniques in order to improve teaching and learning, although adapted from research rather than business experience, appears to be more than compatible with the spirit of continuous improvement programmes. What has been suggested throughout this paper is that in fact a number of organisational lessons, often formulated in universities and sharpened in the highly competitive world of contemporary business, might well have relevance for institutions such as those offering higher education, struggling to cope with immense change and rising pressures to respond.

Fostering and supporting a climate of innovation and continuous improvement, of continuous organisational learning in institutions of learning seems entirely appropriate. It is essential if these institutions are to move forward.

**Accountability based on results**

Any institution wishing to improve must be prepared to take a hard look at its results and adjust accordingly. If no-one within the institution can say what the intended results of the endeavour might be, what it is trying to achieve and whether it has in fact been achieved, then talk of excellence or quality or improvement is likely to be meaningless. Certainly, there are matters in higher education which are very difficult to measure or quantify, but this difficulty does not justify the avoidance of concentration on results.

Students, governments, businesses and industries do not hesitate to tell higher education the outcomes they seek. Over 95 per cent of the students who attend Mount Royal College in Calgary, Canada, state in entering student surveys that they want the skills and credentials they need to get jobs and pursue successful careers in the field of their choice. Since they are the primary customers of the institution, determining whether they in fact meet those objectives upon graduation is a matter of considerable concern and one of the results on which the College judges its performance. In order to find this out, the College surveys its graduates six months after they have completed their course of study. During the peak period of unemployment in Canada in 1991-92, 87 per cent of Mount Royal graduates were employed six months after graduation, 80 per cent of them in fields for which they had explicitly prepared. This is down slightly from the College’s average over several years of approximately 90 per cent.

At Mount Royal, programmes intended to prepare students for the workplace and not performing effectively are placed under review so that it becomes possible to determine why they are failing to meet their objectives for students. If the decline is a consequence of a temporary change in the labour market, the admission quota for the programme may be adjusted; if the change in the labour market appears to be permanent, the programme may be revised or eliminated altogether and a new programme may be brought on stream to respond to a different niche in the labour market. There might well be other problems with the programme which the responsible department will attempt to rectify in light of the review and consultation with the programme advisory committee, which has on it representatives of appropriate businesses or industries as well as faculty and students. This is simply one illustration of how important results and assessment are to institutional improvement.

**Openness to external collaboration and co-operation**

In the environment described earlier, institutions not actively pursuing collaboration with other institutions, developing partnerships with their regions or communities and with the businesses and industries which predominate in them are probably stagnating. The purposes of such alliances are many
and varied: community and economic development, work study placements for students, faculty and student mobility amongst academic institutions for international learning, exchanges between business and industry and the academic community for faculty and programme renewal, joint and applied research projects, consulting services, small and medium-sized business development, contract training, joint venture training, mutual advice on programme advisory committees and boards, and networking including the development and support of flexible business networks, and the sharing of best practices, to name only a few. These forms of co-operation are, generally, mutually beneficial. From the perspective of a higher education institution, the motivation is obvious: institutional development.

A recently published report of the Industrial Research and Development Advisory Committee of the European Commission (IRDAC) entitled *Quality and Relevance: The Challenge to European Education -- Unlocking Europe’s Human Potential* (March, 1994) underscores the critical importance of this point. Amongst the key conclusions of the report are the following:

"For Europe’s economy to remain competitive and maintain the prosperity of its citizens, the only valid response is innovation and quality. Education and training systems have a central responsibility in this matter and must react flexibly and appropriately to the changing economic environment. Overall, an adequate response to industrial change can only be achieved through *enhanced collaboration between education, institutions and industry*. Establishment of industry-education partnerships will be vital for Europe’s future”.

It is possible to illustrate the value of business and education working together with another example from Mount Royal. For some years, Canadian higher education institutions had expressed the concern that Canadian companies were being unclear and confusing about the qualities they were seeking in graduates. The Conference Board of Canada, together with twenty-eight leading Canadian corporations, conducted a study of Canadian business and industry to clarify what skills Canadian companies wanted in the people they hired. The results of the study were released at the 1992 national "Business and Education Working Together" conference, an annual event sponsored by the Conference Board, in the form of an *Employability Skills Profile*. This document specifies clearly the skill sets sought by Canadian corporate employers in the decade ahead. Mount Royal College ordered a thousand copies of the document, which the academic vice-president and president distributed and discussed in personal meetings with each academic faculty to ensure awareness and to encourage instructors to develop programmes and courses enabling Mount Royal students to develop these skills and become, thereby, more employable.

Another illustration may be mentioned briefly. Research indicates clearly that the most significant engine of economic development and job creation is small business. A few months ago, Mount Royal College opened a small business development and entrepreneur training centre to provide people who are unemployed with the opportunity to acquire the skills, the information and the support they need to start their own businesses and create thereby jobs for themselves, and perhaps others, while developing the economy. The centre is being established with the collaboration and the support of partners in the business community. No funds have been requested or provided by government.

**Attention to people**

If this condition has been placed last, it is because of its summary importance. Institutions of higher education, of whatever stripe, are essentially groups of people organised around common purposes, functions or interests: learning, scholarship, research, teaching, training. People make institutions.
Any attempt at institutional development or reform must begin with that fact and keep it constantly in view. It is possible to focus on abstractions, the whole or the sum of the parts, the systems and structures, the plans, and forget that, in this case, the parts are people, and that these people will determine what institutions become and how effectively they meet the needs they are supposed to fill. All of the things planners and decision-makers wish to happen must be wrought by people; without them, none of it will happen. People are the essence of institutions.

What do people want from their institutions? Many things, of course, but if organisational behaviour of fundamental importance to post-secondary institutions must be identified, three interdependent factors should be mentioned: integrity, honest communication, and trust. These are very difficult to build in an organisation and very easily damaged or lost. They are, however, crucial. As Donald Walker has observed: "Almost anything will work when enough trust is present. Without it, nothing works".

If an institution chooses good people, develops together with them a strong sense of common purpose, value and priority; provides for itself effective systems of organisational communication, planning and assessment; enables, authorises and supports these people well; then they will virtually ensure the improvement of the institution and its responsiveness to change. They will create intelligent enterprise.

**Recommendation**

The theme of this seminar is "Professional and Social Competence". Institutional development should be about just that: the enhancement of professional and social competence through the continuous improvement of institutions and the educational programmes and services they provide. In the language of the IRDAC report, "an adequate response to industrial change can only be achieved through enhanced collaboration between education institutions and industry". Inasmuch as partnerships between industry and education constitute an opportunity for institutional as well as industrial and economic development, consideration ought to be given to multi-country projects which focus on institutional development through such partnerships.
Notes

1. I was invited to attend this seminar on the topic of the development of higher education institutions from the perspective of the presidency of one of them: Mount Royal College in Calgary, Alberta, Canada. Consequently, this paper is not a research paper but rather the work of a "reflective practitioner", to borrow a phrase from Donald Schö (1983). In writing it, I have tried to answer from personal experience a number of practical questions an academic administrator faces with respect to institutional development: What works? What does not? What is it important to concentrate on? What are some useful ideas and practices? It is unusual for someone in a presidency to have time or opportunity to try to order his or her thoughts on such matters even in a very modest way. For that opportunity, I wish to express my appreciation to Ian Whitman, of the Project Secretariat at the OECD.


7. Kotler’s first work in this regard, written in collaboration with Alan Andreasen, Strategic Marketing for Nonprofit Organizations (1991) begins with an attempt to persuade public and non-profit institutions of the importance of the development of a customer orientation and provides an introduction to the elements required to create strategic management and marketing capabilities. Public educational institutions figure in the cases and examples.

In 1985, Kotler co-authored with Karen F. A. Fox a book directly aimed at universities and colleges: Strategic Marketing for Educational Institutions. This book attempts to provide a guide for institutions wishing to understand markets and marketing and their application in higher education.
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