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A paper presented at the Structural Reform and Transformation of Organisations and Business Conference, Homerton College, Cambridge, 03 - 06 Sep 2003.

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Managing Education Policy in Globalised Knowledge-Based Societies: Lessons from Hungary

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Abstract

Increased flows of information and the enhanced use of information, computer and telecommunication (ICT) technologies are seen as having major implications for those managing education and training policies, especially within resource scarce transitional economies. After reviewing a number of characteristics associated with progressively globalised and knowledge-based societies and relevant to educational/training initiatives, the Hungarian experience is considered in some detail. This analysis prompts a more focused debate on the effective management of educational and training policies in contemporary societies, especially those engaged in transition. Although the growth of knowledge based societies would seem to be imposing a relatively uniform set of challenges for education/training managers in all modern economies, effective implementation of these policies arguably demands a degree of customisation to account for the particular socio-cultural contexts existing within Hungary and the other transition economies.

1. Globalisation and the growth of knowledge-based societies

Globalisation is much talked about in the media, and has been approached from the perspective of at least four academic disciplines, within each of which it tends to take on different characteristics. Economists focus on the growth of international trade and the increase in international capital flows whereas political scientists view globalisation as a process that leads to the undermining of the nation state and the emergence of new forms of governance. Sociologists view globalisation in terms of the rise of a global culture and the domination of the media by global companies in contrast to international relations experts who tend to focus on the emergence of global conflicts and global institutions. Certainly the world is seen as becoming increasingly interconnected as the result of economic, political, sociological and

cultural forces so that a one-dimensional view of globalisation, which thinks purely in terms of market forces, is likely to result in only a partial picture at best.

Some argue that globalisation is a long-standing phenomenon and not really anything new, pointing out that world trade and investment as a proportion of world GDP is little different today from what it was a century ago and that international borders were as open at that time as they are today with, proportionately, just as many people migrating abroad. However those who believe that globalisation really is a new phenomenon tend to agree that at least three key elements are commonly involved.

- *Shrinking space.* The lives of all individuals are increasingly interconnected by events worldwide. This is not only a matter of fact but one which people increasingly perceive to be the case, recognising that their jobs, income levels, health, and living environment depend on factors outside national and local boundaries.
- *Shrinking time.* With the rapid developments in communication and information technologies, events occurring in one place have almost instantaneous (real-time) impacts worldwide. A fall in share prices in Wall Street can have almost immediate consequences for share prices in London, Frankfurt or Tokyo.
- *Disappearing borders.* The nation state and its associated borders seem increasingly irrelevant as 'barriers' to international events and influences. Decisions taken by regional trading blocs (e.g. EU, NAFTA) and supra-national bodies (e.g. IMF, World Trade Organisation) increasingly override national policy making in economic and business affairs as well as in other areas such as law enforcement and human rights.

Management specialist Stephen Kobrin (1994:497-8) describes globalisation as driven not by foreign trade and investment but by information flows. It is this latter perspective, which sees globalisation as a process inextricably linked with the creation, distribution and use of knowledge and information, which is the focus of this paper and which has such profound implications for the management of education policy. Many contributors to the globalisation debate regard the technological convergence of information, computer and telecommunications (ICT) technologies in the late twentieth century as having acted as a key catalyst in the rapid growth of these information-based activities, seen here as the hallmark of the globalised economy (Baldwin et al 1995; Held *et al* 1999).

Contemporary discourse often seeks to express globalisation in terms of the exponential growth in the creation, processing and dissemination of knowledge and information. For example an 'index of globalisation' recently compiled jointly by the Carnegie Foundation and AT Kearney (a global consultant) gives considerable weight to the proportion of national populations online as well as to the number of internet hosts and secure servers per capita. These indicators of access to information

technology and associated information flows are seen here as proxy variables for 'global openness', to be used in association with the more conventional indicators of investment, capital flows, foreign income as a proportion of national income and convergence between domestic and international prices when compiling the overall globalisation index (Walker 2001). Singapore was recorded in the 2000 index as the 'most globalised' country, helped by the fact that its recorded outgoing telephone traffic at 390 minutes per head per year was some four times as much as in the US. Sweden (ranked third) recorded some 44% of households online whilst Finland (ranked fifth) had over 70 web - connected servers (internet hosts) per 1000 people whilst Swiss citizens (ranked fourth) spent 400% more time on international phone calls than Americans. Table 1 outlines the rapid growth in some selected knowledge and information-based indicators.

Table 1 Globalisation: Selected indicators, 1995-2000, annual percentage change and US\$ (billions)

Table 1 Globalisation: Selected indicators of information technology (IT) use

Country	IT/GDP (in percent)		IT per capita (Nominal US dollars)		Personal Computers (per 100 people)		Telephone lines (per 100 people)	
	% Change 1992-99	1999	% Change 1992-99	1999	% Change 1990-2000	2000	% Change 1990-2000	2000
<i>Developing</i>								
Argentina	1.0	3.4	78.0	294.3	4.4	5.1	12.0	21.3
Brazil	2.3	5.8	199.4	267.4	4.1	4.4	8.4	14.9
Chile	1.1	5.7	121.8	321.0	7.5	8.6	15.5	22.1
China	3.0	4.9	465.7	37.9	1.6	1.6	8.0	8.6
India	1.8	3.5	220.8	15.4	0.5	0.5	2.6	3.2
Malaysia	2.1	5.5	61.8	168.4	9.7	10.5	12.2	21.1
Mexico	5.2	1.0	30.6	231.8	4.3	5.1	6.0	12.5
Philippines	0.9	2.7	82.6	33.6	1.6	1.9	2.9	3.9
South Africa	1.8	7.2	49.5	240.6	5.5	6.2	3.2	12.5
<i>Advanced</i>								
Canada	1.6	5.3	31.6	1,808.7	28.3	39.0	11.1	67.6
Denmark	1.0	4.5	45.3	2,540.3	31.6	43.1	13.8	70.5
France	0.8	3.8	27.5	1,706.6	23.4	30.5	8.5	58.0
Germany	0.9	4.1	29.4	1,699.9	23.4	33.6	16.0	60.1
United Kingdom	0.7	4.7	52.0	1,979.5	23.0	33.8	12.6	56.7
United States	0.9	5.2	57.9	2,792.1	36.8	58.5	12.8	67.3

Sources: adapted from World Economic Outlook 2001, OECD and World Information Technology Services Alliances, Digital Planet, 2001.

Nevertheless others have argued that 'globalisation' is merely a contemporary catch - phrase for what in reality has been a long-established process in the growth of knowledge and information. Adams, an American historian, claimed as early as 1918 to have observed an exponential growth in various aspects of knowledge, subsequently formulated as 'Adam's Law of Acceleration of Progress' (see Rescher, 1978). Similarly Rider (1944), investigating the stock of books of American Universities over the period 1831 – 1938, found the stock to have doubled every 22 years, whilst the stock of the pure research universities doubled every 16 years, resulting in growth rates of 3.2 and 4.4 per cent per annum respectively. Price (1961) using similar indicators estimated the annual growth rate of the stock of knowledge to be rising at 6.5 per cent per annum. Later writers (Machlup 1962, Bell 1973, Gershuny 1978) have identified these patterns and trends as being part of an inexorable process towards 'maturity' as developed economies pass through industrial and service sector stages and towards 'post industrial' societies. The acquisition and codification of theoretical knowledge, giving rise to a host of information-related activities, is seen as a key characteristic of such post-industrial societies.

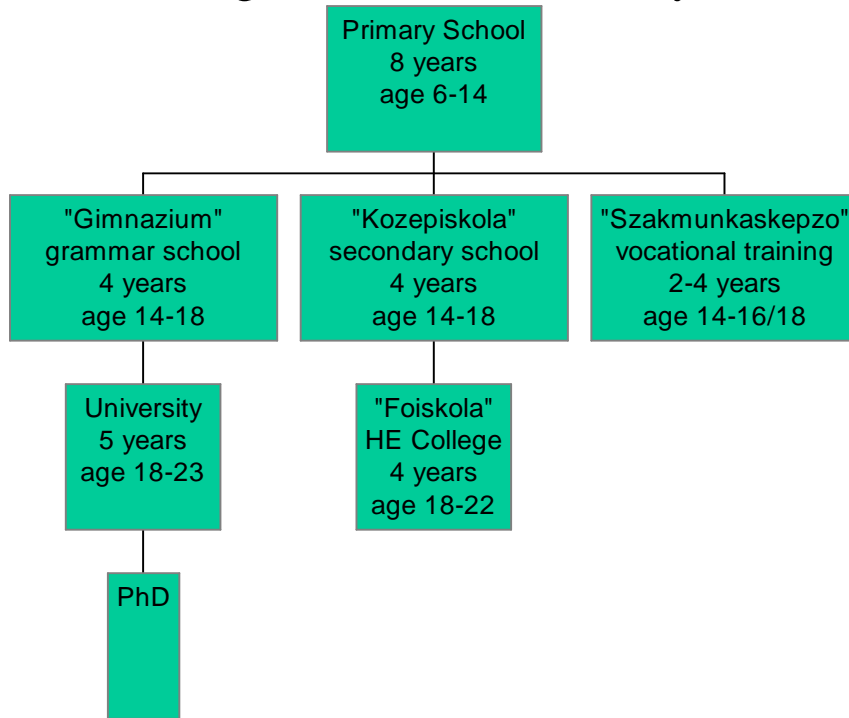
A key issue for those engaged in devising and managing education and training policy is to assess the implications for such policies of patterns and trends within globalised knowledge-based societies. This task is particularly acute within the resource constrained transition economies, where the educational and training policy prescriptions must account not only for the new requirements of post-industrial societies, but must simultaneously redress existing problems at either extreme of provision, whether undereducation or even the alleged existence of 'over-education'. Before returning to such questions, we might usefully look in some detail at the current educational, training and labour market experiences of one such transition economy, namely Hungary.

2. Hungarian educational system

In terms of education, participation rates are 98% in primary school (8 years, compulsory), 60.3% in secondary school (4 years, non-compulsory) and 21% in further education, as a percentage of the population of corresponding age (Hungarian Ministry of Education). A diagrammatic summary of the Hungarian educational system is presented in Fig. 1.

Fig.1

The Hungarian Education System



The area which has seen the most dramatic changes has been higher education, with the amalgamation of many specialised colleges into universities reducing the number of higher education institutions from 89 (55 state, 28 church and 6 foundation institutions) to 62 institutions (30 state, 26 church and 6 foundations). The objective of such rationalisation has been to create greater co-operation and efficiency (Act LII, 1999, Restructuring the Institutions of Higher Education) in a context in which the number of students in higher education is expected to carry on increasing. The structure of higher education finance allocates funds to institutions based on the number of students they admit, providing institutional incentive to expand even if this means lowering entrance criteria.

The political objective of increasing the proportion of young people in higher education to 50% (currently around 28%) is also fuelling the current expansion. The belief that a higher educated population will facilitate higher economic growth (e.g. Solow 1980) is motivating this drive for additional education. Although this target does not mean a doubling of absolute numbers in higher education because of the dramatic decrease in the youth population, it is still a demanding target. Many have criticised it as a purely political target, with no economic basis, which may even be detrimental if quality suffers as a result and the labour market becomes saturated with overeducated individuals.

The 'over-education' debate

In today's knowledge-driven world, it is a widely held view that all education is beneficial. However, economic theory and analysis can show that (at least in economic terms) there *is* such a thing as too much education, from both an individual and national perspective. Over-education refers to situations in which people are employed in jobs for which their educational attainments are wholly or partly superfluous and is often interpreted as a failing of the market system.

From an economic standpoint, the inability of graduates to find jobs which make full use of their human capital is a significant source of inefficiency. It also has a number of social side-effects, most importantly of disillusionment and job dissatisfaction. The fact that there are numerous examples of university graduates working as secretaries or estate agents suggests that over-education is a very real phenomenon and contradicts the classical view of the labour market, which maintains that complete efficiency prevails. Interestingly, although over-education is normally associated with college or university graduates, they are but one of the groups likely to 'suffer' from it (Duncan and Hoffman, 1981). It is also important to note, that Eckaus (1964) suggested that it was not very helpful to look at over-education purely from the economic point of view. He criticised the use of rate of return criteria for education and suggested an alternative approach. He suggested that by calculating current requirements for education as an investment which creates productive factors, extrapolation of future requirements would be possible. His method allows for a classification of all employment by education type and therefore to find the requirements, sector by sector, of the levels of education needed. This would not take into account the amount of education that had actually given, but instead produce a value for the amount that can be efficiently used in operating the economy.

Human capital theory would explain education growth in terms of the incentives to individuals derived from a direct relationship between the net pecuniary returns and the level of investment expenditure in education. Signalling theory (e.g. Spence 1973) would point to increased labour market efficiencies resulting from experience indicating a close correlation between the possession of educational certificates and productivity in the jobs to which those certificates give ready access. However a

recent paper by Kramer (2000) showed that, in Hungary, economic factors play only a small part in such investment decisions, with sociological factors such as prestige and respect often outweighing any perceived economic benefits. For example the prestige associated with holding a degree in Hungary has a long historical tradition in evoking class consciousness, even during the communist era. The type or subject of the degree has tended to be of secondary importance – the holding of the degree itself having been the key element in social stratification and the main motivator for further study. Kramer also found that students opting to study arts and humanities often had no idea as to what they might do upon graduation, again suggesting that economic considerations may not have been foremost in their minds.

It would seem, overall, that economic factors are playing an increasing role in shaping educational decisions within Hungary, especially with an increasingly competitive labour market. However, the long historical and cultural associations of education within Hungary would seem to provide significant scope for apparently ‘irrational’ behaviour by those whose main motivation for study is directed towards the consumption element of education and who base their choice of subject on factors unrelated to pecuniary rewards.

Higher education in Hungary

In Hungary, around 180 thousand young people graduate from universities or HE colleges every year. Whether the labour market demands too much or too little educated labour might be inferred from changes in wage rates, if we assume a competitive wage - setting model. Although OECD data is only available for Hungary since 1996, the figures since then indicate that the relative earnings of men and women who have completed tertiary education have been rising in relation to the norm for upper secondary education. Table 2 shows the most recent data on relative earnings for Hungary and other selected countries.

Table 2 Relative earnings of persons aged 25-64 with income from employment (upper secondary education = 100), following tertiary (university) education

Country	Year	Men + Women	Men	Women
Hungary	1999	184	218	159
Holland	1997	141	139	143
United Kingdom	1999	157	149	173
Spain	1996	167	178	155
United States	1999	173	176	163

Source: OECD Education at a Glance, 2001

It is interesting to note that the relative wages of the more highly educated are significantly further above the designated ‘norm’ (here the average wage of those completing upper secondary education) in Hungary, especially for men, than in the

other countries represented in Table 2. This would suggest a very strong monetary incentive within Hungary for attaining a university qualification. However, since not all graduates find employment, it is also important to look at the probabilities of graduate unemployment vis-à-vis non-graduate unemployment.

Table 3 Labour force participation rates and unemployment rates by level of educational attainment and gender for the Hungarian population aged 25-64 years

M/F	Labour force participation rates (%)				Unemployment rates (%)			
	<Upper secondary	Upper secondary	University	All levels	<Upper secondary	Upper secondary	University	All levels
Men	48	83	88	74	12.6	6.0	1.5	6.5
Women	35	68	79	57	9.5	5.2	1.1	5.4

Source: OECD Education at a Glance, 2001

It is clear from Table 3 that labour force participation rises with educational attainment, from around 35% for women with less than an upper secondary education, to 88% for men with a university degree. Similarly the probability of those participating in the labour force being unemployed is also greatly reduced for the highly educated, the differences being especially visible for men. The above data would seem to suggest that if one wishes to maximise the probability of participating in the labour force and to minimise the probability of being unemployed having done so, one should aim to attain higher educational qualifications.

So far we have focussed on the *supply* aspects of highly educated individuals to the Hungarian labour market. It may be useful also to ascertain whether there is indeed a sufficient *demand* for these highly educated workers in the Hungarian labour market. This is a difficult task and especially so within Hungary where very little empirical work has been done on the notion of a mismatch between jobs and individuals. However Polonyi and Timar's (2001) work on the higher education system points out the real possibility of over-education among graduates, estimating (from graduate surveys and census data) that of the 590 thousand active graduates in the labour market, some 13 thousand are unemployed, with a further 40 thousand inactive and up to 60 thousand in occupations that require only an upper secondary education or less, suggesting an over-education rate of around 10%.

A recent study, carried out under the partly EU-funded Tempus Foundation (2001) provides further empirical results regarding the labour needs of Hungarian firms. This survey was carried out in 400 domestic firms, covering 312,200 employees, and although the sample is not random, due to the separation of firms into geographical regions (North-West and South-East), but it does still present an illuminating account of what employers are looking for. The results are based on an extensive 14 page questionnaire, which asked employers to rank the qualities they hold "most

important” in their workforce. The answers reveal that for the majority of their workforce, the most important attributes identified by employers are those of reliability and unquestioning adaptability. Abstract or lateral thinking were consistently ranked very low, perhaps implying that the skills gained from many non-vocational qualifications and degrees are often perceived by employers as unnecessary or even undesirable. The survey concluded that Hungarian firms still view most of their workers as “production line machines”, who should think only as much as is necessary to perform their particular tasks competently, and who should exhibit a strong desire to do well in their given tasks and only in their given tasks. However, towards the upper end of the organisational structure, employer questionnaire results gave some indication of more advanced personal skills being demanded.

The low human capital equilibrium suggested by this study would seem to point towards the need for an improvement of information flows between educational institutions and firms. Although the vocational skills afforded by many degree subjects such as engineering would seem to be highly valued – other skills, such as abstract thinking and problem solving, arguably need to be appreciated more by employers, especially in today’s knowledge-based societies. We return to this issue below.

Questionnaire based survey

The following results are derived from the authors’ own questionnaire based survey which asked respondents to give details of their educational record and their current job status, and furthermore enquires as to what sort of qualifications they need to do their job competently. This method is based on the widely used self-assessment format of Battu *et al* (1997) and Groot and Massen van den Brink (1996).

Some 233 responses were received to a non-random sample involving respondents in full-time employment and possessing higher educational qualifications. The results are summarised in Table 4 below.

Table 4 Summary statistics of questionnaire respondents

	Men	Women	Total
No. in sample	135	98	233
Age distribution			
20-25	16	14	30
26-30	32	36	68
31-35	28	14	42
36-40	18	16	34
41-45	23	6	29
46-50	8	5	13
50+	10	7	17

Total	135	98	233
Degree type			
University	86	40	126
HE College	49	58	107
<i>Overeducated</i>			
No. in sample	24	22	46
As percentage	17.9%	22.4%	19.7%
Years in current job (for overeducated sub-sample)			
≤1	5	14	19
≤3	14	6	20
3+	5	2	7
Degree type (for overeducated sub-sample)			
Science/numerical	19	8	27
Arts/humanities	5	14	19

Of the whole sample, some 19.7% of respondents claimed to hold qualifications which are superfluous for their jobs, with such perceived over-education being a lower proportion among men (17.9%) than women (22.4%).

Looking at the responses of the overeducated in more detail, some 42% of those perceiving themselves to be overeducated were less than 30 years old of age. A further observation is that the majority of the overeducated have not been in their current jobs for very long. Some 20.8% of men and 63.6% of women had been in their current position for a year or less, while 79% and 91% respectively had been in their current position for three years or less.

Looking at the types of degree that the overeducated hold, it appears that a slight majority are university educated (54%), perhaps reflecting the relative unsuitability of university degrees, which are purely academic and last 5 years for all subjects. However, it may also be related to a phenomenon specific to the Hungarian education system – namely the possibility of a degree top-up, whereby a college degree can be upgraded to a university one with two years of postgraduate study. In this sample, 20% of the overeducated had both a college and a university degree, which is most likely the result of a top-up. This is popular because of the perceived superiority of university degrees and is mainly undertaken by two groups of people; those who initially fail to achieve the required entrance exam marks to get into a university and who spend four years at a college before spending two more years to upgrade to a university qualification; and those holding college degrees who are already working and feel that a university degree “might be useful along the way” (a very common way of thinking about education in Hungary), taking part in the top-up course part-time or through distance learning. The existing literature on over-education might lead us to expect the majority of the overeducated to be graduates of

arts or humanities subjects. However in this sample over half (58.7%) of the overeducated individuals held science, engineering or business-oriented degrees.

Overall, this sample reveals that over-education is perceived to exist to a considerable extent among Hungarian graduates and that the overeducated are more likely to be female and in their current job for a relatively short time. These patterns are similar to those observed in the advanced market economies, implying that although their labour markets differ in many respects from those in the Transition Economies, an element of mismatch is present in both cases.

3. Education and training policy issues

A number of important issues involving the effective deployment of scarce educational/training resources stem directly from the structural changes already noted towards global, knowledge based societies and our case materials on the Hungarian experience.

- *Appropriate curriculum content*

Throughout the curriculum attention needs to be given to the acquisition of the more cognitive skills of knowing why and how to learn, rather than fact based procedural knowledge. The World Development Report, 2001 suggested that procedural knowledge, i.e. knowledge about facts, is becoming progressively less important in the modern, information-rich economies. The emphasis is switching towards knowing why and understanding the basic principles which can then be applied flexibly to a range of new situations. The increased importance given to such cognitive knowledge and to the skills needed for its acquisition, are placing education and life-long learning at the centre of governmental policy initiatives in modern economies.

Using the following classification of ‘types’ of knowledge proposed by Forray and Lundval (1996), the curriculum content should be progressively designed to support knowing ‘why’ and, to a lesser extent, ‘how’ and ‘who’ (in the sense of teambuilding skills) rather than overemphasising knowing ‘what’ as has been the priority in the recent past.

- *Knowing what*: procedural knowledge which involves the transfer of codified knowledge into facts;
- *Knowing why*: cognitive knowledge involving an understanding of basic principles, rules and ideas;
- *Knowing how*: knowledge that derives from direct experience or ‘know how’;
- *Knowing who*: knowledge that involves the ability to communicate and work in teams

At higher levels of learning in Hungary, fragmentary evidence suggests that labour market returns (higher relative wages, higher levels of employment, lower levels of unemployment) are directly related to levels of educational attainment, and more so than for the other comparator countries in Table 4 above. It may be that the historical and cultural factors responsible for some of the 'over-education' identified in Hungary, may at the same time have encouraged a less mechanistic, fact based and vocational perspective in higher education, to the benefit of more generalised processes of cognitive thinking more attuned to the needs of knowledge based societies.

Whatever the merits of the above proposition, Hungary and other Transition Economies must clearly seek to bring the types of knowledge conveyed explicitly and implicitly throughout the curriculum and at all educational levels into line with the needs of modern knowledge based societies.

- *Overcoming the digital divide*

Crafts (2001) and others have noted a close association between rates of economic growth and participation in ICT technologies which are supporting the global flow of information and reducing many of the constraints to global communications previously related to time and spatial distance. The World Employment Report (2001) has been rather more specific in identifying some of the factors underlying the gains in economic efficiency and productivity via participation in ICT within knowledge based societies.

- Improved functioning of markets through lower transaction costs, providing easier and cheaper access to information on goods and services and resulting in greater efficiency in the allocation of resources;
- Quality improvement and frequent changes in product and process design which ICT permits through more precise monitoring, faster speed of operations and better knowledge of customers;
- Managerial improvements including improved decisions through better and faster marshalling of information;
- Savings on material costs, energy and inventories, due to ICT facilitating just-in-time management;
- Faster and more efficient working of the financial sector as ICT results in quicker access to information.

The same report also points to the potential of ICT in supporting the development strategy of 'leapfrogging', i.e. bypassing some of the processes involved in the accumulation of human and fixed capital investment in order to narrow the productivity gaps that separate the advanced industrialised and the developing/transition economies.

Access to ICT technologies at home and work remains restricted to the more educated and higher income groups in most countries, whether developed or in transition. For example households with a 'head of household' possessing a university degree in Canada were more than twice as likely to regularly use a computer than in cases where the head of household had only completed secondary education (OECD, 2000). Although by no means a panacea, increasing internet connectivity in schools, colleges and community centres has been an important policy mechanism for overcoming this digital divide in developed and transition economies. Estonia achieved 100 per cent connectivity in its school system in 2000, with Chile meeting the same criteria in 2001 for its secondary schools, though primary schools lag behind at around 50 per cent. Of course internet connectivity *per se* is an imperfect indicator! For example although all Portuguese schools have been connected to the internet with the help of EU funding since 1998, actual access is restricted by the high number of students per computer (around 40 students per computer in 1998 for secondary schools and over 100 students per computer for primary schools).

- *Broad-based literacy initiatives*

A well-educated workforce has been shown to be a prerequisite for harnessing the use of ICT technologies in developing countries such as India, the Philippines and elsewhere. However many of the statistical relationships established often identify broad-based initial levels of educational attainment as the key independent variable. For example differences in school enrolment (% of school-age children actually attending school) are closely correlated with various indicators of ICT usage. A major report of the International Labour Office (ILO 2000) found a close and positive correlation ($r = 0.77$) between the percentage of school enrolment and the number of internet hosts per 1000 population.

Although Hungary has a participation rate in primary schools as high as 98% and in secondary and further education over 81%, there can be no grounds for complacency. A survey of OECD and Central European Countries (Hudson 2001) found that, in 14 out of 20 countries surveyed, at least 15% of adults had only literary skills at the most rudimentary level, making it difficult to cope with the rising demands of the information age'. In the countries surveyed, from one-quarter to an astonishing three-quarters of the adult population failed even to meet the literacy standard of Level 3, defined as the minimum for coping with the demands of modern life and work, i.e. capable of participating fully in the knowledge and information society.

- *Skills training and lifelong learning*

It has been pointed out that by 2010, over 80 per cent of the workforce in the EU will have received their formal education and training at least a decade earlier. In a rapidly evolving ICT context, the ability of workers to find and retain a job will increasingly depend on their possessing appropriate 'foundation skills' that are transferable in terms of job flexibility and which can be regularly updated. These 'foundation skills' must, of necessity, extend beyond those required in the ICT sector itself, which employs less than 5 per cent of the workforce across most OECD countries. Clearly a key policy focus must entail the provision of adequate numbers of those with these skills, which include the ability to learn, to communicate and to analyse and solve problems.

In addition a set of more technical skills related to ICT applications must be fostered across a broad range of sectors of modern knowledge-based societies. A recent IDC report for Microsoft (World Employment Report 2001) identified three broad categories of these more technical ICT related skills.

- *Internet working environments*: skills that enable internet technology to connect to business environments
- *Technology neutral environments*: skills for aligning IT processes with business processes
- *Other technology environments*: skills centred around host-based, distributed applications.

The highest labour demands have been found to occur in these latter two categories, involving a broad range of technical support personnel.

4. Effective management of educational/training policies

A key question is, of course, how these or other educational/training policy prescriptions for knowledge based societies can be effectively implemented in the transition economies. A number of authors (Illes and Rees 2001, Hollinshead and Michailova 2001) have expressed concerns as to the pressures exerted on transition economies to adopt wholesale western oriented education/training initiatives that may be unsuitable to their particular socio-economic context. For example Hollinshead and Michailova demonstrate quite clearly the problems faced by Western trainers and Bulgarian managers in drawing up training programmes. They showed how the underlying premise of course designers was that 'capitalist logic possesses universality of application which needs little or no translation in its application to newer market economies. It is taken to be self-evident that "strategic" modes of thinking are appropriate for managers in privatised settings.'

The Bulgarian experience of this training was usefully summed up by a participant:

'There were only a few links with Bulgarian reality, but I don't think that this can be expected from the Western teachers. First of all, they know nothing about Bulgarian practice, and secondly, Bulgaria is a

peculiar country that is stuck on its transition between socialism and capitalism. Our economy does not provide typical examples to illustrate Western theories. It would be much better if the teachers knew just a little about Bulgaria. The lack of this type of knowledge made the training difficult, especially for people who were not able to speak English or who were not economists.'

This picture of miscommunication perhaps highlights some of the very real problems experienced by transition economies, which are undergoing, in a period of a decade, change that has taken over 200 years in other countries. It must be remembered that much of the training and development that is imported from the West is underpinned by thinking within Western economic systems of logic which supports the view that 'knowledge' is a package that can be owned and transported. It is dangerous to ignore the critique of such a view that alternative management theorists have been discussing for over two decades (e.g. Alvesson and Willmott 1992, Rees 2003) wherein knowledge is considered to be socially constructed and intimately interlinked with power relationships.

A more fruitful way of conceptualising this dilemma may be to take into account the role of the learner in the process of 'transfer', thus moving on from a largely static notion of knowledge 'transfer' to that of 'translation', with its emphasis on a process of dynamic and interactive adjustment. This approach is certainly in line with the work of the social scientist Elias (1994) and his focus on synthesising centuries-long historical perspectives with contemporary theoretical developments as a pre-requisite for gaining meaningful insights into organisational practice in particular cultural settings. For example Beracs (2001) advocates creating 'flexible organisational forms' (e.g. use of matrix structures) within Hungarian Higher Education institutions in order to internationalise the higher education market. But what would really constitute a 'flexible organisational form' for a population who, for over 40 years, have experienced only paternalistic command and control structures? Some adaptation to the conventional, western oriented structural models would seem apposite if the 'learners' perspectives are to be accommodated in this particular case of knowledge 'translation'.

Csepeli (2000a and b) takes this point further by outlining some of the socio-psychological Hungarian characteristics induced by historical learning experiences: authoritarianism; paternalism; learned helplessness; culture of complaint; enslaving liberation; negative identity; doublespeak; endurance; passivity. Illes and Rees (2000) also note how, as a result of its history, the Hungarian personality is shaped by characteristics of passivity and resistance. Over the centuries, Hungarians have developed a sort of 'learned helplessness' which made it impossible for the individual to believe in the possibility of controlling his or her destiny through internalised drives such as motivation, effort, knowledge or skills. According to data,

even among the young, there is great fear that what little they have gained from the West will be lost, with one in five young people believing that there is no way that the country can prosper (Wolf, 2000).

The following discourse usefully exemplifies some of these points in an educational context. The Hungarian name for student, '*hallgato*', means, quite literally 'listener'. Even today, in the MBA classroom, it is highly unusual for the teacher to be questioned. Traditionally sitting on a platform, the teacher talks, and the students listen and don't like to interrupt. Indeed, teachers do not expect to be interrupted – and if they do then this means that he or she is incomprehensible. The professor does not make mistakes. If the professor invites a question, students are reluctant to stand out on their own. To do so would be to break a pattern. If they ask a question then they disclose their lack of knowledge. Students study and listen, teachers know and talk. The system of delivery is based on the old German system, and just as officers give orders, so the private obeys the orders. Whilst there are some real advantages to this system, in a modern world it has drawbacks. When this is linked to the survival of a paternalistic state, and to a typically pessimistic Hungarian personality, then little learning can take place (Csepeli 2000 a and b, Illes and Rees 2000). The implication is that if Hungary is truly to emerge from the 'shadow' of her history, then the educational system needs reform that does more than merely emulate the structural reforms of the West.

The need to customise education and training approaches and 'packages' to Eastern European audiences is further supported by the work of Bakacsi *et al* (2002). They place Hungary within a cluster of countries comprising Albania, Georgia, Greece, Kazakhstan, Poland, Russia and Slovenia seen as characterised (using Geert Hofstede's seminal classification) by high power distance, high family and group collectivism and high uncertainty avoidance. Returning to our earlier example of MBA and management training courses it would be unrealistic to expect courses predicated on audiences exhibiting highly individualistic, low power distance and weak uncertainty avoidance traits to be equally effective in Eastern European settings! Adaptation to learner requirements in such countries must take account of these socio-cultural realities, despite the authors' prediction that the ongoing transition process may eventually result in some convergence of such societal practice 'scores' with western oriented economies over the next five or ten years.

References

- Alvesson, M. and Willmott, H. (1992) *Critical Management Studies*, Sage, London.
- Anderla, G. (1973) *Information in 1988*, OECD, Paris.
- Bakacsi, G., Sandor, T., Andras, K. and Viktor, I. (2002) 'Eastern European Cluster: Tradition and Transition', *Journal of World Business*, 37.
- Baldwin, T. F., McVoy, D. S. and Steinfield, C. (1995), *Convergence: Integrating Media, Information and Communication*, Sage, Thousand Oaks, California
- Battu, H. *et.al.* (1999) Overeducation amongst graduates - a cohort review, *Education Economics* 7 (1)
- Bell, D. (1973) *The Coming of Post-Industrial Society*, Basic, New York.
- Bell, D. (1977) Teletext and Technology, in: *Encounter XLVIII*.
- Berács, J. (2001) Rendszerváltás előtt a magyar felsőoktatás (Before the change of regime of the Hungarian higher education), *Vezetéstudomány*, XXXII. No.03, 2001, pp.41-53
- Crafts, N. (2001) Historical Perspectives on the Information Technology Revolution, background paper for the *World Economic Outlook 2001*, Oct.: International Monetary Fund, Research Department, Washington.
- Csepeli, G. (2000a) A jövő század fényei és árnyai Magyarországon (The lights and shadows of the next century in Hungary) *Magyar Hírlap*, 23rd December 2000 p.15
- Csepeli, G. (2000b) Transition blues: the roots of pessimism. *The Hungarian Quarterly*, No. 158
- Duncan and Hoffman (1981) The Incidence and Wage Effects of Over-education, *Economics of Education Review* (1).
- Elias, N. (1994) *The civilizing process*, Blackwell, Oxford
- Eckaus, R. S. (1964) Economic Criteria for Education and Training *The Review of Economics and Statistics* Harvard University Vol.XLVI, No. 2. May 1964
- Forray, D. and Lundvall, B.A. (1996) *Employment and growth in the knowledge-based economy* Paris: OECD.
- Gershunny, J. (1978) *After Industrial Society? The Emerging Self-Service Economy*, The MacMillan Press, London.
- Groot and van den Brink (2000) Over-education in the labour market – a meta-analysis, *Economics of Education Review*, 2000 (19).
- Held, D., McGrew, A., Goldblatt, D. and Perraton, J. (1999) *Global Transformations: Politics, Economics and Culture*, Polity Press, Cambridge
- Hollinshead, G. and Michailova, S. (1991) 'Blockbusters or Bridge-Builders? The Role of Western Trainers in Developing New Entrepreneurship in Easter Europe, *Management Learning*
- Hudson, H. (2001) The potential of ICT's for development: opportunities and obstacles, background paper for the *World Employment Report 2001*, available on the CD-ROM of the Report pp 24 – 25.
- Hungarian Ministry of Education (2000) *Higher Education in Hungary in the Year of the Millennium*.

- Illes, K. and Rees, B. (2000) 'What Price Competitiveness? Unintended Consequences of Managerial Knowledge Transfer to Hungary, in *Dimensions of Competitiveness*, Eds. Lloyd-Reason, L. and Wall, S. Elgar, Cheltenham
- Illes, K. and Rees, B. (2001) 'The Transformation of Educational Processes in Hungary: Fragmentation or Integration?' Paper presented at the Fifth ASEAN Inter-University Seminar on Social Development, National University of Singapore, 23 – 25 May
- International Labour Office (2000) Globalisation Europe: Decent work in the information economy, *Report of the Director General to the Sixth European Regional Meeting*, Geneva, Dec.
- Kobrin, S. J. (1994) Is there a relationship between a geocentric mind-set and multinational strategy? *Journal of International Business Studies*, 3: 493-511
- Kochen, M. (ed.) (1967) *The Growth of Knowledge: Readings on Organisation and Retrieval of Information*, New York
- Kramer, D (2000) *A felsőoktatás és a munkaerőpiac kapcsolata* (The relationship between higher education and the labour market) Struktúra Munkaügyi Kiadó, Budapest
- Luthans, F., Stajkovic, A. and Ibrayeva, E. (2000) Environmental and Psychological Challenges Facing Entrepreneurial Development in Transitional Economies, *Journal of World Business* 35/1.
- Machlup, F. (1962) *The Production and Distribution of Knowledge in the United States*, Princeton.
- Machlup, F. (1980) *Knowledge and Knowledge Production*, Princeton.
- OECD (2000) *Literacy in the Information Age* Paris: OECD.
- OECD *Education at a Glance* (1998, 2000, 2001).
- Polonyi, I. and Timar, J. (2001) *Tudásgyár vagy Papírgyár*, (Knowledge Factory or Paper Factory).
- Price, de Solla, D. (1961) *Science since Babylon*, New Haven.
- Rees, B. (2003) *Competence, Gender and Identity*, Elgar, Cheltenham.
- Rescher, N. (1978) *Scientific Progress. A Philosophical Essay on the Economics of Research in Natural Science*, Oxford.
- Rider, M. (1944) Growth of Knowledge, in *Science since Babylon*, Price, de Solla, D. (ed.) New Haven
- Solow, R. (1980) On theories of unemployment, *American Economic Review*, Vol.70, no. 1.
- Spence, M. (1973) Job Market Signalling *Quarterly Journal of Economics*, August
- Stajkovic, A. & Sommer, S. (2000) Self-efficacy and casual attributions: Direct and reciprocal links. *Journal of Applied Social Psychology*.
- Tempus Közalapítvány, (2002) *Az európai gyakorlathoz illeszkedő munkaerőpiaci készségigény-felmérés a magyar oktatás képzés fejlesztése szolgálatában* (A skill-demand survey of the labour market relating to education and training needs in Hungary) www.tps.iif.hu/keszsegigeny.html
- Walker D. (2001) Global's Good Side *Guardian*, May 02.

Weiss, A, (1995) Human Capital vs. Signalling Explanations of Wages, *Journal of Economic Perspectives*, Vol. 9, Fall 1995.

Weiss, G. (1967) 'Knowledge: A Growth Process in: Kochen (ed.) *op. cit.*

Wolf, G (2000) 'How the young live now.' *The Hungarian Quarterly*, No. 159

World Development Report (2001) *Life at Work in the Information Economy*, International Labour Office, Geneva.

World Economic Outlook (2001) *The Information Technology Revolution*, International Monetary Fund, October.

World Employment Report (2001) *Life at Work in the Information Economy*, International Labour Office, Geneva