

Advanced Vocational Education in Sweden Statements and Comments

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Globalisation, industrial specialisation and flexible skill adjustment

Because of its common use these days, 'globalisation' is in danger of becoming a cliché. But the reality is that global economic integration has been accompanied by increasing international competition with its pressure on each country to raise productivity. A response to the competitive pressure is specialisation in the production of goods and services, thus promoting productivity growth, in particular through economies of scale. This process of internationalisation of production and distribution of goods and services is accompanied by increasing capital and trade flows, to a lesser extent also labour flows.¹ Technological developments and structural changes, often characterised as the post-industrial information and knowledge-based society, call for the abandonment of Tayloristic work and training practices in Europe², such as de-skilled operations and narrow job classifications, and embracing a new approach to training the workforce. Flexible specialisation in the labour market implies changing professional profiles. For diplomas to stay valid, continuous updates and quality assurance has to be built into the education and training system.

Thus, the process of industrial specialisation and rapid technical change represents a challenge for the system of education and training as the skills of the resident work force have to be adjusted to the changing needs. This is the reason for the EU putting the institutionalisation of a learning society very high up on the policy agenda.(EU 2001)

Flexible skill adjustment is an appropriate response to flexible specialisation of production and work organisation. It allows the work force to keep up with leading countries if not outpacing them, and in so doing ensures that the living standards of the population can be preserved and unemployment kept low.

This process calls for vocational skills in particular to be targeted for adjustment. They are at the forefront of change; the traditional school system can only provide basic key skills; a system of modularised flexible advanced vocational education has to follow suit to tailor the skills and the necessary qualities to the new specialised production processes of today. Sweden is a forerunner in the development of an institutional framework (AVE) which addresses the issue of flexible advanced vocational education explicitly and successfully.

¹ Different parts of the production and distribution process of a final product are transferred to different regions of the world, to take advantage of the comparative advantage of alternative production sites and of different rates of technological change. This is often referred to as multinationalisation of production or disintegration of production processes, under which values are added at each stage of production in the various production sites and in the marketing of the product. Multinationalisation of production of goods and services is an integral element of globalisation, (Sachs & Warner, 1995, Schulze & Heinrich, 1999, Sachs, 1998).

² Tayloristic work processes went hand in hand with Tayloristic education and training systems.

Flexible advanced vocational education - a response to increasing specialisation of production of goods and services

Christer Wikfeldt's admirable paper on advanced vocational education is timely and provides a welcome opportunity for sharing the Swedish experience with the Peer Group. The paper notes that the rationale of the Scheme is to facilitate the development of a demand-driven and flexible form of education, supplying new and changed skills in response to rapid technological changes, which the prevailing vocational schools and apprenticeship forms of education are unable to deliver. In order to relate the Scheme to Austrian experience, it may be useful to summarise the essential elements of the Scheme briefly.

Main features of the Scheme

- It is available at post-secondary level both for those coming directly from schools and for older professionals desiring to upgrade their qualifications as an approach to 'life-long learning'. Distance educational facilities exist for those in outlying areas.
- For those who are deterred from proceeding to the longer higher education programmes with their attendant costs and uncertainties, the Scheme offers an opportunity to embark on shorter relevant vocational programmes, with clearer employment prospects. Moreover, those who may wish to proceed to higher education, will be given credit for their AVE performance.
- Successful completion of the programme is recognised by the award of a Diploma.
- The Government is responsible for the design and implementation of the programmes, as well as the funding of those drawn directly from schools.
- The administration of the Scheme is effectively in the hands of the Agency for Advanced Vocational Education, which is managed by a board made up of representatives of employers, unions, universities and other educational institutions as well as from the student body.
- Students (other than the older professionals) pay no programme fees but are entitled to government financial assistance and study loans on the same terms as higher education students. *Individual Learning Accounts* will be introduced in July 2003 to assist the older professional financially.
- The providers of AVE are upper-secondary schools and municipal adult education centres (55%), private training companies and industrial institutes (34%) and institutes of higher education (8%).
- The length of the programmes varies between one and three years but one-third of the programme is workplace oriented for practical application of the students' theoretical knowledge. Thus the availability of workplaces is critical to meeting the placement of students.

Outcomes

It is too soon to establish that the overall outcomes sought from the Scheme — providing professionals with better development potential and wage growth, employable skills, a stronger position in the labour market and greater work satisfaction — have been adequately met. But there are grounds for believing from the few years in which the Scheme has operated that a fair measure of success is being achieved.

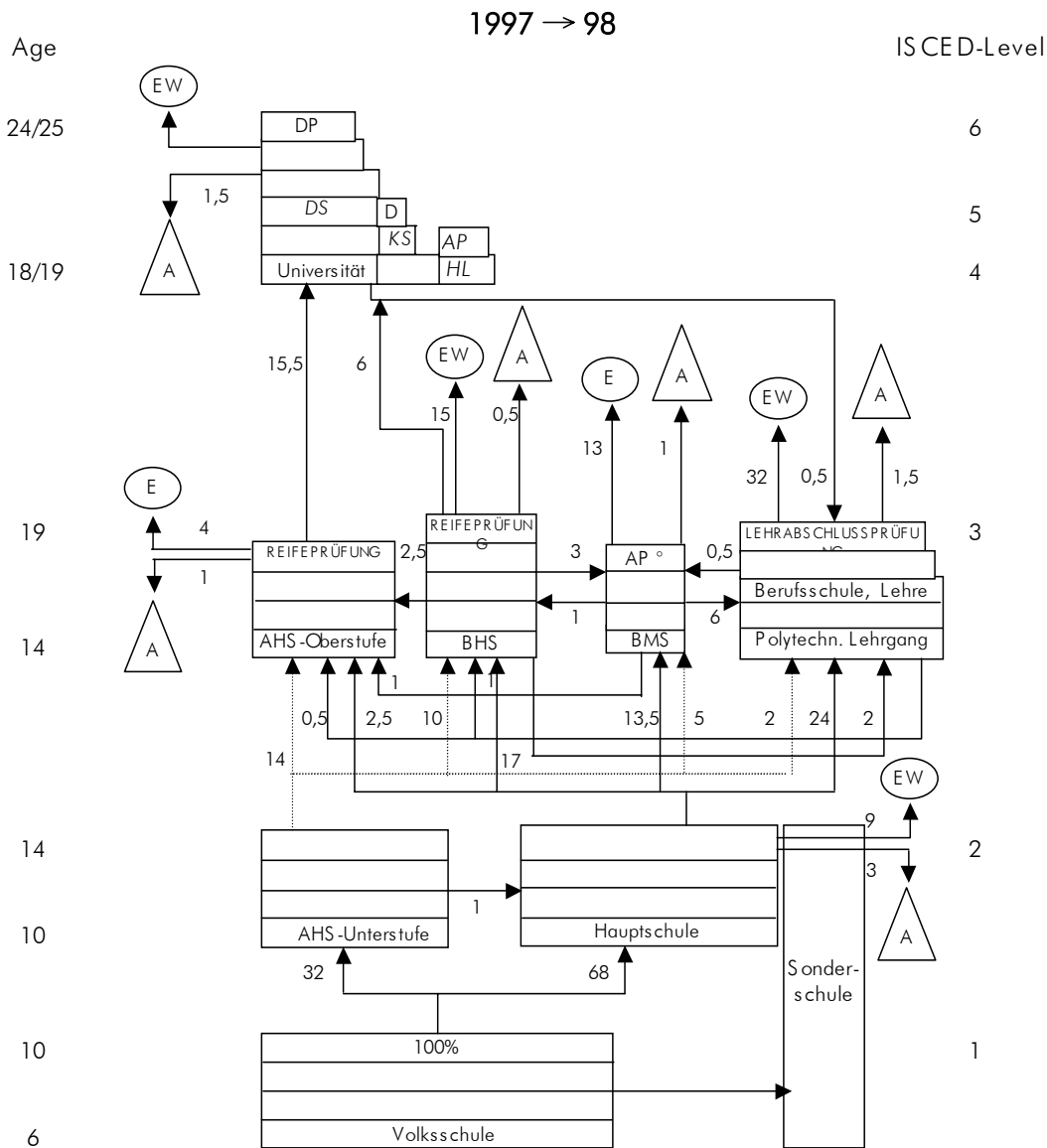
- The success of the Scheme is generally conceded and is reflected *inter alia* in the fact that more than 90% of students completed their courses and 80% are gainfully employed. Two-thirds of the graduates were within their chosen vocational field. Surveys also showed substantial approval of the Scheme among graduates.
- The gender participation in the Scheme was balanced.
- Programmes focusing on IT, multimedia and the graphical industry dominate the Scheme.
- Of those who embarked on the IT and Environment programmes, just over half were satisfied with them, whereas those who embarked on health care programmes were to a much higher extent satisfied (83%).
- Although employer opinions were not sought in follow-up surveys to establish their view of the quality of the graduates, their continued active support of the Scheme suggests their tacit approval of it.
- The cost of the Scheme with about 2000 students during 2002, is something in the vicinity of € 64m. This is a small proportion of the overall education and financial support outlay of € 15-16 billion.
- The average subsidy per study place amounts to € 5,300 per year.
- In the light of experience with the Scheme, the author of the paper sees opportunities for further improvement of higher technical vocational education by applying the principles of the Scheme also to this level of technical education. It is believed that this would give the students 'greater security in their choice of educational programmes which are in demand in the labour market'.
- The paper sees scope for further improvement in distance programmes and IT-and media-supported programmes and suggests that it is a high priority area with potential for European cooperation.

The Austrian story

- The Austrian education system is heavily biased towards vocational education. At the end of the 1990s, only some 21% of a youth cohort graduated from the general education upper secondary education stream (AHS-Baccalaureat). Slightly more (22% of a birth cohort) graduated from an advanced vocational orientation higher education stream, i.e. vocational colleges (BHS-Baccalaureate).
- Some 12% of a birth cohort entered the labour market right after compulsory education, and the remaining 45% continued after compulsory schooling with medium vocational education, three quarters of them in an apprenticeship stream.
- Thus a relatively small proportion of Austrian youth enters university education — about 22% of a birth cohort, given the relatively good employment opportunities of youth with a vocational orientation baccalaureate.
- The medium vocational education school leavers are not entitled to university access and it is rather the exception than the rule for somebody with a medium vocational attainment level to go through the rigmarole of second chance schooling, basically on one's own account, to obtain a baccalaureate and thus university access.
- The formal qualification awards issued in the medium VET sector are:
 - Certificate I ISCED 2C
 - Certificate II ISCED 2C
 - Certificate III ISCED 3C

It is this group of medium skilled persons, i.e. the group which faces limits of further education, which has increasing labour market difficulties. In the wake of flexible specialisation, the standardised skills of tradesmen are less in demand. The major employers of these skills are small and medium sized enterprises (SMEs), who are experiencing increased competition and the need to specialise. They often lack the financial means and capacity to provide the necessary advanced vocational skills to their workers.

Graph 1: Transition rates between elements of the education system and the labour market, Flow in % of a birth cohort



AHS ... General Education Stream, Upper Secondary Education
 BHS ... Vocational Higher Education (colleges), BMS ... Vocational Medium Upper Secondary Education
 AP° ... Final Exam/certificate, AP ... Final Exam, DS ... Long Study/Diploma, KS ... Short Study,
 HL ... University Course, DP ... Diploma/exam, LP ... Teacher/Exam,
 EW ... Employment, AL ... Unemployment.
 ISCED ... International Standard Classification of Education
 Lines separate the educational levels within the respective types/programmes of education.
 S: Statistics Austria, WIFO-calculations.

- Graph 1 gives an overview of the Austrian education system and the flows of students between the elements of the education system. The transition rate is calculated on the basis of a birth cohort moving from primary education (=100%) to higher education and into the labour market.

- In the case of Sweden, some 8% of a birth cohort, who complete compulsory education, enter the labour market immediately. (OECD 2001, for the year 1999) This compares with some 12% for Austria. As for the main thrust of Swedish upper secondary education: about half attend general education programmes — compared to 22% in Austria.
- The educational behaviour of the Austrian pupils has changed significantly during the 1990s. Youth does not enter the labour market after compulsory schooling to the same extent as in the past: only about 12% in contrast to 16% at the end of the 80s. A higher proportion of 16-year olds choose higher education instead of medium upper secondary education than a decade ago. In the main, education shifted away from apprenticeship training to vocational colleges. As a result, about 42% of youth today have a baccalaureate, in contrast to 31% at the end of the 80s, while slightly more than half of all baccalaureates are from vocational colleges.
- The rising number of baccalaureates, i.e. of youth eligible for university education without prior entrance exams, does not automatically translate into an equivalent rise in students entering universities. This is so because about 75% of youth with a baccalaureate from a vocational college enter the labour market immediately, while about 75% of those with general education baccalaureate take the university path. Thus only about 22% of a youth cohort went to university at the end of the 1990s compared to 16% at the end of the 1980s.
- The rapid improvement of the educational attainment level of youth, in particular the move from medium to higher vocational education, ensured sufficient labour supply in the more advanced vocational skills, which are needed in the rapidly changing economic environment. Increased international labour mobility of university graduates, in particular from within the EU, ensured that Austria had sufficient labour supply at the upper end of the educational attainment level.

Challenge of upgrading vocational skills and reducing gender segmentation

- The rising educational attainment level of youth did not bring about a marked reduction in the gender segmentation of upper secondary or higher education. In middle and upper secondary education, girls continue to cluster in commercial subjects and hospitality services, while boys are concentrated in technically orientated apprenticeship education and vocational colleges. Only the general education stream of upper secondary education has a more balanced gender distribution of students.
- The Labour Market Service and private education and training colleges are the only institutions which provide further education and training. These adult education institutions and their further education programmes are rarely integrated in the normal state education system and programmes. This means that skill recognition and certification of a post secondary vocational type hardly exists in Austria.
- By contrast, the pathways of young people through education and into work in Sweden are more varied and individualised as a result of the diverse post school education and training options. The AVE programme is a particularly interesting case of advanced further education as it is flexible, adaptable to the changes in demand, while at the same time ensuring quality outcomes. The AVE agency is key to the success of the programme. It does not only involve all major players in the education and labour market in programme development, but it organises also the finance, carries out quality assessment and supervises the schemes. It is thus a flexible public

agency tailored for the rapidly changing vocational needs in niches of professions and occupations.

- It is this sort of a public agency Austria would need to organise advanced vocational education. The overall management of the agency and the procedures necessary to get an AVE programme approved has a striking similarity to the procedures at hand in Austria in the new tertiary education field of Fachhochschule (applied university education, implemented in 1992). The Austrian system of Fachhochschule differs from the German system in that it has similar access criteria as universities; in addition entrance exams are required. Applied university education programmes are developed and chosen on a similar basis as the AVE programmes of advanced further education. They are niches of tertiary education which the traditional university system does not cater for adequately or where the applied aspect of higher education is lacking.
- The bridge from medium vocational skills to advanced vocational skills is sadly missing in Austria, however. An agency like the AVE could provide this missing link. This could be achieved if the Ministry of Education linked up with the Ministry of Economic Affairs and Labour, the Labour Market Service and the social partners to develop a pilot project. The Ministry of Education does not have a tradition of working together with labour market institutions in Austria. This is a major drawback for the development of a system of lifelong learning, in which AVE could play a vital role.

Points for Discussion

The AVE is an interesting approach to dealing with the vocational needs of the economy. Its progress and its implications for the EU Member States in connection with labour mobility are of particular interest.

There are two questions I wish to raise for discussion:

1. One relates to the restrictive nature of work places in the practical training of students because 'companies will not agree to take on students unless they can see the need for the specific skill that the programme aims to develop.' The question is whether it is safe to allow the judgment of companies on the future needs for specific skills to determine the supply of skills. This is all the more pertinent in view of the paper's recognition and emphasis on prioritising the long term needs of industry. (p.15) The paper also notes that the applications for the AVE programmes are three to four times the number of workplaces available. Is there sufficient scrutiny and evaluation of the companies' projected demand for the different skills? And if there appears to be excess demand which cannot be accommodated by the companies, could it not be met, at least partly, by the provision of simulated workplaces?

2. The second question relates to a view expressed on page 9, suggesting that young people might be encouraged to 'choose a specific vocational orientation, for example, in upper secondary schools. The trend of an ever-lower status being attached to vocational programmes at upper secondary schools needed to be broken.' This comment can only be understood in the context of the comparatively small proportion of upper secondary students attending vocational orientation courses suggesting that there is a stigma attached to vocational education. In the Austrian situation, the high proportion of students attending vocational orientation courses shows that vocational education is not stigmatised but is rather regarded as the appropriate transition from school to work. It is seen as the major reason for low youth unemployment rates. However, it is arguable that the Austrian view is short sighted, as youth with only apprenticeship education or full time medium skill vocational education is facing increasing employment problems. In the current technological developments and industrial specialisation, such limited educational and training attainment turns out to be a dead end for many. The approach taken in Sweden for advanced vocational education, provides an appropriate model for Austria to consider seriously.

References

EU, 2001, Making a European area of lifelong learning a reality. Communication from the Commission.

OECD, 1996, Assessing and certifying occupational skills and competencies in vocational education and training, Paris.

OECD, 2001, Education at a Glance, OECD, Paris.

OECD, 2002, Education at a Glance, OECD, Paris.

OECD, 2002, Labour Force Statistics, OECD, Paris.

Sachs, Jeffrey, 1998, "International Economics: Unlocking the Mysteries of Globalisation", Foreign Policy, Spring 1998, pp. 97-110.

Sachs, Jeffrey, Warner, Andrew, 1995, "Economic Reform and the Process of Global Integration", Brookings Papers on Economic Activity, 1995, 1, pp. 1-188.

Schulze, Günther G., Ursprung, Heinrich W., 1999, "Globalisation of the Economy and the Nation State", The World Economy, 22/3, pp. 295-352.

<http://peerreview.almp.org/en/principles.html>