

Apprenticeship Training in European Countries. The Lessons for Canada

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[See table of contents](#)

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Article abstract

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Apprenticeship Training in European Countries

The Lessons for Canada

Klaus Weiermair

This paper investigates environmental conditions conducive to apprenticeship training; examines various government reactions in this field; discusses the problems and deficiencies of apprenticeship training in Canada, and analyzes the usefulness of European labour market measures to be employed in this country.

Even though everybody may have clear perceptions as to what apprenticeship training entails or is all about, it may nevertheless be helpful, to briefly define at the outset its basic elements, so that what is said subsequently can be viewed and criticized against this definitional frame of reference. The following characteristics can be considered key elements in apprenticeship training found throughout Europe:

1. Apprenticeship Training (AT) is a sufficiently general form of training yielding transferable and adaptable skills which can be utilized in different firms and/or different jobs within an organization.
2. Given 1) AT therefore also contains theoretical instruction, which is provided off-the-job in vocational schools, while the firm provides the practical component through on-the-job or vestibule-type training.
3. Similar to other education programmes, AT has clearly defined and uniform objectives, curricula and entrance and performance standards (tests) which are set almost invariably by authorities outside the direct sphere of influence of the organization providing AT. Furthermore, AT is a long duration programme lasting anywhere from 2 to 5 years.
4. Lastly, AT is provided by the employer because it is a viable (economic) alternative of skill acquisition implying that employers can expect a recovery of training costs. It is similarly a viable career alternative to

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young labour market entrants for they can expect higher paid and more secure jobs after becoming fully skilled compared to other employment and training alternatives open within the constraints of individual ability endowments.

Although similar with respect to these four elements, apprenticeship in Europe differs appreciably in many other aspects across jurisdictions on account of national differences in systems of education, historical developments in the employment sector and in industrial relations, the composition and competitive strength of particular industrial sectors and the political aspirations of governments, past and present, to name only the more salient contributing factors.

To call for the import of new ideas such as tripartism, codetermination, Japanese forms of management or for that matter European lessons in apprenticeship training from those jurisdictions presently blessed with more industrial excellence and success is understandable; new ideas or lessons will, however, only be useful to us in Canada if their contingency character with respect to the forementioned socio-economic realities peculiar to specific European countries is fully revealed and understood. In this context it is also worth noting, that there are no safe-proof or unique solutions to effectively organize and run a country's human resource system, just as we know from management theory and -practice that there are no single ways to successfully structure and manage an organization, e.g. Sweden and Japan are both strong industrial competitors, yet show vastly different systems and styles of industrial-type training. Since a thorough and requisite discussion of the social and economic context of European AT is beyond the scope of this paper¹ my presentation will be structured as follows: on the basis of our previous definition of AT, we will first discuss the characteristics and prerequisites of a well functioning AT system including a brief account of prime advantages of such systems to industrial well-being in terms of human resource management, work organization and innovation. Following that, we will describe as to how other jurisdictions declines in AT observable throughout the industrialized world. The last part, finally, will be devoted to a discussion of potential knowledge transfers with respect to European industrial training policies.

Systems of apprenticeship training work well when they represent to the employer a viable e.g. economic alternative of acquiring and utilizing qualifications in production and to the apprentice and future skilled worker

¹ A more detailed discussion can be found in: K. WEIERMAIR, "Industrial Training in Canada: An International Perspective", paper presented at the Annual meeting of the Industrial Relations Association, Montréal, June 1980.

rewarding career alternatives in terms of income and occupational development. Starting with the interests and perceptions of potential apprentices, what are the more specific conditions which make AT successful? To start with, we would have to point to the wider societal forces which can create a positive environment for AT such as social value systems which encourage and promote production and productive skills as much if not more than distribution and distributive skills, and which consequently respect production skills, skilled workers, craftsmanship and in a wider sense the production quality in general. Secondly, young people making career decisions will view and choose AT as an interesting training and career alternative if they are part of an education system which screens and streams for differential ability, skill and talent as opposed to one which is meant to prepare everybody for university. Such an education system, therefore, would imply a fair emphasis on the development of vocational and occupational curricula at the secondary school level combined with strong occupational counselling and testing and a general education philosophy of "appropriateness", which distributes students and trainees evenly and according to innate abilities across different schooling and training programmes.

Apart from the amount of screening carried out in the system of education, AT only remains an attractive route of learning skills for the individual if its content is of sufficient quality, so as to serve as a broader base for a given occupational cluster of jobs. This implies a careful balancing of theoretical and practical instruction, on- and off-the-job training components and a constant updating of vocational curricula in the light of technological changes of production. Since even in ideal settings, firms may not have the requisite skills nor the appropriate enlightenment for the development of training curricula, most of the more successful AT systems have placed curriculum development outside the firm providing training. Usually, this poses questions as to the appropriate representation, participation, consultation or codetermination in curriculum decisions, among interest groups such as employer organizations, governments, educationists (vocational training specialists), unions and possibly youth organizations. While absolute superior formula for representation and group decision-making do not exist, some general observations regarding relative success can be gathered from international comparisons. As is so true for many other aspects of industrial relations consensus with respect to the structure and organization of AT, is best achieved in an atmosphere of high mutual trust and cooperation between the partners to the employment and training relationship. The latter is likely to occur where employers or employer organizations have in the past shown genuine concern with AT traditions and standards, where unions can point to responsible cooperation in training decisions and where governments and educational institutions have refrained from maximizing

pure bureaucratic and regulatory influence. Ideal outcomes of such consensual decision making processes are training curricula which are standardized with respect to entrance requirements, training content and performance tests, thereby, providing objective labour market signals with respect to the skill endowment of individual workers. The latter should be in the economic interest of both the skill holder and skill user e.g. the employer. At the other extreme, high trust and cooperative endeavours may have evaporated on account of strategic short gain maximizing behaviour of labour market participants, e.g. a political consensus is likely hard to come by where in the past, employers have used training and job-rotation schemes as a means to break-up unions, where apprentices are employed as cheap labour and laid-off during recession, where unions use AT as a means to restrict labour supplies and where educational institutions and governments display great skills in institutional growthmanship.

A further facilitating factor is the breadth and scope of AT across different occupations. Success with AT is more likely when it spans a large number of occupations than when it is merely reserved for a few construction and metal-machining trades. As far as monetary incentives are concerned, a wide variety of differing methods of financing AT exists. In the past, successful systems were as a rule those which made the apprentice pay a substantial share of the training cost and which in turn provided sufficient pay-offs in terms of wage differential between skilled and unskilled work combined with high upward mobilities of journeymen and additional option returns from licensing entry into trades and small business. In many industrialized countries, governments have distorted these market incentives by heavily subsidizing the formation of substitute skills in technical schools, colleges or other institutional forms of industrial-type training and -schooling. As a consequence, governments had to introduce further measures to correct for this formal schooling bias and re-establish the financial attractiveness of AT to both firms and apprentices. Their discussion is deferred to the latter part of the presentation dealing with foreign lessons.

Critical success factors for AT, on the employer side, seem to fall into two broad and interrelated categories: a) there is the question of available quantity and quality of apprentices and the related cost of personnel recruitment, -screening and -training and b) questions associated with the journeymen's length of employment tenure in the firm providing the training, his productivity contributions to the firm and the firm's associated net costs of human investments and its recuperation over time. To the employer, AT proves to be a more attractive form of skill acquisition when he is able to choose from a larger population of apprentice applications and when he can rely on the education system to provide good e.g. unambiguous signals on

individual workers' (apprentices') abilities and qualifications. In this context, the more standardized schooling and learning is with respect to entrance requirements and performance tests in specific programmes or at different educational levels the easier it will for the firm to identify skill- and qualification-potential in the market place, e.g. firms will be able to save much of the cost of screening and selection of personnel where the education system undertakes the filtering and screening functions².

High mobility among apprentices and younger skilled workers have obviously a negative effect on the amount of quality of AT offered by the firm. Finally, there is the question as to whether AT can be tailored to the specific needs of the employer or whether it can be very general. At first, it might seem more profitable for firms to provide and entertain only firm- and job-specific forms of training, however, upon second considerations this proves to be a rather short-sighted and narrow perspective with large negative consequences for the long-run. For if firms were to provide only narrow and firm-specific training, this will contribute to sharply reduce the long-run supply of qualified apprentices and, thereby, strongly effect industrial excellence. Opting for quick and cheap short-run solutions has its long-run price, contrary maintaining high quality and standards its long-run benefits. Certainly, this is born-out by facts when we compare the relative success of AT programmes in Europe. Invariably, the more successful systems are those which have and enforce high standards of quality.

Having spent a considerable amount of time enumerating conditions of AT which are ideal both from the vintage point of the apprentice and the employer, we now turn our discussion to focus on measures and policies found in European jurisdictions which can bring about or create such ideal conditions.

Before doing so, I would like to briefly indicate as to how the existence of a well-run AT system can effect a number of other phenomena indirectly related to industrial productivity far beyond the more frequently heard and narrower Canadian concerns of skilled worker shortages and high costs of training.

Extensive enterprise training such as is true when AT covers many occupations can serve as a key tool of communication and socialization among large segments of employees and as such provides a strong integrat-

² This, however, does not mean that firms would automatically undertake extensive personnel search and screening in the education system were to delinquish its filtering functions thereby, producing qualitative uncertainties over worker qualifications. Contrary, firms may adjust by downgrading industrial skills, and tightening supervision of an unskilled or semi-skilled work force with little vocational preparation or training.

ing force between management and workers. At least in the European context, AT has produced a high level of social qualifications among highly skilled workers in the form of industrial discipline and leadership qualities which benefit both the firm and the worker. For the worker, they have meant a high upward mobility into lower and middle management positions as well as outward mobility into becoming independent entrepreneurs. For the firm they have yielded low managerial controls and supervision and associated cost savings. In turn, this has made it also easier for Europeans to move towards new forms in work organization such as autonomous work groups, participative management practices and other innovations in industrial democracy. At the other extreme, a lack of both comprehensive enterprise training schemes and formation of medium level (vocational) skills leads to highly segmented firm-internal labour markets, educational credentialing and top-heavy organizational structures with tight managerial controls. When viewed in this light appropriate company-training, -mobility and -communication structures have much farther reaching implications for industrial productivity and may accomplish much more than "professional" approaches of management development and other such processes suggested frequently by behavioural scientists³.

The other area where AT seems to have paid off handsomely for many European firms is related to the process of product and process innovation. For the broad nature of AT has not only facilitated a close cooperation between master craftsmen, engineers, designers and work planners but it has also made it possible for firms to adapt quickly to changing market conditions and new production methods⁴.

Throughout Europe, traditional forms of AT were exposed to two major coinciding assaults which came from high economic growth and tight labour markets coupled with a rapidly expanding system of formal schooling during the sixties and early seventies. The implications for AT or for that matter any employer sponsored form of training were tendencies of the employment system to succumb to short-run market pressures yielding: a deterioration in the quality of AT, a narrowing of training content in the direction of company-specific requirements and an increased use of inferior alternatives in the form of subcontracting, employment of substitute labour

³ For a discussion and presentation of facts see e.g.: B. KRAIS, *Relationship between Education and Employment and its Impact on Education and Labour Market Policy*, West Berlin, European Center for Development of Vocational Training, 1977; K. WEIERMAIR, "Relationships between Social Values, the Education System and the Structure and Performance of Labour Markets", paper presented at the conference on Management Under Differing Value Systems, Toronto, York University, 1980.

⁴ For an account of the West-German experience, see e.g.: F. WELTZ, G. SCHMIDT u. J. SASS, *Facharbeiter im Industriebetrieb*, Muenchen, 1974.

and alternate forms of production. At the same time such forces as demographic shifts (baby boom), rapidly changing social, technological and economic conditions, the emergence of different education philosophies (e.g. the perception of education as the great social equalizer, or the notion of evolutionary individualism) and above all sample government financing for institutionalized forms of schooling and training lead to the combined effects of inflating hopes and expectations in the profitability of formal schooling far beyond its long-run equilibrium, breaking up the tie-in between schooling and work experience or theory and practice, thereby, increasing the gap between the world of work and school and of institutionalizing the formation of vocational skills. If left entirely to the short-run dynamics of the market mechanism, all of these tendencies would have strongly undermined the attractiveness of AT to both the employer and the young labour market entrant. However, and here the European approach seems to somewhat differ from North American reactions and perceptions, market forces were not entirely relied upon in adjusting to the realities of the sixties and seventies, e.g. in education, large reform endeavours aimed at comprehensive and long-run solutions were set in motion, which attempted, and partly succeeded, in redressing the forementioned imbalances between formal schooling and industrial training.

In this context, it is worth to note the following developments: a prioritizing of vocational education and its reforms by means of political debate⁵, the formation of independent research centers in vocational education, which were removed from short-run political pressures and which were empowered with the development of industrial training policies⁶; the establishment of new training schools and/or training centers which were to provide vestibule-type training on an inter-firm level.

During the late sixties and early seventies, most of the Scandinavian and many of the common market jurisdictions introduced also employment measures aimed at lengthening the firm's forecasting and planning horizon in the field of human resources and built a closer knit network of social responsibilities at the enterprise level. Most of these measures have directly or indirectly strengthened employer sponsored forms of training such as AT. Of particular relevance are here: the implementation of advance manpower planning, -reporting and -consulting responsibilities of firms vis-à-vis employees, governments and trade unions; the codetermination laws of

⁵ E.g. industrial training reforms were a top election issue in two subsequent federal elections in West-Germany.

⁶ The European Center for the Promotion of Vocational Training, the Federal Institute for Vocational Training in West-Germany, the Training Boards in the U.K. or the ESI Institute in Italy fall into this category.

West-Germany are probably the most far-reaching and most comprehensive measures in this regard; the tightening of dismissal rules for younger workers; by making it more difficult to fire young workers or apprentices, firms were in essence forced to make longer-run human resource decisions; subsidies for an array of training schemes complementary to AT such as re-training of workers and other forms of adult occupational training.

The most important interventions effecting AT, however, were new financing and funding schemes for vocational training which were introduced in order to correct imbalances in the attractiveness of AT vis-à-vis other forms of skill acquisition.

Three distinct approaches or systems of financing developed, which are described below:

THE BRITISH SYSTEM

Introduced by the *Industrial Training Act* of 1964 is a levy/grant scheme controlled by Industrial Training Boards and organized around major industries. The boards are set up by equal numbers of employers and trade unionists together with some educational members under the aegis of the Department of Employment and Productivity. Objectives of these training boards were to a) secure an adequate amount of training in industry at all levels of employment, b) to impose quality levels in training, and c) to secure a fair distribution of training costs between individual firms. It is within the purview of these boards to determine the size of both the levy to all firms in an industry and the amount of grants given back to individual firms for their training, provided it follows prescribed content and quality. Essentially a stick and carrot approach it contains all the characteristic micro-motives and -outcomes of such incentive systems. While it was possible to raise the size of overall training in British industry, most experts in Britain are fairly divided over the question as to whether the training boards also met the two other objectives of improved quality and a fairer distribution of training costs⁷. Already on theoretical grounds, one could expect such a piece of legislation to lead firms to maximize training receipts via turnover, to benefit those who are better equipped to demonstrate a good administration or documentation of formalized training as opposed to those who are actually running a good system of formalized training and to

⁷ For a discussion see: M. OATEY, "The Economics of Training with Respect to the Firm", *British Journal of Industrial Relations*, 1970, pp. 1-21; K. DRAKE, *The Financial, Legislative and Regulatory Structure of Vocational Training in the U.K.*, West Berlin, European Center for the Promotion of Vocational Training, 1978.

introduce numerous other inequities on account of lacking information on training benefits, economies and diseconomies of training, etc. Not surprisingly, part of the Act was changed in 1973 to reduce some of these inequities particularly with respect to the small business sector. Our remaining criticism with this form of financing industrial training in particular and British industrial training policies in general are that its net effects appear to have encouraged employers to carry people on their payrolls who are not productively employed implying that:

- a) there has been a bias towards skill training relevant to Britain's past rather than her future e.g. training resources have shifted into declining industries rather than expanding ones;
- b) identification of possible mismatches between available and required skills was therefore impeded; and
- c) individuals' expectations as to the skill requirements of the future distorted via a subsidization of present employment patterns.

THE WEST-GERMAN SYSTEM

Represents a continuation of the traditional dual-type AT system, which after considerable reform debates and new regulations throughout the sixties and seventies has now transferred some responsibilities from individual firms to self-governing organizations such as associations, chambers and guilds and from those to tripartite bodies. Intellectual leadership emanates from the Federal Institute of Vocational Training, which also undertakes most of the enormous coordinating functions between interest groups. The basic regulatory structure of AT is set out in the *Federal Vocational Training Act* and *Training Promotion Act* of 1969. The latter also stipulates conditions and subsidies for further training and retraining. The reforms of vocational training in the early seventies⁸, which gave the government and trade unions more say in matters of training, initially caused negative reactions among employers. This, coupled with the school leaving bulge of the seventies, led in 1974 for the first time in history to a situation where training demands exceeded available training places. In response, the government passed the *Training Place Promotion Act* of 1976 which fore-saw an acceleration in the building of inter-industry training centers and, in

⁸ In the main, these were detailed regulations regarding the educational preparation of vocational training instructors, the establishment of a system of educational credits in AT and a tightening of supervision and control of training quality. For a more detailed discussion see: W.D. WINTERHAGER, *A Comparative Study of Vocational Training Systems*, West Berlin, European Center for the Development of Vocational Training, 1978.

addition, proscribed a levy of 1/4% of the total wage bill on all those firms where the number of apprentice places offered exceed demand by less than 12.5%. The threat of such a levy was, however, sufficient for it never had to be used since the passage of the law. The West-German system of AT and other forms of industrial training appears to have served West-Germany well in the past. They have to be, however, understood in the context of social values and historical and political developments peculiar to this country. Some aspect such as the creation of inter-industry training centers or the operation of a Federal Institute for Vocational Training are nevertheless worth studying since they are transferable to our own institutional framework.

THE FRENCH TRAINING SYSTEM

The French training system and its financing provisions is an interesting and innovative approach, for it shows how a rigid and highly centralized education system, which initially offered very little in the way of vocational or AT can be changed into a more diverse structure without lengthy political processes and/or educational reforms. The French government began moving into the fields of vocational training with a number of training reforms, -regulations and -financing schemes, which started with the creation of an "Interministerial Committee" for the coordination and cooperation of the administration and occupation and trade union circles (December 1966) followed by a law in 1968 which defined and standardized the system of allowances for trainees and which culminated in the passage of the *National Inter-Trade Agreement* of 1970 and 1971. The latter set about the basic rights of workers to permanent education and the means to finance it⁹. The latter essentially represents a dual financing system consisting of budget appropriations from the state and compulsory contributions from the private sector. The state finances vocational training and social advancement courses according to the guidelines set out by the Interministerial Committee on Vocational Training and Social Advancement after consultation with trade unions and industry associations. Funds, which are negotiated each year, go in the main to assist special groups such as unemployed youth, unskilled manual workers or other underprivileged groups. In addition, the state participates in covering capital and operating expenditures for training and trainee remunerations to the extent that these are not covered directly by the private sector. Employers have to make compulsory contributions to

9 For a more detailed discussion see: Vincent JEAN, *Comparative Study of the Financial, Legislative and Regulatory Structure of Vocational Training Systems*, Berlin, European Center for the Promotion of Vocational Training, 1978.

the financing of continuing vocational training which they can fulfill by either financing training measures which give them partial or total exemption or by paying a tax of the traditional type. In practice, the employer has several alternatives at his disposal, none of which are mutually exclusive. He may directly finance measures for the benefits of his staff: a) within the enterprise itself, b) by signing an agreement with a training institution, c) by contributing to a Training Insurance Fund, and/or d) by paying subsidies (but only up to 10% of total contributions) to organizations which, because of the scope of their activities, are approved as organizations for the continuing vocational training of employees; if, at the end, the total amount of these measures does not reach the rate fixed by law, the employer is obliged to remit the remainder to the public treasury. Given the extreme flexibility and choice awarded to the firm in choosing between training and financing options, the law had to be very specific as to what kind of training was eligible under any of these options. A number of amendments were passed between 1971 and 1979 covering and regulating further details of implementation¹⁰.

So far, the governments measures and provisions have increased absolute levels of industrial-type training with resources in this field doubling from 1971 to 1977. Although the multi-layer of provisions may appear complex, the latter were merely introduced to create flexibility for employers in the use of training resources. The basic philosophy of the regulations was to check institutional growthmanship in the educational field and to inject more work related curricula through a combination of taxation and market allocation.

Are there any lessons to be learnt from European manpower and education policies? The answer to this question is both a yes and a no. The answer is no if we were to consider adopting an entire training system as it exists in any of the European jurisdictions. The answer would certainly be a qualified yes if we were to consider particular aspects and/or features of apprenticeship training abroad.

Canada's sluggish development of apprenticeship and other forms of employer based training has been conditioned to a large extent by industrial and educational policies which have been carried out at various levels of government. In terms of overall industrial strategies, Canadian economic development was thought to be best served through a liberal policy of foreign investment and immigration coupled with tariff protection in large segments of Canada's industrial base, an old policy which was essentially continued throughout the post-war period. As to the development of education

¹⁰ *Ibid.*

policies, in Canada, these were largely nurtured by the so-called "Human Capital Revolution" of the early sixties which was based initially on studies in the United States showing high rates of returns to formal schooling in comparison to other human and non-human investments. Given Canada's low rates of educational attainment among workers coupled with a brain-drain phenomenon in the early sixties, this has led to a spectacular rise in secondary, and particularly post-secondary, education throughout the sixties and most of the seventies. Both policy stances have, in consequence, led to very deep-seated philosophies, perceptions and social values with respect to the development, utilization and appreciation of blue-collar (industrial) skills. On the employer side, management, already conditioned to slack on account of lacking international competition, very quickly adjusted to liberal immigration and education policies by relying heavily on cheap means of skill acquisition in the form of immigrants and later, the output of the educational system. As far as blue-collar labour markets were concerned, these developments further reinforced orthodox perceptions of and attitudes towards work and workers in that the firm's interest was seen to be best served through the creation of flexible labour bourses from which "homogeneous" labour could be hired and into which it could be released on short notice. Expectedly, only very few and very specific types of labour have in the past become subject to careful scrutiny, costing and planning within the firm analogous to other fixed factors of production such as capital, the remainder being considered a truly variable factor of production, unworthy of longer-term consideration. An illustration of this is the still existing and empirically validated difference in intensity and approach of training towards managers and skilled workers. If skilled journeymen are needed, firms expect them to be available on the market, if managerial talent is in demand, firms much more carefully plan for it and provide the requisite training. The lack in extent and sophistication of manpower forecasting and planning in Canadian firms can be taken as a further good indication of such short-term practices and biases¹¹. Excessive reliance on obtaining adequate manpower through mobility in firm-external labour markets was further reinforced through the expansion of formal schooling fed by employers' faith that more educated people were indeed also more productive, by parents' conviction that their children would indeed reap high returns on their foregone earnings and educational expenditures and by governments' assumptions of continuing positive social marginal returns to schooling. The cumulative net effect of these attitudinal changes were an almost complete institutionalization of learning, substituting many forms of employer-

¹¹ B. KEYS and H.H. WRIGHT, *Manpower Planning in Industry: A Case Study*, Ottawa, Economic Council of Canada, Staff Study No. 18, 1965; The Conference Board of Canada, *Corporate Manpower Planning in Canada: Trends and Prospects*, Montréal, 1975.

sponsored training, particularly initial- and apprenticeship training and an increased use of schooling as a screening device.

With the exception of construction unions, who as a matter of ongoing concern have voiced criticism about vocational education and who have been both actively and passively involved in the development of the apprenticeship training system, Canadian unions have generally remained rather apathetic and/or orthodox in matters of both training and work organization when compared, for example, with the union movements in other jurisdictions. The recent submission of a brief to the Interparliamentary Task Force on Employment in the '80's by the Canadian Labour Congress endorsing the British levy/grant system certainly was not based on extensive prior research, consultations and/or past policy statements on training and, as such, failed to come to grips with many of the technical and specifically Canadian problems in apprenticeship training. Many of the specific problems such as, for example, the lack of high quality general training or the old age of Canadian apprentices, may furthermore, at least in part, be considered the result of past union policies and practices.

If our prior assertion about the state and development of apprenticeship training in Canada is correct, the following specific measures, which have proven useful in some European jurisdictions, might be considered.

Despite efforts of the Red Seal Programme Committee to standardize training, Canada has ten different apprenticeship training systems with extreme and, most likely unfounded, differentiations in the extent and quality of apprenticeship training. A precondition to combat disfunctional diversity and excessive programme diversification at various levels of government would be, to establish objectively in the first place the nature of the relationship between i) worker qualification and productivity, ii) alternative forms of skill acquisition and productivity and iii) worker qualifications and career mobility¹².

This could be done through an independent research and policy formation institute specialized in occupational research, analogous to the West German Institut fuer Berufsbildungs-forschung. Such an institute, if well equipped with empirical findings, should be in an excellent position both politically and as an authority on occupational qualifications to become more heavily engaged in the standardization of training. It certainly would represent an improvement over suggestions of creating new interprovincial superstructures such as the Council of Employment and Training Ministers.

¹² So far knowledge in this area is either non-existent or based on fragmentary and/or local evidence.

In addition to the aforementioned key question as to the proper definition of nature and content of training, Canadian apprenticeship suffers from a number of additional ailments which recently have been documented by two major task forces and special studies¹³. In the main, these studies/task forces found that: training was of a low standard in certain trades and in particular regions and that highly skilled worker training comparable to that found in other European jurisdictions was absent in the Canadian economy; that there was poor self-selection and referral of young workers into apprenticeship; that there was low penetration of female, native Canadians and other minority groups; that Canadian apprentices were relatively old, had poor employment and qualification records and experienced highly unstable employment and training; that the training system showed strong cyclical behaviour.

All of these deficiencies are appreciably heightened by misconceptions and prejudices about the potential usefulness of apprenticeship training held by large segments of employers, school students, education experts and government officials.

The obvious answer to simultaneously combatting all of these problems is a better integration of apprenticeship training into existing provincial systems of education, which would entail:

- a) development of standardized curricula in apprenticeship training to be worked out by the newly created Institute of Occupational Training in cooperation with the Red Seal Committee and provincial apprenticeship training boards.
- b) a move to increase the number of apprenticeable occupations and to make apprenticeship compulsory. This would only entail standard regulations regarding the training and examination of apprentices, it would not mean compulsory certification.
- c) introduction of legislation or penalty/reward measures to reduce or prevent lay-offs of apprentices during their period of training.
- d) a tightening of standards in higher education so as to increase the pool of potential apprentices bringing about a distribution of qualifications in the population more in line with the distribution of innate abilities.

¹³ Employment & Immigration Canada, *Labour Market Development in the 1980's*, Report of the Task Force on Labour Market Development, July 1981; House of Commons, *Final Report: Work for Tomorrow, Employment Opportunities for the '80s*, Ottawa, 1981; K. WEIERMAIR, *Apprenticeship in Canada: A Theoretical and Empirical Analysis*, Ottawa, Economic Council, unpubl. manuscript, 1981.

If in this way the quality of apprenticeship training can be ascertained and raised to a socially optimal level, if specific apprenticeship training programmes can clearly spell out career alternatives for young school leaving individuals and signal clearly defined qualifications and levels of productivity to employers, much greater faith could be placed in the efficiency of the market in responding to temporary disequilibria such as worker shortages. There already exists a noticeable difference in market response between well recognized and well run apprenticeship training programmes and poorly designed/recognized and fragmented training efforts.

The existing financing of transferable industrial skills through the employer and the apprentice stand in sharp contrast to financing arrangements provided by the public sector for other forms of general training. Both equity and efficiency considerations, therefore, dictate the desirability of changes in the existing formula for financing vocational education and training in Canada. In recognition of the various drawbacks of employing either a pure levy/grant or a pure payroll tax credit system, we suggest a modified payroll tax credit system, which works similarly to the former. It, however, has the added advantage of considerably strengthening the decision making capabilities and responsibilities of those directly involved in the training process, e.g. the apprentice and the employer providing training. The system would work as follows:

- a) The total amount of training costs would be split equally between the firm, the governments and the apprentice.
- b) Apprentices would receive an educational allowance or grant as long as they are in the process of completing an apprenticeship training programme.
- c) On the other hand, firms would pay apprentices only according to their productivity levels during the various years of apprenticeship.
- d) The total funds for the apprenticeship programme would come from a percentage payroll tax levied on the employer (with some firms qualifying for exemptions) from the apprentices' lower wages during training and from matching funds in the public sector (federal and provincial government). In order to further reduce the human capital risk for the apprentice in terms of the probability of lay-offs, it is conceivable to build in penalty payments for the laying off of apprentices while in training. As distinct from the other approaches, this system can be applied in a flexible way to different training situations with varying performance/productivity characteristics. Since, ultimately, the apprentices have the choice and the dollar votes (through the educational allow-

ance), as to where they want to receive the on-the-job and institutional portion of their apprenticeship training programmes, there would be considerable pressures both upon the employer and the educational institutions to perform, a factor which is absent in either the pure levy/grant or payroll tax credit options.

A further strengthening of the apprenticeship system should be provided for by unions through an exclusion of apprentices from the seniority principle. Clearly, this would be the trade union contribution to stabilize employment for apprentices analogous to the penalty/reward mechanism applied to employers. If apprenticeship training can truly be considered an educational programme, it should, similarly to other forms of education, be carried through without interruption.

Finally, and perhaps most importantly, we should try to change management attitudes from a perception of using or utilizing human resources to the notion of developing human resources including those pertaining to industrial skills. Much has been written about the present lack of long-run concern for human resources development in North American business¹⁴, proposing better systems of human resource accounting and planning as solutions. More expertise in manpower forecasting, human resource accounting and other long term concepts of labour management at the level of the firm no doubt will help increase managerial awareness of manpower development and training, but as European and, more so, Japanese, experience demonstrates positive social values and employer commitment towards training may be far more important. These in turn are nourished better in an environment where initial employment training such as apprenticeship constitutes a viable and desirable method of skill development than in an environment where firms can, in the short run, opt for cheaper solutions of skill acquisition by relying more heavily on immigration or the output of the education system. The latter aspect clearly shows the circularity between social values on the one hand and design characteristics of the education system on the other hand. As to immigration, here the government may wish to reduce its negative effect upon employer centred forms of skilled worker training through a number of legislative measures. For example, firms may only obtain fully skilled immigrant or visa workers if, at the same time, they also provide apprenticeship training. In effect, such a measure would step up training in proportion to the number of skilled workers admitted to Canada. To some extent the federal department of manpower and immigration, over the past couple of years, has been moving in this direction.

¹⁴ See R. LIKERT, *The Human Organization: Its Management and Value*, McGraw Hill, 1967; OUCHI, *Theory Z*, Addison-Wesley, 1981.

In summary, there are a number of viable alternative measures which could be instituted and which would help reduce our skilled worker shortage and at the same time provide for higher levels of industrial excellence. The real question as to the desirability of those changes is not technical feasibility but rather our social preferences and education philosophies.

La formation professionnelle dans les pays européens

Dans sa première partie, l'article expose d'une façon schématique les caractéristiques et les éléments fondamentaux des programmes de formation professionnelle existant en d'autres pays.

L'apprentissage y est défini comme un processus général de formation qui permet d'acquérir des connaissances qu'on peut utiliser à différents postes et dans différentes organisations, qui assure un contenu d'enseignement théorique et de formation pratique en atelier et qui, enfin, poursuit des objectifs uniformes et bien définis, des programmes d'études et d'examen établis par des autorités hors de l'influence directe de l'organisation qui dispense l'apprentissage.

Se fondant sur cette définition de la formation professionnelle, l'article analyse les conditions qui, en d'autres pays, en Europe principalement, ont contribué au maintien de cette forme d'apprentissage de type industriel. En ce qui concerne les valeurs sociales globales, on y observe d'abord un climat positif où les fonctions de production et l'habileté technique sont mises en valeur par rapport aux fonctions de distribution et au savoir-faire commercial, ce qui a pour conséquence de valoriser le travail manuel, l'ouvrier qualifié et, d'une manière générale, la qualité des entreprises de production. Au sujet du rôle de l'éducation et des systèmes d'éducation, nous soutenons que ces pays qui, dans le passé, ont mis au point un système d'éducation propre à sélectionner et à orienter l'habileté, la dextérité et le talent de chacun peuvent mieux prendre en main l'apprentissage que les systèmes conçus pour préparer le plus grand nombre possible d'étudiants à l'université. Et ceci est d'ailleurs renforcé, si l'on introduit au sein du système d'éducation, des services de consultation et de tests professionnels. Comme la formation professionnelle est destinée à développer un vaste réseau de connaissances transmissibles à des groupes de postes encore plus étendus, dans les pays européens, la mise au point des programmes d'études s'appuie sur l'utilisation de prises de décision mutuelles auxquelles participent gouvernements, éducateurs, employeurs et syndicats. Tout comme il en est pour plusieurs autres aspects des relations professionnelles, ces prises de décision conjointes ainsi que le règlement des conflits semblent mieux atteindre leur but dans des pays qui font montre d'un haut degré de confiance réciproque et de coopération entre ceux qui s'intéressent au domaine de l'emploi et au milieu de la formation professionnelle. Ceci est particulièrement mis en valeur là où les employeurs montrent un intérêt véritable pour la qualité de la formation, là où les syndicats peuvent coopérer valable-

ment aux décisions et là où les gouvernements et les autorités dans le domaine de l'éducation, savent s'abstenir de réglementations excessives et bureaucratiques. Un autre facteur primordial pour l'apprentissage réside dans son extension aux diverses occupations et carrières. Le succès de ce modèle de formation précoce semble plus plausible lorsqu'il est plus généralisé, c'est-à-dire quand il s'étend à un grand nombre d'occupations plutôt que lorsqu'il est limité à quelques métiers de la construction et de la mécanique. Pour les employeurs de ces pays, l'apprentissage s'est avéré être une forme meilleure de l'acquisition de la compétence parce qu'ils sont ainsi en mesure de recruter des sujets dans un large bassin d'étudiants en formation professionnelle et qu'ils peuvent s'en remettre à un système d'éducation qui fournit des indices clairs quant aux capacités et aux qualifications des apprentis. En effet, plus la scolarité et l'enseignement uniformisés touchent les exigences de l'accès au travail et aux tests de rendement, plus il est facile pour les entreprises de reconnaître le potentiel existant de compétence et de qualification sur le marché du travail. De fait, dans plusieurs pays européens, les employeurs et les travailleurs considèrent la formation professionnelle comme un moyen efficace de promouvoir la communication et la socialisation entre des groupes considérables d'employés, ce qui non seulement favorise à court terme la productivité industrielle, mais assure à long terme un meilleur climat de coopération en facilitant la participation du travailleur à l'organisation du travail et aux changements technologiques. Enfin, la formation professionnelle apporte traditionnellement aux travailleurs la possibilité d'atteindre un statut social et économique plus élevé par l'accession à des postes de direction ou au statut d'entrepreneur indépendant.

La deuxième partie de l'article traite de la façon dont les différents gouvernements en Grande-Bretagne, en France et en Allemagne de l'Ouest ont participé et réagi à beaucoup d'événements sur le marché du travail qui auraient été de nature à éroder l'attrait de l'apprentissage au niveau de l'entreprise, principalement par l'accroissement de l'enseignement formel et institutionnalisé, par le taux de mobilité élevé des travailleurs et par la présence sur le marché de très nombreux travailleurs migrants. Dans ce contexte, les diverses réformes que l'on a apportées aux projets de législation et de financement de la formation professionnelle en général, et de l'apprentissage en particulier, sont d'un grand intérêt. Les réformes instituées en Grande-Bretagne, en France et en Allemagne de l'Ouest au cours de la décennie 1970 concernant le financement de l'apprentissage sont ensuite traitées d'une manière plus approfondie.

La dernière partie de l'article met en lumière les problèmes et les déficiences en matière d'apprentissage au Canada et analyse l'utilité des mesures prises en Europe, mesures auxquelles on pourrait recourir ici. L'article propose ensuite que l'on apporte trois modifications caractéristiques aux politiques de la main-d'oeuvre et de l'éducation: l'institution d'un organisme fédéral indépendant de la formation professionnelle qui assumerait le développement et l'uniformisation des cours d'apprentissage au Canada et qui serait responsable de la politique dans ce domaine; un nouvel aménagement du financement de l'apprentissage qui impliquerait les employeurs, les gouvernements et les apprentis eux-mêmes; enfin, l'établissement de mécanismes de récompense et pénalisation afin de forcer pour ainsi dire employeurs et travailleurs à s'engager davantage à longue échéance dans le développement des ressources humaines du pays.