

**Promotion of Workplace Innovation
on the Public Policy Agenda
Reflections on the Finnish
Workplace Development Programme**

By

Tuomo Alasoini
Project Manager, Docent
Finnish Ministry of Labour
P. O. Box 34, 00023 Government, Finland
tuomo.alasoini@mol.fi

This article examines the ways in which public policy can support innovative development in working life with the help of a research-supported programme. The main focus here is the Finnish Workplace Development Programme (1996-2003). The article does not, however, focus exclusively on this one programme; the intention is to also highlight other, more general themes and questions which are of interest for programmatic workplace development.

The article is divided into five sections: first, I will examine the ‘Finnish success story’ of recent years and its staying power. The second section deals with development programmes as a way of promoting workplace renewal. The third section is an overview of the background and aims of the Finnish programme and the results of its projects. The fourth section deals with the role of learning networks in promoting workplace innovation, especially in the light of experiences from the Finnish programme. The final section presents concluding remarks.

The Finnish Success Story – Can It Last?

The differences in productivity between various countries began to grow again in the late 1990s after a long period of convergence. The average annual rate of increase in labour productivity in the US went up from 1.1% in the early 1990s to 2.0% in the second half of the 1990s, while the corresponding figure for the EU Member States fell from 2.5% to 1.4%. The USA was able to maintain almost the same pace of growth even during the economic slowdown in 2001, while the growth rate in the EU Member States fell by more than half to 0.6% (McGuckin & van Ark 2002).

Monitoring labour productivity involves many statistical issues and interpretation problems. Firstly, total factor productivity growth, i.e. a weighted average of the growth of labour and capital productivity, would in fact give a more nuanced idea of the situation than labour productivity alone. Secondly, though the long-term growth in productivity shows a positive correlation with the potential for economic growth and, consequently, with the economic prosperity of a nation, short-term changes do not necessarily have any clear connection with people’s economic prosperity at any given time. Thus, for instance, the surprisingly small slump in the productivity growth curve in the US compared with the EU in 2001 reflects the fact that US companies are more prepared to use personnel cuts as a way of adapting to a

downward economic trend. Despite all these reservations, growth in productivity can be considered one of the main indicators of a country's economic competitiveness and the renewal potential of its companies. The prevailing view among experts on the subject is that the growing differences between productivity trends in different countries, sectors and companies over the past few years indicate differences in their ability to adopt information and communication technology (ICT), and product and process innovations (including management and organizational innovations) which draw on it (McGuckin & van Ark 2002; OECD 2000).

In recent years, Finland has acquired a reputation for being one of the most successful countries in adapting to the conditions of the 'new economy', mainly as a result of the success of the Nokia Corporation, but also because of the generally strong ICT cluster in Finland. The ICT cluster has rapidly established itself as Finland's foremost export sector, with a 30% share. The high-tech trade surplus (high-tech exports/imports ratio) went up here in the late 1990s, becoming the highest in the EU Member States, despite the fact that Finland was below the EU average at the beginning of the same decade (Ali-Yrkkö et al. 2000). Finland's success story is also evident in its productivity statistics. The average labour productivity growth rate, 3.2%, was the second fastest in the EU, second only to Ireland, in the late 1990s. According to a flattering description by Manuel Castells, "The Finns have quietly established themselves as the first true information society, with one website per person, internet access in 100 per cent of schools, computer literacy campaigns for adults, the largest diffusion of computer power and mobile telephony in the world, and a globally competitive information technology industry, spearheaded by Nokia" (Castells 2000: 72).

However, the image of Finland's success began to crumble in 2001 with the downturn in the world economy and in the ICT businesses, in particular. The trend in Finnish labour productivity *deteriorated* by 0.9% in the course of a single year, becoming the lowest in the EU and second lowest in the entire OECD area. The fall evidenced how profoundly dependent Finland's productivity growth rate was on the ICT cluster's staggering annual rate of 25%. No other sectors have been able to seize the opportunities offered by the new economy with the same success; productivity growth has remained sluggish throughout many of the more traditional sectors in Finland. In fact, better integration of the new economy and the old has recently been highlighted as one of the main challenges facing Finnish innovation policy (Drihvi et al. 2000).

In the long term, unstable trends in productivity in Finland are a threat to national competitiveness as a whole and thus also to economic prosperity in a situation where both the population in general and the workforce are growing older. The change in Finland's demographic and workforce structure over the next few years will be exceptionally sudden compared with many other west European industrial countries. It is estimated that a million people will leave the workforce between 2000 and 2015; this is equivalent to almost half the present workforce of 2.4 million people. There is a danger that this may cause a considerable labour shortages, as the new age groups entering the labour market will be considerably smaller than those retiring from it. It is estimated that the average shortfall will be over 10,000 people a year at the present average age for retirement, which is only 58.

Labour shortages have an impact on the potential for economic growth, as this derives from labour input, capital investments and total factor productivity. Public policy measures have some potential for slowing the fall in labour input in Finland over the next few years, but they cannot prevent it altogether. The main way of compensating for falling labour input is to boost productivity. In fact, the growth in productivity should be speeded up. The risk here is that in a situation where labour shortages are threatening to put a damper on economic growth, clumsy attempts to boost the rate of productivity growth may have a negative impact on individual employees' work ability, wellbeing at work and motivation. Specifically, this is a risk when changes designed to boost productivity are planned and implemented without giving proper attention to employee needs and views. In a worst-case scenario, an accelerating productivity growth rate designed to compensate for a fall in labour input may cause a further deterioration in the labour supply in a specific sector or occupation. As a result, ageing people are no longer able to cope in the sector and occupations in question. It also becomes increasingly difficult to attract young people to take their place, as young people have more choices than ever, due to the falling labour supply on the market.

The challenge in such a situation is to find solutions which make it possible to speed up productivity growth while also ensuring employee wellbeing and encouraging people to stay on at work. Finding such solutions could be described as *the challenge of raising productivity in a sustainable way*. Essentially, a company's ability to deal with this challenge depends on its potential for producing innovations – i.e. product innovations, service innovations and management and organizational innovations. Companies which are unable to effectively

generate innovations to raise their productivity are forced to respond to competitiveness problems arising from their slow productivity growth rate by using other methods which are usually far harsher from the employee's point of view (e.g. rationalization, close-downs, staff and cuts). This means that public policy should not be indifferent to how smoothly and how fast companies can adopt new work, organizational and human resource management (HRM) practices.

Development Programmes – A Way of Promoting Workplace Renewal

Workplace development has been a focus of interest for government, labour market organizations and researchers alike in many industrial western nations since the 1970s. Interest in workplace development was boosted at that time by an increase in job dissatisfaction, absenteeism, labour turnover and industrial action, all of which were viewed as signs of problems in working conditions and the content of work as such. On the conceptual level, there was also talk of a crisis of Taylorism, Fordism and mass production in general. In many countries such as Germany, Norway and Sweden, programmes were launched with the aim of improving working conditions, the content of work and forms of work organization, opportunities for employee participation and labour-management relations. As of the 1980s the aims of these programmes have gradually expanded from issues of the quality of working life (QWL) and industrial relations (IR), to enterprise development in a broader sense.

The term 'workplace development programme' applies to cases where development in several companies is guided simultaneously by the same conceptual frame of reference whose contents have been mutually agreed by all the main stakeholders, typically central government or other R&D funding bodies, the labour market organizations, research and educational institutions, and, of course, the management and employees of the companies themselves. The added value of a programmatic approach to workplace development is usually justified with the following arguments:

(1) It helps lower the threshold of individual companies to developing their operations.

- (2) It can influence the aims, implementation and progress of development measures in companies.
- (3) It can help identify good practices and disseminate information on them.
- (4) It can help create arenas for the exchange of information and experiences between companies and various expert organizations (universities, research and educational institutions, consultants and development agencies), thus promoting interactive learning.
- (5) It can help strengthen the expertise of workplace researchers and developers.
- (6) It can help create new forms of interaction between stakeholder groups and interest organizations, such as labour market organizations.
- (7) It can help bring workplace development issues to the attention of the general public and make them the subject of public debate.

Workplace development programmes are in progress at present in most west European countries. However, they differ from each other considerably in terms of approaches, aims, extent, design and institutional arrangements (Business Decisions Limited 2000; Gustavsen et al. 2001). The social legitimacy and institutional standing of these programmes do, in fact, to a great extent reflect how closely the labour market organizations and the central (or regional) government cooperate.

The legitimacy and institutional standing of programmatic development have also varied within individual countries over time. In Germany and in Sweden, for instance, where government and labour market organizations have funded workplace development more than anywhere else, the volume of programmatic development has fallen distinctly in recent years and the emphasis has shifted increasingly from a national to a regional level. In the third pioneering country, Norway, cooperation between the labour market organizations in workplace development remains strong. In certain other countries, for instance Finland and Ireland, programmatic development did not begin until the 1990s. Meanwhile, Anglo-American countries, with the partial exception of Australia, have never given this much effort. As the short outline above indicates, developments have taken very different directions in

different countries over the last few years. It is not possible to talk of any convergence of industrial relations systems between western industrial nations, or even within the EU Member States, in this respect.

One thing, however, that all the western industrial nations do have in common is that the social legitimacy of workplace development programmes has not been equal to that of programmes designed to develop technology or workforce skills. The financial resources available to workplace development programmes have been relatively limited, with only a few exceptions, such as the Swedish Working Life Fund Programme (1990-95) and the German Work and Technology Programmes (1974-). This has left the programmes unable to aim at clearly distinguishable and immediate macro-level effects. There are a number of reasons for this.

Firstly, workplace development focuses on an area where the various parties involved, such as the labour market organizations, may have such conflicting views that it is impossible to find the common framework required for programmatic development. Furthermore, it is often difficult to measure the effects of programmatic development and evaluate them unambiguously. Effects may often be indirect, as they are mediated through changes to companies' work, organizational and HRM practices; they are often delayed effects, and measuring and evaluating them typically rely on 'soft', indirect methods (qualitative evaluation, surveys, interviews). Their significance is also difficult to express in the 'language' of policy-makers who focus on the macroeconomic level. How, for instance, can the impact of the learning networks created through programmes between companies and different expert organizations be evaluated using simple quantitative measures? And yet, these networks may be far more important in promoting innovations and interactive learning in companies and entire sectors, regions and, in the final analysis, for the competitiveness of a country as a whole, than any example projects with easily quantifiable results.

This paper examines preconditions for programmatic workplace development to promote innovations within companies in the light of experiences of the Finnish Workplace Development Programme. The values and principles of programmatic workplace development designed specifically to promote innovations can be linked to its QWL- and IR-oriented predecessors in two ways:

(1) Innovations provide a way to boost productivity and thus to improve the competitiveness of companies and economic growth in general. Countries, regions and companies which are unable to compete in the field of innovations are in danger of losing their strategic room for manoeuvre in global competition. They will then be forced increasingly to seek their competitive advantages in lowering the costs of traditional production factors such as labour. On the corporate level, this has the long-term effect of undermining the job security of the employees, making atypical employment more widespread and reducing companies' interest in developing the competence and skills of their employees. For society as a whole, the threat lies in a weaker financial base for social expenditure and a growing economic and social gulf between different population groups. The consequences could easily be a self-perpetuating vicious circle which would be hard to break.

(2) Promotion of innovation activity within companies makes them more interested in improving employees' opportunities to contribute to development work. In this respect, the Japanese quality movement provides both a good and a bad example. It is good in the sense that it became in effect a mass movement for quality improvement in Japanese companies. It is, however, a bad example in the sense that it did not, in fact, break down the hierarchical decision-making structures within companies and lead to industrial democracy, giving rise instead to a development organization (e.g. quality circles) which existed parallel to the production organization (Cole 1993; Lillrank 1995). By contrast, in the Nordic countries, where the responsibility for planning and development activities has recently been delegated to employees and teams *within* the production organization, programmatic workplace development aimed at boosting innovation has much better chances of further speeding up this line of development.

The Finnish Workplace Development Programme (1996-2003) – An Overview

The Origin of the Programme and Its Framework Conditions

The Finnish Workplace Development Programme (FINWDP) is the first of its kind in Finland in terms of its conceptual foundation and scale (i.e. a national initiative in which the focus is on research-supported development of work organization). In terms of programmatic workplace development, Finland has been lagging behind the other Nordic countries, and

above all Norway and Sweden, despite the fact that the cooperation between central government and labour market organizations on workplace development has been very close in Finland since the 1970s. FINWDP was launched by the Economic Council at the beginning of 1996 as part of the programme of Prime Minister Lipponen's first administration, and will continue until the end of 2003 under the programme of the second Lipponen Government.

It has been a typical starting point for many workplace development programmes that there is a problem in working life or society at large which is perceived as politically significant (working conditions, dissatisfaction with work, unemployment, discrimination based on age, sex or ethnic background, etc.), which can only be solved through programmatic research, development, training and information provision focused on the specific problem in question. The starting point of FINWDP is different, however.

The tripartite working group which prepared the programme included representatives of the Ministry of Labour, the four central employer organizations, the three central employee organizations and the entrepreneurial organization. The working group report was based on the premise that the mode of operation of a company is crucial for its competitiveness (Ministry of Labour 1996). The report criticised the fact that innovation promotion in Finland has chiefly focused on developing industrial, technology, science and educational policy without any links with workplace development. The thinking behind this approach, i.e. that economic growth rests on the 'propulsion power' of product and production technology innovations and investments in education and training, was considered too one-sided. According to the report, equal support must be given to workplace innovation within production and service chains, too, in order to reap the full benefits of the large investments made in developing technologies and workforce skills.

Significantly, all the members of the working group were prepared to accept this premise. A contributing factor in this was probably the exceptionally deep economic recession that Finland suffered in the early 1990s, which caused unemployment to skyrocket from only 3 per cent in 1990 to nearly 17 per cent in 1994. Many companies had made large investments just before the recession struck and fell on very hard times as a consequence. Even very highly trained employees suddenly found themselves out of a job as a consequence of the recession. This gave rise to a Finnish saying in the early 1990s, that Finland had "the most highly trained unemployed people in the world"

The conceptual framework of the working group's report was based on the debate about national innovations systems engaged in by economists and social scientists who took a critical stance toward neo-classical economic theory (e.g. Lundvall [ed.] 1992; Nelson [ed.] 1993). According to this, the neo-classical theory that regards economic growth as resulting from the most efficient possible use and combination of production factors is far too static. According to an alternative and more dynamic view, economic growth is speeded up specifically by innovations and interactive learning involving the various actors in the economy. In this discussion, the whole made up of the institutions involved and the interaction between them which promotes this on the national level was referred to as the 'national innovation system'. This innovation system could be influenced through the application of innovation policy (Lundvall 1999).

In Finland, this discussion has had a strong impact on the outlining of science and technology policy since the beginning of the 1990s, especially through the Finnish Science and Technology Policy Council. The Council is an advisory body headed by the Prime Minister, but is not actually part of central government (in addition to politicians, its members include high-level civil servants and representatives of the business sector, research and the labour market organizations). Finland has probably adopted development of a national innovation system and the concomitant reinforcement of knowledge-intensive growth as a key political objective more seriously than perhaps any other industrial nation. In the proposal for implementing FINWDP made by the tripartite working group in 1995, the programme was conceptually linked to development of the Finnish national innovation system, thus making it easier for policy-makers and other stakeholder groups to find a rationale for the new programme.

Aims, Activities and Strategic Context

The key principles of programme design and of the planning and implementation of programme activities can be summarized as follows:

(1) The programme promotes projects, which aim *at a comprehensive and holistic change in corporate modes of operation*. The aim is not so much to support companies in solving their

operative problems as to develop their modes of operation so as to make the companies in question (management and employees working together) better able to solve their own problems themselves and to find solutions to their own development needs in future. At best, the focus is on simultaneous development of technologies, leadership, work organization, networking capabilities, employee skills and competences, working conditions and occupational health. The basis for this is the assumption that creating a supportive environment for continuous learning and development calls for a strategy of change, which advances simultaneously on a broad front, and a 'fit' between different work, organizational and HRM practices within a company. Theoretical foundations for this can be found in Anglo-American discussion on 'high-performance work systems' (e.g. Appelbaum et al. 2000; Huselid 1995; Whittington et al. 1999) and Scandinavian discussion on 'concept-driven development' (Gustavsen et al. 1996).

(2) The programme aims at *balanced development between productivity and QWL in companies* according to the principle of sustainable productivity development (see above).

(3) A successful strategy of change, according to the principle of sustainable productivity development, calls for *broad participation on the part of employees*. The programme requires that employees are involved in the planning and implementation of projects carried out within the programme.

(4) The programme starts out with the assumption that there is *a close link between organizational innovation and job creation, especially where a company follows a strategy of balanced product and process (technological and organizational) innovation* (Edquist 1996; European Work & Technology Consortium 1998). Traditional consultancy often provides sufficient means to find solutions to problems which do not require any questioning of a company's basic norms and assumptions, whereas linking research to development shows its power primarily in cases where the aim is not to provide solutions to given problems, but to define and contextualize the problems themselves. Innovations often call for the posing of new questions or the redefining and recontextualizing of old ones, i.e. *linking research to development creates more favourable conditions for organizational innovation than pure consultancy alone*.

(5) To promote learning from experiences of other companies and dissemination of good practices, it makes sense *to get a sufficient number ('critical mass') of companies and experts (researchers, trainers and consultants) involved in the programme and to organize forums for interaction and dialogue between them with a view to creating learning networks.* Learning networks encourage companies to try out new practices, boost their search for new, innovative solutions and improve their opportunities for carrying out projects successfully.

From a public policy point of view, the basic premises of the programme are in line with an approach which can be called a *conditions-enabling innovation policy* (Schienstock 1999). In this approach the legitimacy of public policy intervention is not so much market failure as weak performance of the market mechanism in terms of innovation in a much broader sense. This point of departure implies that there is a need to adopt a holistic and systemic view of innovation in public policy which focuses on positive interaction between technological and organizational (and other social) innovations in all sectors of the economy, instead of seeing 'modernization' of the economy primarily as the development of new cutting-edge technologies. In this policy framework, work organization development should constitute an integrated and well-established aspect of this new, broadly defined innovation policy.

The main forms of programme activity are as follows:

(1) *Supporting project activity at workplaces:* The programme's main form of activity is the provision of expert support to companies, public bodies or other work organizations based on applications submitted to the programme. Expert support is used mainly to fund the use of experts (researchers, consultants and in some cases also internal coaches) in the projects. Expert support can be granted for three kinds of project: (a) Basic analyses are brief analyses used by workplaces to specify their development needs with an eye to a larger project. (b) Development projects are intended to promote changes in modes of operation at workplaces with a view to bringing about improvements in productivity and QWL. Development projects must concentrate on one of the following focus areas: promoting learning-supporting forms of work organization, developing human resource management, improving the functioning of workplace communities and promoting equal opportunities at workplaces. (c) The funding for network projects is intended for research and experimentation to support the creation and testing of organizational innovations that have potential for job creation. The projects must involve a sufficient number of companies in close and open cooperation. Cooperation

between companies can be based on vertical (production) or horizontal (development) networks, or in some cases infrastructure networks (funding is intended to create technological or other channels for inter-organizational cooperation). Most network projects are jointly funded by FINWDP and other R&D funding sources such as the National Technology Agency (Tekes), the Finnish Work Environment Fund, the National Productivity Programme, the European Social Fund or other ministries.

(2) *Disseminating knowledge about workplace development:* This includes, for example, publications (reports, working papers, bulletins and brochures), seminars and workshops, and information registers (e.g. an Internet homepage with information about funded projects, application instructions, statistics, publications, seminars and seminar papers, assessments of projects, 'good practice' case studies and a register of working-life R&D institutes in Finland). The most important focus groups are workplaces, R&D institutes, consultants, labour market organizations and policy-makers.

(3) *Strengthening the workplace development infrastructure in Finland:* This involves measures that strengthen cooperation between different stakeholders in workplace development. FINWDP supports networking between workplaces with its project activity and by organizing seminars where researchers, consultants and practitioners from different projects meet each other. In addition, FINWDP aims to cooperate especially closely with other R&D funding institutes and programmes, R&D institutes, labour market organizations, other ministries and their regional organizations (Employment and Economic Development Centres and Occupational Health and Safety Inspectorates) and international expert organizations. FINWDP provides grants for experts who work for projects funded by the programme and who utilize project material in their Doctoral thesis.

FINWDP is funded by the Finnish Government. The total budget of the programme from 1996 to 1999 was EUR 16 million, and for the second programme phase from 2000 to 2003 it is approximately EUR 28 million. The contribution to funding made by the workplaces taking part in the projects is approximately double the programme funding. More than 1,000 workplaces and 100,000 employees in 520 projects have so far (June 2002) taken part in the programme. In terms of funding allocations, the largest sectoral groupings are industry and construction (45%), followed by local authorities (30%), which carry the main responsibility

for basic education and health care services in Finland. The leading individual sectors are metal and engineering, and municipal welfare and health care.

Results of the Projects

The project-level results of FINWDP are the easiest to measure. This section contains an overview of project-level results according to two evaluation studies. The following main section contains a separate overview of the programme's role in promoting learning networks.

One way of looking at the results of development projects within FINWDP is the evaluation given by management and staff at workplaces and by the external experts involved concerning the impact, success and implementation of projects and the value added to projects by the programme. This self-assessment is carried out using a questionnaire sent to each of the three parties involved in a completed project. A representative of the management, a staff representative and an expert each fill in the questionnaire, either alone or with others from the group they represent.

A summary made by Ramstad (2001) comprises 502 self-assessment questionnaires from 186 development projects which had been completed by July 2000. The material is representative, in that it comprises 91% of all development projects completed by that time and 82% of potential respondents. The reply rate is almost the same for all three groups of respondents.

A general idea of the impact of the projects can be obtained by looking at the percentage of respondents who felt that the project had improved things either 'clearly' or 'to some extent'. Improvements in effectiveness were examined in terms of five different aspects. 66% of respondents said there was an improvement in the productivity of work, 76% said product or service quality had improved, 73% said the quality of operations had improved, 70% said the ability to respond flexibly to clients' needs had improved and 63% said the smooth functioning of operations had improved. Staff representatives saw slightly fewer improvements than the other two respondent groups, but still found them in over half of the projects in all five aspects; two thirds of them saw improvements in product and service quality and ability to respond to client needs.

The projects were also generally considered to have positive effects on work operations and the organization. 89% of respondents felt there had been an improvement in teamwork, 78% said cooperation between management and staff had improved, 67% said social interaction in the workplace had improved, 74% said there were better opportunities for staff to develop their vocational skills and 91% said there was more development activity in the workplace. About one in three respondents felt that there had been *clear* improvements in teamwork and development activity. Again, the views of staff representatives tended to be slightly less positive than the views of other respondent groups, but even there 60% felt there had been an improvement in cooperation between management and staff.

Improvements were not so often identified in aspects which described the quality of working life more directly. 58% of respondents felt that mental wellbeing in the workplace had improved, while 35% felt that physical working conditions had improved. About one in five respondents felt there had been an improvement in the position of ageing workers, young workers or gender equality. Again, the responses from staff representatives are slightly less positive than the others. Only in very few projects was there any indication of deterioration on any of these points.

The results cannot be directly compared with those from any other programme, as the aims and focus areas of different programmes differ and materials are collected in different ways. On the general level, however, it seems that FINWDP projects had more direct effects on workplace productivity than the Swedish Working Life Fund Programme, but less impact on QWL (cf. Gustavsen et al. 1996: 83-93). This result reflects the different focus areas of the two programmes; support for rehabilitation of employees, reduction of sick leaves and improvements in the working environment were among the central aims of the Swedish programme.

Self-assessment was also used to find out what influence management, staff, shop stewards and experts had over project content at the planning stage, and during implementation. Staff had been actively involved in implementation, but at the planning stage, the input of both staff and shop stewards was clearly smaller than that of management and experts. 83% of respondents said management had had a great or rather high influence at the planning stage, and 88% said the same was true about the influence of experts, when the corresponding figures for staff and shop stewards were 57% and 35% of respondents, respectively.

These differences are not surprising as such. In the Swedish Working Life Fund Programme, too, top and middle management were more active than other employees in taking initiatives in projects. Here, however, staff played a greater part than external consultants (Gustavsen et al. 1996: 105). The differences could be a result of different focus areas in the projects, or country-specific differences in workplace development traditions. A traditional expert-driven development approach may still have a stronger position in Finland than in Sweden, where various participatory development approaches have been tested in practice since the 1970s. Thus, for example, the empirical results of the joint Nordic Nordflex project for 1995-96 showed that active participation in the reorganization process by employees other than management was far more widespread in Sweden than in Finland. The same comparative study also suggested that management representatives in Sweden tend to see the role of both shop-floor workers and trade unions in promoting organizational change in a much more positive light than their Finnish counterparts (NUTEK 1999: 108-112).

The interpretation of self-assessment responses involves evident methodological problems. One problem is that the respondents themselves have taken a more or less active part in the projects concerned. This may mean that they have a tendency to assess the results with a positive bias. Another problem arises from the fact that the self-assessment was carried out as soon as the projects ended. Since many of the project results will probably only be felt after some time, some of the self-assessment results may have more to do with respondents' expectations than with recognizable effects.

Consequently, the programme started a study in 2002 aimed at finding out how participants assessed the results of development projects an average of two and a half years after they had ended (Arnkil et al., forthcoming). This study covered 108 projects. Ten respondents were selected from each project so as to include respondents from four groups: the project manager or coordinator, a member of the steering or management group, an employee who had participated in implementation and an employee who had not been directly involved.

There were 419 responses to this survey, yielding a response rate of 39%, which can be considered reasonably good in this type of study. Furthermore, the responses covered some 90% of projects.

The results of this study largely confirmed the results of the self-assessment study. Responses to the new study described significant or rather positive results for projects to an astonishingly similar extent regarding the same aspects as in the original self-assessments, but the percentage of respondents identifying positive results was slightly lower on average. For instance, for the five aspects of effectiveness, the difference was an average of 10 percentage points. 75% of respondents generally felt that the development projects had had very positive or rather positive effects. Management representatives, supervisors and the employees who had been most intensely involved in the projects were all slightly more likely than others to consider the results positive, which was also in keeping with the original hypothesis.

Learning Networks as Promoters of Workplace Innovation

Creating Connectedness as a Challenge for the Legitimacy of Programmes

The projects of FINWDP must be considered successful in terms of their results at the workplace level. According to the self-assessment study, the programme has also added value to workplace development in a clear majority of projects. 65% of respondents said the financial support from the programme was of considerable significance, or at least a great deal of significance for setting the project's aims. 75% said the same about the implementation of the project and 75% about the timetable and start of the project (Ramstad 2001: 64).

FINWDP's results in terms of value added by programme support are on a par with the results of the Swedish Working Life Fund Programme and the Norwegian Enterprise Development 2000 Programme (cf. Gustavsen et al. 1996: 140; 2001: 50).

The projects' good results at the workplace level, and proof of the value added by the programme in attaining these results, are essential criteria for the social legitimacy of the programme. They do not, however, say very much about the programme's impact on the infrastructure; for instance, how far it has succeeded in encouraging interactive learning between different actors. According to Gustavsen (2001), "The impact of each specific programme on the level of each participating enterprise seldom exceeds impacts that could have been achieved in several other ways, such as by the use purely of consultants or by internal improvement projects. The point about working together in a development programme with a broader range of actors has to do with many other things, such as creating

new lines of connectedness, learning to work together across organizational boundaries – particularly public-private ones – and the creation of legitimacy. From a short term efficiency point of view we hardly need programmes; from a long term development perspective we can not do without them (or similar social arrangements, whatever we like to call them).”

Gustavsen’s view of the importance of the programmes in creating connectedness can be examined through the ‘learning network’ concept. The next two sections will deal with the role played by learning networks in promoting workplace innovation, and the role of FINWDP in supporting the emergence of learning networks.

Learning Networks — What, Why and How?

The term ‘learning network’ refers here to a cooperation forum between companies and expert organizations, based on equal participation and confidential exchange of information and experiences, which is intended to help companies define their development needs and find solutions to their problems. Such networks may take many forms and may also include other participants, such as customers, labour market organizations, intermediate-level organizations or third-sector organizations. They may be open or closed. They may have a reasonably permanent structure or a constantly changing one. They may have both permanent members and loosely connected contributors. The expert organizations involved in these networks are typically research and educational institutions, consultancy companies and development agencies.

Knowledge demands change at an ever increasing speed. It is therefore becoming increasingly important for companies to gather information proactively from a wide spectrum of sources. Companies need methods and tools which allow them to determine which items of information are of strategic importance to them and how they can be utilized. This also applies to new management methods and development models, which are spreading from one country or company to another at an ever faster rate. It is often difficult for companies to critically assess these and the concepts and values they embody.

One of the typical and important functions of a learning network in conditions of globalized competition is to adapt different management methods and development models to local

conditions. A learning network may significantly help to reduce the obstacles preventing individual companies from following the latest ideas on a global level. In larger groups and with the help of external experts, companies will be able to make a more realistic assessment of the actual content of such new ideas, to translate and adapt their language to their own language and to produce local adaptations better suited to their own particular needs. At their best, learning networks could become both the ‘antennae’ of individual companies in feeling out global debate and ‘interpreters’ of this debate for individual companies.

Learning networks can filter, transmit and process the information in their environment more efficiently than individual companies. The various parties in the network can bring different types of information to the network for processing, and thereby expand individual companies’ field of information. It is also possible to deal with important issues for the companies involved more freely and more creatively in a network without immediate pressures of production or the limitations set by hierarchical organizations.

Individual companies often feel considerable resistance to the idea of confidential cooperation with other companies. In order to set up learning networks, companies should ideally be connected by a shared aim or theme. The companies involved must also have faith that the time and other resources they put into cooperation will bear fruit. The outlook for setting up a network is best if companies in the same district or region, the same sector or in the same value-added chain can get together. The formation of learning networks is restricted if the companies are competing or are at very different stages of development.

Different types of network can be effective in different situations. In cases of learning involving the search for solutions to problems which are already fairly well defined, it is useful if the companies and their knowledge base are similar to each other. In cases where the focus is on defining the actual problems, differences in knowledge between the network participants can be a resource in itself. Since both types of learning are often needed, the best situation could be ‘just the right difference’ between the network participants (Schienstock & Hämäläinen 2001: 134-137; Tell 2001: 18-23). This helps enrich the knowledge base of the network but still leaves the participants able to understand each other’s fundamental issues, targets, language and value judgements.

A learning network is a demanding form of cooperation for all the companies involved. No company can just be a 'free-rider'; everyone has to be willing and able to share knowledge and ideas with the others for the use and benefit of all concerned. In a genuine learning network, no one can take part only in the role of master or only in the role of apprentice; even expert organizations cannot be involved in a learning network as masters only. The theoretical knowledge of the experts is not superior to the practical knowledge of management and workers; its benefit for the companies lies in the fact that it is different. This difference complements the knowledge that management and workers possess and enriches the pool of knowledge available for development work in these companies (e.g. Fricke 1994; Gustavsen et al. 2001; Tell 2001).

The benefit of being part of a learning network must exceed the cost of participation for each participant, at least in the long term. External support is often needed in order to reduce the cost of networking for individual companies and to reinforce trust in the feasibility of the network. This is important especially in the early days of a network. In many countries, inter-company networking has been actively promoted in recent years through various development programmes and projects. Each learning network is unique, in both its historical and its cultural context. It cannot be directly copied. Learning networks which operate well can be a source of enduring long-term competitive advantages for the companies, regions, sectors or even nations involved in them.

Examples of Learning Networks in Finland

According to a study by Ramstad (2002), there are over 120 units in Finland involved in workplace research or development, employing a total of about 1,700 researchers or developers. These figures do not include consultancy firms. Most R&D units are small; only one in three employs more than 10 researchers and developers. The units focus more on companies than public-sector organizations. In the private sector, the focus is slightly more often on industry than on services. In the public sector, the focus is clearly on municipal organizations.

Nieminen and Kaukonen (2001) have conducted a survey of how important companies consider innovation-related cooperation with different partners. Based on their material (374

companies in manufacturing and knowledge-intensive business services), the companies considered cooperation with their own client companies, equipment suppliers, material suppliers and subcontractors fairly or very significant clearly more often than with any other partners. About one in three also considered cooperation with competitors, consultancy companies, development agencies and research institutes such as the Technical Research Centre of Finland (VTT) to be important. Meanwhile, the figure for technical universities and faculties was one in four, and one in five for educational institutes (e.g. polytechnics), only one in eight for universities and only three per cent for schools of business administration. This shows that there is a high threshold for building confidential cooperation between companies and R&D units. It would seem to be slightly easier to achieve cooperation with units that are involved with technology and engineering.

FINWDP has used project funding to create new cooperation contacts in workplace development. The programme aims to use project funding in long-term cooperation especially with R&D units which have enough critical mass, use and develop participatory approaches and are themselves actively involved in networks. The following table shows some examples of projects and other long-term cooperation contacts supported by the programme, which can be considered to operate as learning networks.

Table 1. Examples of learning networks in workplace development in Finland.

<i>Name of network</i>	<i>Scientific or practical basis of network</i>	<i>Parties involved in the network</i>
Cooperation network for users of the Change Laboratory approach	The Change Laboratory approach, which is based on developmental work research (a Finnish approach, which in its turn is based on the cultural-historical theory of activity developed by Russian psychologists)	The Center for Activity Theory and Developmental Work Research of the University of Helsinki Merikoski Research and Rehabilitation Centre The method has been applied in 40 organizations, and change laboratory coaches have been trained in many of them
Municipal Quality Network	Participatory action research, inspired by the Scandinavian democratic dialogue approach, Lewinian action research and the American Organizational Assessment (OA) tradition	The Work Research Centre of the University of Tampere Researchers in various R&D units and in the municipal employer and employee organizations Projects in 40 municipalities and 150 working units in them
Multilateral production networks (several networks)	Experimental development research, inspired by developmental work research, process management, action research and the grounded theory approach	The Industrial Automation Unit of the Technical Research Centre of Finland (VTT) Researchers in various R&D units Several production networks, consisting mainly of industrial SMEs
The Lohja Area Environmental Cluster	The need to improve the state of the environment, create new forms of cooperation between different actors and boost environmental expertise in the Lohja area	Western Uusimaa Institute for Continuing Education of the University of Helsinki Consultancy firms 16 companies The City of Lohja The Lohja Hospital District The Entrepreneurs of Lohja.
TEL LAPLAND Network	The need to improve the seamlessness of service chains and access to health care services in Lapland through telemedicine, and the need to improve telemedicine expertise in the Oulu area and Lapland	The University of Oulu and its Development Centre for Telemedicine The Lapland Hospital District Oulu University Hospital The University of Lapland Rovaniemi Polytechnic The Regional Council of Lapland 16 municipalities Companies in the health care and ICT sectors

The cooperation network for users of the Change Laboratory approach is a method-centred learning network, formed around the Center for Activity Theory and Developmental Work Research of the University of Helsinki. A Change Laboratory is a development method based on broad personnel participation, which enables a workplace community to produce both deep transformations and continuous improvement (Virkkunen et al. 1997). It differs from methods such as quality circles in that the development work is carried out in the actual working unit in the closest possible physical proximity to the actual work space, and in that development does not focus just on ‘how’ things are done (operating processes), but also on the ‘what’ and ‘why’ of the process (the objective of the work activity). The Change Laboratory is also different from many measures based on group discussions, in that the development measures are not based just on dialogue between the parties involved, but on analysis and interpretation of complex empirical material concerning actual activity, based on models. There are various adaptations of the method in existence, such as the ‘Boundary Crossing Laboratory’ used for developing cooperation between organizations (Engeström et al. 1999) and the ‘Competence Laboratory’ used for knowledge management (Ahonen et al. 2000). The user network consists of different types of organization, ranging from ICT companies, post offices, hospitals and schools, with special change laboratory coaches trained from among the staff in some cases. In the future, the Center for Activity Theory and Developmental Work Research intends to create even more solid forms of cooperation within the network in order to enable participants to exchange good experiences and develop the method further.

The Municipal Quality Network emerged from a separate quality project in the early 1990s and has become a broad-based cooperation forum for researchers and practitioners, coordinated by the Work Research Centre of the University of Tampere. Originally, the main source of inspiration for the network was the Swedish LOM programme (Leadership, Organization, Codetermination), from which it has adopted work conferences and democratic dialogue as its development tools. The methodology of the Quality Network has expanded over the years, and researchers and developers have often taken a more active role in the process of change than in the original LOM approach, e.g. processing development targets and solutions, introducing various models, methods and tools into the process and taking part in strategic-level planning processes in the municipalities (Kalliola & Nakari [eds.] 1999). This is due both to the personal interests of the researchers and developers and to the expectations of municipal management and staff. Finnish municipalities of different sizes from all over the country and working units from their different sectors have joined the network, i.e. social

health, meals and technical services; kindergartens, comprehensive schools and vocational training and education; and municipal administration. One of the most interesting features of the network is that experts from both the municipal employer organization and the employee organizations have taken an active part in the operations of the network, some of them as researchers and consultants in the actual development projects. The Quality Network has been a tool for the trade unions in developing their expertise in issues concerning the work organization, productivity and QWL, and, consequently, in their general supervision of employee rights.

The Industrial Automation Unit of the Technical Research Centre of Finland (VTT) has been involved since the early 1990s in creating development networks between companies in the same value chain. The Unit's approach has adopted influences from a variety of sources, such as developmental work research and process management. Its approach is clearly more design oriented than the Scandinavian approach based on democratic dialogue. The aim is, however, to link everyone touched by change to the various stages of the development cycle (analysis, planning, experimentation, stabilization). In recent years, the Unit has focused particularly on creating multilateral development networks between companies. Multilateral cooperation, where the relationship between the different companies is typically less hierarchical than in bilateral cooperation between one big company (principal) and one small company (subcontractor), is a better basis for process and product innovations than bilateral cooperation. Bilateral cooperation is often limited to areas that the principal assumes will produce direct economic benefits, without the opportunity for interactive learning that cooperation between several suppliers creates (Hyötyläinen 2000). The VAVE network (value analysis, value engineering) in Pirkanmaa region, which has been in operation since 1998, is a good example of a multilateral cooperation network; it is made up of a big principal and its two systems suppliers, three part suppliers and three companies which produce industrial services. New supplier companies have joined the VAVE network along the way, and the focus of development has shifted towards interaction between the suppliers, something which has brought in more of the elements of a genuinely multilateral learning network.

The Lohja Area Environmental Cluster comprises 16 local companies, the organization Entrepreneurs of Lohja, the Lohja Hospital District and the City of Lohja itself, located in an old industrial area in southern Finland. The University of Helsinki's Western Uusimaa Institute for Continuing Education acts as coordinator for the cluster, which is intended to

launch and implement projects that aim to improve the state of the environment in the area, to create cooperation in environmental issues between authorities, companies and local residents within local society, and to increase and utilize environmental know-how in the area. The cluster was a consequence of a competitiveness analysis of the area, carried out by a local partnership project in 1998. This showed that efficient handling of environmental issues was an important factor for companies' competitiveness and for that of the area as a whole. It is hoped that cooperation will help find solutions and operating models that reduce environmental impacts arising from raw material acquisition, energy use and the manufacture, transport, distribution, use and recycling of various products. The cluster is an open learning network seeking to expand. Specific rules were set down right at the outset, covering decision-making, the implementation of subprojects, funding, agreements and internal and external provision of information. The companies have formed clubs amongst themselves for the personnel in charge of environmental issues, logistics, information and acquisitions, and for technical staff. The operations of the cluster have been aimed at both local residents and company personnel, and have taken the form of environmental and company surveys, training seminars, visits, joint development projects and various other events, such as a car-free day and a car-pool day. The companies' joint development projects focused on reducing the environmental impact of logistics chains, on more effective waste recycling, on efforts to boost the user value of Lohja lake, on developing environmental indicators and on working together on developing environmental management systems. The plan is that the cluster should continue to operate even after its specific project funding from FINWDP runs out in 2002.

The TEL LAPLAND Network is based on a project which started in 1997 with the aim of creating Finland's first overall system of telemedicine (video training and consultation, radiology, primary care, ophthalmology, transfer of ultrasound and digital transfer of ECG) in Lapland between the Sodankylä Health Care Centre, the Lapland Central Hospital and Oulu University Hospital. The project started in the form of cooperation between the Lapland Hospital District and the Development Centre for Telemedicine at the University of Oulu. In Lapland, which is sparsely inhabited, with great distances, there was a need for new methods which could help create seamless service chains and improve access to health care services. The Oulu region, meanwhile, has a strong concentration of expertise in ICT, one of whose specializations over the past few years has been medical solutions. From the very start, the project included a study of the introduction and usability of the subsystems and equipment

involved. The study focused on the impact of different alternative solutions on patients' experiences of care, the productivity of work, the working environment, ergonomics and the wellbeing of personnel. The ultimate aim of the study was to develop new innovative working methods and services and produce feedback for the manufacturers of the equipment and systems. Personnel training was also provided when each subsystem was introduced. All this brought new participants into the network, i.e. units from two universities, a polytechnic and several companies. In 2000, it was decided to expand the project to cover all 16 municipalities in the Lapland Hospital District by the end of 2003. The project functions as a learning network, in that each health centre has a multiprofessional project team which is responsible for project implementation at its health centre and works on developing services in cooperation with other health centres and project teams at the Central Hospital. The aim is to productize the new ICT-based services created by different pilot units for general use through joint planning and evaluation seminars. The project is also subject to a separate evaluation process, which monitors and supports the introduction and establishment of new operating methods at the units involved.

Conclusions and Critical Assessment

This article started with some critical comments about the 'Finnish success story'. The implication was that Finland's reputation as a highly developed, competitive information society may not be based on a very solid foundation. During the last few years, growth in productivity outside the ICT cluster has been slow, and Finland's age structure and the structure of the workforce will change rapidly in coming years. Both of these facts face workplace development with great demands.

These demands have been examined in this article in the light of the concept of sustainable productivity development. According to this view, productivity development in Finland over the next few years should be promoted with solutions which simultaneously ensure employee wellbeing and thus help them stay on at work. The ability to answer the challenge of sustainable productivity development is crucially dependent on companies' ability to generate innovations. This can be supported through programmatic workplace development.

FINWDP started in 1996 and under the Government decision will continue until the end of 2003. Whether it will continue after that will depend on the views of the Government, the Ministry of Labour, which is coordinating the programme, and the labour market organizations. The results of the projects supported by FINWDP can be considered successful so far in terms of their impact in the workplace. The programme has also brought clear added value for workplace development actions. One of the key questions for the programme's social legitimacy is, however, its impact on the infrastructure, over and above the effects already mentioned. Infrastructure impact is more difficult to measure and estimate. There are, however, interesting examples in Finland of learning networks that the programme has helped create and develop. The next challenge for programmatic workplace development in Finland is, in fact, how to shift the emphasis from the workplace level more towards learning networks and gradually to the level of the entire innovation system.

The following are some of the critical issues for the opportunities and institutional status of programmatic workplace development in Finland over the next few years:

- Central government (Ministry of Labour) has so far played the role of initiator and coordinator of programmatic workplace development. In this respect, Finland is clearly different from countries such as Sweden and Norway. The prominent role played by central government means that FINWDP enjoys a high level of political support. This serves to reinforce its legitimacy and visibility and to safeguard its resources for the entire programme period. The problem is that funding is highly dependent on political trends and power relations, and the duration of the programme period is short (it is tied to the Government's term of office, which in Finland is a maximum of four years), making long-term strategic planning difficult. The prominent role of central government may also reduce the drive for innovation in formulating programme concepts and strategies.

- The labour market organizations have been closely involved in programme activities, even though the major role of initiator has been played by the Ministry of Labour, and there has been no major disagreement on the need, aims or content of the programme. This constitutes a solid basis for planning future programme strategies and forms of activity. The legitimacy of the labour market organizations as representatives of employers and employees is very solid in the sense that both groups claim a very high rate of membership (about 80%). One potential problem would be if the labour market organizations tried to establish a monopoly

preventing other interest groups from influencing workplace development issues. For instance, the organization of entrepreneurs, which is not a labour market organization involved in collective bargaining, is nevertheless represented in the FINWDP management group, while third-sector organizations or even organized NGOs have no such influence. As the economy becomes more networked and international, issues of corporate social responsibility are becoming ever more topical and are linked in many ways to workplace development, but the traditional tripartite cooperation model may not be an adequate institutional basis for dealing with these issues.

- R&D institutes have not been active in making proposals concerning the programme strategy. There is, however, close interaction between the programme and certain leading R&D institutes at project level and in building up learning networks (see previous section). Promoting staff qualifications, networking capabilities and knowledge creation in the area of working-life research and workplace development in R&D institutes should be given more emphasis in programme strategy for the future, from two particular points of view: firstly, the problem of finding skilled experts to help workplaces with their developmental problems may come to block attempts to increase the number of workplace development projects. Second, R&D institutes play a key role in creating and coordinating learning networks.

- Cooperation both at programme and project level between technology and workplace development policy does not yet have a solid basis in Finland. This is partly due to institutional separation of decision-making in these two domains of public policy, and partly due to the lack of a programmatic approach to workplace development and its low financial resources before the mid-1990s. FINWDP has set up several jointly funded projects with Finland's most important funding body for technology development, the National Technology Agency (Tekes). However, these jointly funded projects emerged largely as a result of the active approach of the applicants for project funding, and long-term, programme-level cooperation between these two funding bodies has yet to be established.

- Workplace development lacks an institutional base at the regional level in Finland. It is located in a 'grey' area between the spheres of action of different regional institutions, such as business support, technology development, labour market policy, occupational health and safety, and educational, research and general regional development agencies. The geographical distribution of workplace R&D units is also very uneven in Finland, with a clear

majority of these units located in growth centres in southern and western Finland. The polytechnic reform, which was completed in 2000, resulted in the founding of 31 polytechnics in over 60 locations in Finland, but it has not yet had an impact on the regional distribution of expertise. The lack of an institutional base at the regional level is a major challenge for the future with a view to creating 'critical masses' for learning networks, integrating workplace development issues in local or regional innovation strategies, and mainstreaming good practices.

- There is a deeply-rooted practice of close employee-management cooperation in work organization and QWL development issues at many workplaces, but there is also great variation between single workplaces and branches of industry. The general climate for cooperative action seems to be favourable, especially in the metal and engineering industry and in some parts of the municipal sector, if viewed in terms of the number of funding applications submitted to the programme. The number of companies in new, dynamic, and rapidly expanding sectors of the economy (the 'new economy'), on the other hand, has been rather low in the programme so far. There is the danger that, in focusing on traditional sectors of the economy, the programme may see the main problems of workplace development too much from the perspective of the old structures of workplaces and jobs, leaving them little to contribute to the new, emerging structures.

- FINWDP leaves a lot of leeway for workplaces to determine the goals and methods applied in development projects within the limits of project criteria. Though projects should be planned and implemented in close cooperation between management and employees, they in many cases tend to reflect the interests of management rather than of the employees. The reason for this is that the employees, or their local union branches, rarely have explicit aims concerning work organization or QWL-related issues. Different groups of employees may also have divergent interests. Generally speaking, it seems that, compared with Sweden, which has a long tradition of workplace development programmes, there is less employee initiative in the area of work organization development and QWL issues in Finland.

- The goals and approaches of FINWDP are still poorly understood and the programme itself is poorly known among the general public. It is obvious that there is still a lot of work to be done to raise awareness of the importance of workplace development in Finland.

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