

# Turning the switch on skills

Richard Pearson

*Industrial concerns may have to rethink their in-house training programmes — or pay dearly for the skilled workers they need.*

WITH the dramatic downturn in the numbers of school-leavers available to enter the labour market and higher education systems of most Western countries, (*Nature* 355, 100; 1988), attention is turning to the existing workforce: after all, 70 per cent of those who will be in employment at the end of the century are already in the workforce.

In response to the growing shortage of technical staff, a number of companies are now embarking on special initiatives to retrain non-technical staff and are widening their recruitment net to embrace new types of trainees by setting up conversion courses. Others are introducing special career streams for technical staff to improve their long-term career prospects, and hence retention rates (*Switching on Skills*, NEDD, 1989).

An example of one of these initiatives can be found at the BBC (British Broadcasting Corporation) which has a continuing need to recruit engineering staff to maintain its broadcasting and transmission activities. In the early 1980s the corporation started experiencing increasing difficulty, along with most other employers, in attracting sufficient engineering graduates and school-leavers qualified in mathematics and physics to enter its training schemes. It foresaw these difficulties worsening, and so decided to widen and adapt its graduate training scheme to include arts graduates. When the places were advertised there was a massive response with 8,000 enquiries, and 3,000 applications for the 24 places. An 'O'-level in maths at grade B, or better, was deemed to be the minimum technical knowledge needed and special training tests were used to aid the selection process.

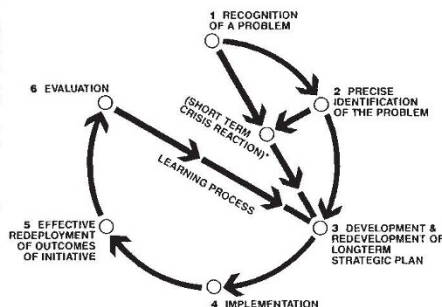
In this way candidates were assessed in near normal training conditions to evaluate their suitability and probable success in the longer term. A special programme was developed to give the trainees the basics of physics in a three-week module. They then followed the 'A'-level trainee programme, both streams eventually merging with the engineering graduate group. The initial off-the-job part of the programme lasts about 13 weeks, and is followed by an 18-month period embracing both off- and on-the-job training.

Although still in its early stages, the programme has been deemed a success, with none of the trainees failing. The BBC has found a completely new source of

recruits, reducing their need to compete in the market for experienced engineers. It is argued that as overall salary levels do not have to match the top of the market, the training costs involved, which exceed £10,000 per trainee for the initial 13 weeks alone, are justified.

Another approach to widening the recruitment net and using non-technical recruits has been undertaken by part of the electronics group Plessey. A shortage of real-time programmers was the spur here, and the company looked to retain internal staff. An in-house 26-week course was designed which could not only take students from a wider range of backgrounds than the external equivalent but was also 60 per cent cheaper. It includes foundation elements of maths and electronics as well as the basics of software. This is followed by short modules on specialist high-level languages and project work. Staff and ex-students have described it as compressing two years of university study into six months.

Initially the course was aimed at graduates but more recently a base entry standard of good 'O'-levels was accepted



*The best of training programmes could fail if it is not adapted in the light of experience.*

for staff who might otherwise have been in danger of redundancy elsewhere in the company. The course was externally validated and in the second year the Manpower Services Commission, a government agency, arranged to buy places to retain graduates and to help ease the more general skill shortages. Selection was by aptitude test and interview with a notional target age range of 20–30 years, reflecting the perceived market prejudice against older workers. All 90 of the students taking part so far have successfully completed the course; the benefits of 'growing your own' having been emphasized by high retention rates. For the externally sponsored students, normally graduates

with no information technology experience and from backgrounds ranging from civil engineering to the arts having been in employment for up to 5 years, the courses were seen to be highly practical. Their relatively short duration, when compared with a 12-month MSc, means that students can find financial support more easily. By allowing externally sponsored students to participate, the company has been able to continue with the course even in times of slack internal demand.

At Barr and Stroud, manufacturers of electro-optical systems, the concern was to provide career routes for specialist staff and improve retention by allowing career progression outside the traditional management hierarchy. The company has introduced a number of new programmes including a career structure with three streams for professional, specialist and managerial staff, explicit grade and progression criteria, an integrated and visible salary structure, and an appraisal system. The latter is a critical means of identifying training needs and succession planning. The programme, which is currently being implemented, will, it is hoped, result in clearer and better career prospects for staff, leading to lower staff turnover.

For other companies interested in developing such initiatives there are a number of lessons of value from these and the complementary case studies (presented in *Switching on Skills*). The first is the need is to recognize the nature and durability of the problem, such as recruitment difficulties, high wastage or poor utilization. Often this is done but only leads to short term, or crisis reactions. The real need is to identify the precise problem and develop a strategic response. Implementation of the plan then follows; it is at this stage that many initiatives stop. In many cases, however, staff are retrained and then their new skills are not exploited. The programme needs to be evaluated and the lessons fed back into the design and implementation strategies (see figure). Few programmes are 100 per cent successful the first time, and even where they are the problem or the environment will continue to change. The challenge now is to increase the skills of the existing workforce to complement the new skills provided by the young. □

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