

SPECIAL REPORT

The elephant in the truck

Retraining low-skilled workers

Systems for continuous reskilling threaten to buttress inequality



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IMAGINE YOU ARE a 45-year-old long-distance lorry driver. You never enjoyed school and left as soon as you could, with a smattering of qualifications and no great love of learning. The job is tiring and solitary, but it does at least seem to offer decent job security: driver shortages are a perennial complaint in the industry, and the average age of the workforce is high (48 in Britain), so the shortfalls are likely to get worse. America's Bureau of Labour Statistics (BLS) says there were 1.8m truckers

in 2014 and expects a 5% rise in their number by 2024. “As the economy grows, the demand for goods will increase and more truck drivers will be needed to keep supply chains moving,” predicts the BLS website, chirpily.

But the future might unfold very differently. For all the excitement over self-driving passenger cars, the freight industry is likely to adopt autonomous vehicles even faster. And according to a report in 2014 by Morgan Stanley, a bank, full automation might reduce the pool of American truck drivers by two-thirds. Those projections came hedged with caveats, and rightly so. The pace of adoption may be slowed by regulation. Drivers may still be needed to deal with unforeseen problems; if such jobs require more technical knowledge, they may even pay better. Employment in other sectors may grow as freight costs come down. But there is a chance that in the not too distant future a very large number of truckers will find themselves redundant. The implications are immense.

Knowing when to jump is one problem. For people with decades of working life still ahead of them, it is too early to quit but it is also risky to assume that nothing will change. Matthew Robb of Parthenon-EY, a consultancy, thinks that governments should be talking to industry bodies about the potential for mass redundancies and identifying trigger points, such as the installation of sensors on motorways, that might prompt retraining. “This is a boiling-frog problem,” he says. “It is not thought about.”



For lower-skilled workers of this sort the world of MOOCs, General Assembly and LinkedIn is a million miles away. Around 80% of Coursera’s learners have university degrees. The costs of reskilling, in terms of time and money, are easiest to bear for people who have savings, can control their working hours or work for companies that are committed to upgrading their workforce. And motivation is an issue: the tremendous learning opportunities offered by the internet simply do not appeal to everyone.

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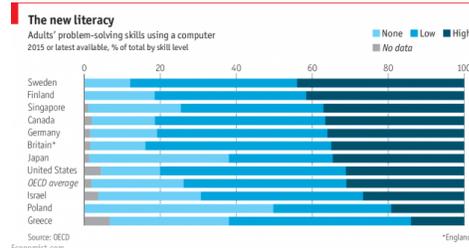
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The rewards of retraining are highest for computing skills, but there is no natural pathway from trucker to coder. And even if there were,



many of those already in the workforce lack both the confidence and the capability to make the switch. In its Programme for the International Assessment of Adult Competencies, the OECD presents a bleak picture of skills levels in 33 member countries (see chart). One in five adults, on average, has poor reading and numeracy skills. One in four has little or no experience of computers. On a measure of problem-solving ability using technology, most adults are at or below the lowest level of proficiency.

Moreover, learning is most effective when people are able to practise their new skills. Yet many jobs, including lorry-driving, afford little such opportunity, and some of them are being deskilled further. Research by Tom Higgins of Cardiff University suggests that the numeracy requirements for retail assistants and care-home workers in Britain went down between 1997 and 2012. The head of one of the world's biggest banks worries that a back-office operation in India has disaggregated its work into separate tasks so effectively that employees are no longer able to understand the processes as a whole, let alone make useful suggestions for improving them.

So the truckers' dilemma will be very hard to solve. "It's difficult when you don't have a good answer even in an ideal world," says Jesper Roine, an economist who sat on a Swedish commission to examine the future of work. But as a thought experiment it highlights some of the problems involved in upgrading the stock of low-skilled and mid-skilled workers. Any decent answer will need a co-ordinated effort to bring together individuals, employers and providers of education. That suggests a role for two entities in particular.

One is trade unions. They have an industry-wide view of trends that may not be available to smaller employers. They can also accompany people throughout their working lives, which may become increasingly important in a world of rising self-employment. Denmark's tripartite system, for example, binds together employers, government and unions. Firms and unions get together to identify skills needs; collective-bargaining agreements enshrine rights to paid leave for training. The country's famed "flexicurity" system offers unemployed workers a list of 258 vocational-training programmes.

In Britain a well-regarded programme called UnionLearn uses union representatives both to inform workers about training options and to liaise with employers on workers' requests for training. Employees seem more likely to discuss shortfalls in basic skills with union representatives than with managers. An analysis by academics at Leeds University Business School shows that between 2001 and 2013 union members in Britain were a third more likely to have received training than non-unionised workers.

The second entity is government. There is much talk about lifelong learning, though few countries are doing much about it. The Nordics fall into this less populated camp. But it is Singapore that can lay claim to the most joined-up approach with its SkillsFuture initiative. Employers in the city-state are asked to spell out the changes, industry by industry, that they expect to happen over the next three to five years, and to identify the skills they will need. Their answers are used to create "industry transformation maps" designed to guide individuals on where to head.

Since January 2016 every Singaporean above the age of 25 has been given a S\$500 (\$345) credit that can be freely used to pay for any training courses provided by 500 approved providers, including universities and MOOCs. Generous subsidies, of up to 90% for Singaporeans aged 40 and over, are available on top of this credit. The programme currently has a budget of S\$600m a year, which is due to rise to S\$1 billion within three years. According to Ng Cher Pong, SkillsFuture's chief executive, the returns on that spending matter less than changing the mindset around continuous reskilling.

Some programmes cater to the needs of those who lack basic skills. Tripartite agreements between unions, employers and government lay out career and skills ladders for those who are trapped in low-wage occupations. Professional-conversion programmes offer subsidised training to people switching to new careers in areas such as health care.

Given Singapore's size and political system, this approach is not easily replicated in many other countries, but lessons can still be drawn. It makes sense for employers, particularly smaller ones, to club together to signal their skills needs to the workforce at large. Individual learning accounts have a somewhat chequered history—fraudulent training providers helped scupper a British experiment in the early 2000s—but if well designed, they can offer workers educational opportunities without being overly prescriptive.

Any fool can know

In June 2016, this newspaper surveyed the realm of artificial intelligence and the adjustments it would require workers to make as jobs changed. “That will mean making education and training flexible enough to teach new skills quickly and efficiently,” we concluded. “It will require a greater emphasis on lifelong learning and on-the-job training, and wider use of online learning and video-game-style simulation.”

The uncertainties around the pace and extent of technological change are enormous. Some fear a future of mass unemployment. Others are sanguine that people will have time to adapt. Companies have to want to adopt new technologies, after all, and regulators may impede their take-up. What is not in doubt is the need for new and more efficient ways to develop and add workplace skills.

The faint outlines of a new ecosystem for connecting employment and education are becoming discernible. Employers are putting greater emphasis on adaptability, curiosity and learning as desirable attributes for employees. They are working with universities and alternative providers to create and improve their own supply of talent. Shorter courses, lower costs and online delivery are making it easier for people to combine work and training. New credentials are being created to signal skills.

At the same time, new technologies should make learning more effective as well as more necessary. Virtual and augmented reality could radically improve professional training. Big data offer the chance for more personalised education. Platforms make it easier to connect people of differing levels of knowledge, allowing peer-to-peer teaching and mentoring. “Education is becoming flexible, modular, accessible and affordable,” says Simon Nelson, the boss of FutureLearn, the Open University MOOC.

But for now this nascent ecosystem is disproportionately likely to benefit those who least need help. It concentrates on advanced technological skills, which offer the clearest returns and are relatively easy to measure. And it assumes that people have the money, time, motivation and basic skills to retrain.

Thanks to examples like Singapore’s, it is possible to imagine ways in which continuous education can be made more accessible and affordable for the mass of citizens. But it is as easy—indeed, easier—to imagine a future in which the emerging infrastructure of lifelong learning reinforces existing advantages. Far from alleviating the impact of technological upheaval, that would risk exacerbating inequality and the social and economic tensions it brings in its wake.

This article appeared in the Special report section of the print edition under the headline “The elephant in the truck”

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