

## TVET AND CAREER DEVELOPMENT

Geoff Hayward

I want to start with an anecdote. A few years ago we advertised for a secretary in the Faculty of Education where I then worked. Twenty years ago that job would have been taken by a school leaver with a Vocational qualification that certified proficiency in typing, basic IT skills, organising abilities and so on. The job has not really changed and we advertised for a person with those skills and qualifications.

We had just over 90 applicants for an entry-level administrative job. Of those 90 80%+ of the applicants had degrees, Masters degrees and/or PhDs. This is the bumping down that Professor Lauder described. What these highly qualified young people lack is work experience and vocational know how: they hope that by taking these entry level jobs they will gain the experience they need to access higher level administrative jobs within the University. We employed someone without a degree but with relevant experience, a school leaver with VET qualifications.

The point of the anecdote is that the labour market in the UK is not providing enough highly skilled jobs for graduates and this is a worldwide phenomenon. A challenge for TVET graduates as they seek to develop their careers is how they compete with graduates for entry-level jobs. UK graduates now retrain as plumbers, as electricians and as carpenters. My tiler has a degree in engineering but is a very good tiler – just come and look at my bathroom.

Some German students leave school with the Abitur, the academic school leaving qualification, undertake an apprenticeship, and then go to University. Transitions to the labour market are becoming more complex, non-linear and ambiguous. Navigating such changes is a major challenge for the design and reform of TVET systems designed for a more linear age across the world.

There is now general agreement that high quality primary education is a key component of economic success in a globalizing knowledge economy. High quality general secondary education also seems essential for economic growth in the modern world. Developing young people's abilities to play with ideas and information seems to be crucial to technological innovation and imitation of technological innovation.

However, the evidence about the role of TVET and HE in relation to economic development is, as Philippe Aghion and his colleagues (2009) suggest, more fragile. In relation to HE, Aghion's research suggests positive returns to HE if a country is using its graduates on the technological frontier and producing jobs that require graduate skills – this implies not just an education policy but an industrial policy too that supports innovation, for example through tax breaks for R&D work a strategy pursued successfully by Singapore.

The evidence about TVET systems is even more ambiguous. In the earliest stages of industrial development skills needed to do the job were learnt on the job, largely through apprenticeship style systems in the case of skilled craftsmen (and they were all men) or by sitting next to a more experienced worker at say a factory loom or a spinning machine. In this sense TVET is the oldest form of education: the skills and knowledge needed to undertake work were learnt within the family and the community: blacksmiths begat blacksmiths; young women learnt domestic skills from their mothers.

The earliest schools we know about are in ancient Sumeria, about 3000 km to the south west of Astana. This classroom (Figure 1) dates from about 5000 years ago. It looks remarkably like a modern classroom.

**Figure 1 - Sumerian Classroom ca 2000 BCE**



Here the children would have sat on these benches and the teacher would have occupied this large space at the front. The only strange objects are the bowl-like structures; these are related to the vocational purpose of the school: learning to write. This is a school for scribes and they are learning a newly invented technology: writing. They cannot learn to write at home because their parents and others in the community are illiterate; they have to come to a special place a vocational school.

The bowls contain clay – learning is by rote exercise forming cuneiform characters with a wooden stylus on a clay tablet. Once the exercise is complete the students put clay from the bowls over their tablets and start again. How like the modern computer screen running behaviourist-learning programmes based upon drill and test.

Why do I see this as a vocational school – well they are learning a vocation, building the basis for a career. As the American philosopher John Dewey (1915, p. 307) pointed out over a hundred years ago in his great book *Democracy and Education*:

‘A vocation means nothing but such a direction of life activities as renders them perceptibly significant to a person, because of the consequences they accomplish, and also useful to his associates. The opposite of a career is nether leisure nor culture, but aimlessness, capriciousness, the absence of cumulative achievement in experience on the personal side, and idle display, a parasitic dependence upon the others, on the social side.’

One might think then that all we need to do to design a successful TVET system is to decide what skills, aptitudes, and competencies we want to develop in young people in order for them to pursue a career, how to certify them and how to decide what the best places are to learn these things – the general education system, vocational tracks within the general education system, the workplace itself or a combination of workplace and schooling as in the famous German dual system?

But the philosophical and practical problems we always have in deciding the nature of the curriculum and how to teach it is amplified in the case of TVET. For example should we teach general capabilities such as writing or should we concentrate on highly specific, even job specific skills?

Policymakers have been emphasizing the need to invest in education and skills formation but if human capital is such a desirable good why is it so hard to create? The development of knowledge, skills and aptitudes, competencies if you must though I think capability is a better descriptor, is not simply a matter of rational choice with young people and their families, on the one hand, and employers, on the other hand, deciding to choose to invest in vocational training to improve the productivity of their companies and individual wages.

TVET systems exist and function more or less efficiently and effectively within a network of other social institutions and process for example, the labour market, firm’s product and competitive

strategies, families and their expectations for their children, and general and higher education. As Busemeyer and Trampusch (2012, p.3) suggest:

‘... the development and availability of skills is not a matter of unconstrained rational choices but is strongly conditioned by and reflected in the institutional context of political economies, both historically and in the contemporary period ... hence the domain of skill formation must not be regarded in isolation from other domains of the political economy.’

Let me exemplify by considering the German dual system of TVET. This is based upon a tripartite set of agreements between the state, employers and trade unions that are grounded in a long history, arguably going back to the medieval guild system. Thelen and Busemeyer (2012, p. 69) argue that:

‘In its heyday, Germany’s highly successful model of diversified quality production rested on a set of institutionally anchored incentives and constraints that, in Wolfgang Streeck’s memorable phrase, both “forced and facilitated” German firms’ pursuit of high-quality, high-wage, high-value added production. The training system [the dual system] was a central part of the model, as it required firms to train their workers according to occupational profiles whose content and quality were subject to nationally standardized and rigorously enforced curricula.’

This quote suggests that what the German system ideally achieves is to force firms to over train their apprentices: the dual system provides young workers with access to a broad range of skills which go beyond the immediate needs of any firm. This is achieved through a mixture of high quality on the job training, rigorously enforced by the local chambers of commerce and strong employer organisations, combined with general education delivered by vocational schools.

The skilled workers produced by the system, with the ability to operate in a range of tasks using a range of skills, are a key source of competitive advantage for the German economy.

No one can force German firms to train – so why do German firms, or at least those in the traditional manufacturing and craft sectors, acquiesce to this corporatist, collectivist training system; seemingly the very antithesis of neoliberal capitalist modes of production? Other wider institutional factors are needed to explain this, notably centralised collective wage bargaining with trade unions which leads to wage compression: skilled workers get paid less than you might expect and less-skilled workers more, so wages become compressed. Holding down the wages of skilled workers increases the returns to the firm of training; paying lower skilled workers more provides incentives to raise productivity. Furthermore, centralised collective bargaining and strong employer associations reduces the attraction of poaching workers and makes moving jobs less attractive for skilled workers (they are not going to get paid a lot if anymore by moving to another factory).

The German TVET system works effectively and efficiently because of a wider set of institutional factors that provide strong incentives for firms to offer apprenticeship places and train, and strong constraints that ensure the content and quality of the training is of high quality. It follows that without this network of factors being in place, and the sets of incentives and constraints have developed over a long time, simply transplanting wholesale the German dual system will not necessarily produce effective and efficient outcomes. Developing a well functioning TVET system requires consideration of a much wider set of social processes than simply that of the training system itself.

### **TVET and progression to Higher Education**

The central concern of Dewey with career can be seen as the challenge of progression. What opportunities does participation in TVET open up for young people, and what opportunities does it block off? When is the best age to decide whether to take up TVET? Does offering more TVET make societies more inclusive? Answering such questions, massive cross-national comparisons undertaken in 1980s and the 1990s could find little if any evidence that expanding TVET provision

led to greater social equality. Accessing Higher Education remains crucial for making progress to higher paid jobs.

Recent research, including our own in the UK, has shown that an increasing number of young people with VET qualifications have successfully gained access to Higher Education. A clear national qualifications framework, and other tools, such as the UCAS Tariff, which show the equivalence of academic and vocational qualifications, and the utility of some vocational qualifications for supporting progression to Higher Education in the UK, have been key mechanisms underpinning the increased transition from VET to HE.

Qualification frameworks signal, at least to some extent, to higher education gatekeepers and employers, the relative value of different qualifications and that can open doorways. The drop out rate from HE for students with vocational qualifications is, however, significantly higher than for those coming with academic qualifications. This is highly inefficient. The reasons for such drop out are complex but a major determinant seems to be the mismatch in the knowledge base developed during VET and the type of knowledge being taught in Higher Education, and the pedagogy being employed – from work sites to lecture theatres is not an easy transition.

Two approaches seem to help young people overcome the transitional frictions that they experience as they move from VET to Higher Education. First a clear mapping of the VET and HE curriculum as occurs in the linkage between ISCED Level 3 VET provision in Danish vocational schools and the Danish Technical University in Copenhagen. Second, support to master academic content. This may take the form of an access year to help VET students make the transition to HE, quite common in Britain.

You also need good support systems in Higher Education that responds to the individual needs of students. However, this costs both in terms of time, for students, and money for universities, which is an active disincentive for some Universities to take VET students. Nonetheless, to enable progression to make sure TVET contributes to making a career through enabling participation in Higher Education such investment seems essential.

## **Conclusion**

Being prepared through education whether general or VET to become an independent, economically self sufficient adult is of course a necessary condition for judging whether an education system is using resources effectively and efficiently. But it is, I would argue, not a sufficient criterion. Education, whether general or vocational, is about more than making a successful transition to the Labour Market and earning lots of money.

Education plays a key role in developing active citizens: education should build inclusive societies and that is better for all of us. Thus the citizenship developing capacity of TVET must not be overlooked and it seems fair, since we all benefit from living in more inclusive societies, that we should all pay for it even if we do not have children.

I would like to end by reiterating a point that I feel is too often forgotten nowadays in discussions about the purpose of education and which has been rarely mentioned at this conference. We live in an instrumental age and of course students want an education that will lead to a bright economic future for them and their families.

But the engineers who built the gas chambers at Auschwitz had a training that enabled them to follow a lucrative career that resulted in the murder of 4 million people; the investment bankers were well trained in the use of derivatives and bizarre financial instruments that only they understood in the pursuit of profit but their actions bankrupted the world economy in 2007/08 and caused huge pain largely to poorer people. Neither of these so called educated groups understood how to act morally. Ultimately I would argue that the role of education is to help us become moral agents: the real purpose of education is to help us to become more human.

### References

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