



Key Evidence on Vocational Education and Training Policy from Previous OECD Work

Kathrin Hoeckel



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ANNEX A
KEY EVIDENCE ON VOCATIONAL EDUCATION AND TRAINING POLICY FROM
PREVIOUS OECD WORK

1. This paper draws together key evidence from recent OECD work bearing on vocational education and training (VET). It sets it out under three headings: a) labour market transition outcomes, b) concerns of status and equity, and c) financing issues, particularly costs and benefits of VET systems. It aims to draw attention both to areas where evidence is well established and to those where firm evidence is lacking. Five cross-cutting policy recommendations emerge from the evidence presented in detail below:

- a. Strong institutional frameworks are important for positive transition outcomes but need to be balanced with sufficient flexibility providing alternative pathways that appeal to a wide range of students and allow for career choices unbiased by status considerations.
- b. Good quality career guidance is important to transition success but needs to be enhanced for those following vocational training.
- c. Including the employers in the process of designing and providing VET is important as employers are aware of changing labour market needs.
- d. Pedagogy has been relatively neglected in the field of VET, damaging quality and labour market outcomes. More attention should be paid to the question of how to teach vocational subjects, and how to train the vocational trainers.
- e. Equity concerns of a widening skill gap arising from unequal participation in CVT should be addressed through government support targeted to disadvantaged groups and financial incentives for employers.

Issue 1: Transition from initial to continuous education and the labour market

2. Transition outcomes are determined by a variety of variables ranging from development and flexibility of institutional frameworks to work relevance of education content

Evidence

- a. Institutions: Countries with good transition outcomes from initial education to the labour market tend to have strong institutional frameworks to support transition including comprehensive laws and regulations, well defined roles for social partners and VET advisory structures, normally developed over an extensive period. However the nature of effective transition institutions varies widely from country to country (Transition 2000, p. 123/124).

- b. Flexibility: Strong institutions should not hamper flexibility for instance through modularised courses or a variety of pathways that can create bridges between upper secondary vocational and tertiary education and hence be more responsive to the diverse needs of students (Transition 2000, p. 86-88). Even though there is a strong trend in several countries to introduce more choice into upper secondary education (Qualification Systems 2007, p. 48) knowledge about the effects of these reforms is still inconclusive.
- c. Inflexible systems: One effect of inflexibility is that students sometimes complete upper secondary education and then undertake a second qualification at the same level. This prolongs the period of study which implies clear additional costs and uncertain benefits (Transition 2000, p. 72/76) but “a clearer understanding of these costs and benefits of longer transitions is now needed” (p. 77).
- d. Broad skills: In principle, positive outcomes might be expected where the educational system allows specialization within VET to be postponed because general education prepares students for a wider variety of jobs in a changing labour market. However, anecdotal evidence suggests that the downsides of broader educational programmes may be less rigorous quality standards and increased, though perhaps less visible, inequality (Transition 2000, p. 84 and 88).
- e. Work-relevance: Positive transition outcomes may also result from increasing the relevance of initial education to work and the value of work-related qualifications in the job market either through combining classroom learning with learning in work settings or through reinforcing collaboration between the different partners as has been done in French-speaking Belgium (Qualification Systems 2007, p. 46/47).
- f. Workplace experience: Individual country examples suggest that workplace experience can improve transition results but we lack firm comparative data (Transition 2000, chapter 4.2). Good quality apprenticeship training for instance may reduce early school leaving (Equity in Education 2007, p. 45). It is associated with lower youth unemployment (Starting Well 2006, p. 22) and good transition outcomes, even if it is “not always clear why this is the case” (Transition 2000, p. 101) but not all forms of workplace experience are as learning intensive as others and they vary widely in the demands that they make upon the firm (Transition 2000, p. 100).
- g. Germany’s dual system: Germany with its dual system of VET, has consistently had lower youth unemployment than OECD or EU average rates and appears (Employment Outlook, 2007) to suffer less from the Achilles Heel of most apprenticeship schemes, namely that they are regarded as second class by young people, their parents and even employers (Economics and Finance 2001, p. 73). Nevertheless, even in Germany (and other countries with traditional apprenticeship schemes), there has been some falling off in their popularity, both among young people who appear to be put off by the difficulty of transferring into tertiary education, and with firms which have been more reluctant to offer apprenticeships given recent weaknesses in the German economy (Economics and Finance 2001, p. 73).
- h. Exporting the dual system: There is a widespread view that the German system cannot simply be transferred to other countries. The institutional foundations, forms of social partnership and levels of government regulation which have enabled the German system to succeed cannot (it is argued) be readily established in other countries over a short period of time in the absence of a grown tradition of

education and employment sector collaboration. But firm evidence on recent attempts to export the dual system is lacking (Economics and Finance 2001, p. 74).

- i. Overall, it is frequently difficult to compare the different VET pathways because national studies are often not compatible as regards either the information provided or the period covered, which makes drawing causal inferences impossible (Pathways 1998, chapter 1).
- j. Good quality career guidance is important to transition success but is underdeveloped for vocational education

Evidence

- a. Why it matters: In principle, poor information about alternative careers may lead to poor choices and increase drop out from formal learning (Beyond Rhetoric 2003, chapter 2). Better guidance improves employability as the capacity to identify interests and abilities, find and keep a new job, adapt to changing labour market and new job requirements (Career Guidance 2004, p. 84). However, the impact of career guidance is complex, difficult to disentangle from other effects and only a limited number of evaluation studies are available to date in particular concerning the long-term effects of career guidance (Career Guidance 2004, p. 33-36).
 - b. Poor guidance for VET: Career guidance for job-bound, vocational careers is under-developed – perhaps because it is assumed that occupational choice is already clear. Attention to educational and vocational issues (which needs constant updating in response to new developments on the labour market) tends to be squeezed by attention to the personal and social guidance needs of a minority of students with particular difficulties (Career Guidance 2004, p. 40).
 - c. Content of guidance: Career services (for vocational careers) need to move from largely providing assistance with individual career decisions to a lifelong learning approach that also encompasses the development of career management skills. Where career guidance services are wholly school-based, links with the labour market can be weak (Career Guidance 2004, p. 40).
 - d. Guidance workforce: In many countries career services are weakly professionalized and coordinated and those involved in provision receive either insufficient or inappropriate training; the government’s strategic role in directing the guidance workforce is neglected (Career Guidance, chapter 7). Overall, information on the size and nature of the guidance workforce is difficult to obtain, data is rarely comparable (Career Guidance 2004, p. 94).
3. There are several ways to use employer input to vocational education to improve transition outcomes. Financial incentives are needed to ensure equitable outcomes

Evidence

- a. Employers’ expectations: Employers commonly have strong expectations that young people will possess generic employability skills as well as specific competencies (Transition 2000, p. 66).

- b. Sectoral changes: Declining participation in traditional vocational pathways is a consequence of changing employment patterns and skill demands, including a growing concentration of employment in the service sector. This should be taken into account in the design of vocational programmes (Transition 2000, p. 66).
 - c. Firm-based training: Concern has been expressed, especially in Germany, that employers in dual system countries are not offering a sufficient number of apprenticeship places. As a result, particular attention should be paid to the existence of sufficient incentives for employers' participation (Starting Well 2006).
 - d. Incentives for employers: Co-financing incentives directed at employers whereby the government covers part of the costs of training can be used to compensate for employers' reluctance to invest in training workers which they might lose to other employers ('poaching problem') (Human Capital Investment 2004, p. 15).
 - e. Incentive effectiveness: However, in order to reduce inequality of access for those groups which have a relatively high demand for training but nevertheless receive little employer-sponsored training (e.g. women, immigrants, temporary workers), raising individual incentives is likely to yield a better outcome than channelling co-financing through employers. This can be done through individual subsidy schemes, such as individual learning accounts (e.g. as in the United States) and/or provisions for training leave (e.g. as in Sweden) or part-time study (e.g. as in Australia) (Employment Outlook, 2003, p. 240).
4. Continuous vocational training is necessary to maintain and improve skills but highly unequally distributed across countries and groups

Evidence

- a. Skill loss: Both theory and evidence suggest that initial education plays a key role in the formation of skills. However, the imperfect association between initial education and skills also suggests that other factors are implicated in the development of skills over the lifespan. Skills have to be actively maintained to avoid skill loss in adulthood (ALL Survey 2005).
- b. Continuous Vocational Training: Evidence is available that adult learning or CVT has a positive impact on various economic outcomes such as employability and job loss rates (Workers' Skills 2003, p. 21). In many countries action is being taken to create or improve links between initial vocational education and training, and continuing vocational training to prevent skill loss (Workers' Skills, p. 15/16).
- c. Unequal participation: In almost all the OECD countries participating in the International Adult Literacy Survey (IALS), CVT accounted for at least 60% of adult education and training. But there is substantial variation across countries and groups (Employment Outlook 2003, p. 240, Training and Wage Premium 2006). Adults who have been through tertiary education are much more likely to be involved in job-related learning (Promoting Adult Learning 2005). Better educated workers and workers in high-skilled occupations enjoy greater opportunities for continuous vocational training (Workers' Skills 2003, p. 11). The probability of receiving employer-sponsored training is estimated

to be on average 9 percentage points smaller for workers with less than upper secondary education than for individuals with a tertiary qualification (Human Capital Investment 2004, p. 3).

- d. Explanations for variation in participation: Supply side reasons: underinvestment, financial and time constraints, market imperfections. Demand side reasons: lack of interest or information, weak incentives because of uncertain return. Moreover, in many countries, collaboration between different players involved in adult education is weak and often social partners are not admitted into the decision making process. The resulting picture is extremely fragmented, with different stakeholders focusing on different outcomes (Promoting Adult Learning 2005, chapters 1.3 and 1.4).

Issue 2: Questions of status and equity concerns

- 5. Equity concerns arise from links between social origin and participation in VET, the low status of VET, underfunding and early tracking.

Evidence

- a. Social origin: Despite a general educational expansion, everywhere, social origin remains important to education enrolment and attainment. Traditionally, VET has catered to students of lower socio-economic background and/or lower academic achievement (Equity in Education 2007, p. 65).
- b. Disadvantage from underfunding: In recent decades, tertiary education outside universities that is more practical, technical or occupational in orientation (ISCED1 level 5B) has expanded. This has widened access to tertiary education and created a more permeable system that fosters links between upper secondary and tertiary education and adult learning. But at the same time equity problems have emerged as these types of tertiary educational institutions are sometimes underfunded and hence lack resources and good quality staff. Less advantaged students might be more likely to participate in these less generously funded institutions (Education Policy Analysis 2005, chapter 1).
- c. Drop-out: The non-completion rate in tertiary-type B programmes at 38% stands higher than for tertiary-type A education (Education at a Glance 2006, p. 56). VET students are particularly subject to drop-out when compared with students in academic tracks, at the same time, countries with higher percentages of students in VET tend also to have lower dropout rates (Equity in Education, p. 65/Figure 3.4).
- d. Early tracking: Early academic selection through tracking is associated with more social separation and inequity. This may be because of unreliable sorting when carried out too early and hence might lead to suboptimal education pathway decisions and unsuccessful transitions to the labour market (Equity in Education 2007, chapter 3.2).
- e. Growing skill gap: The trend of unequal educational attainment goes beyond initial education. Because of a trend whereby better educated people are more likely to be enrolled in continuous

¹ ISCED - International Standard Classification of Education.

education, there is a growing skill gap between those that benefit from continuous education and those that fail to keep up with technological change, falling further behind (Promoting Adult Learning, Economics and Finance 2001, p. 16).

- f. The perceived lower status of VET seems to be related to both the quality of teaching and student selection patterns

Evidence

- a. Selection of teachers and students: The perception of VET as being 'low status' can cause two problems: it can lead to a selection of lower quality teachers and deter the brighter students even if they are interested and have the talent for a particular vocational career. Because of misgivings about the status of vocational education used as a pathway for weaker learners, VET teachers in some countries feel less respected and valued. However, evidence on these matters tends to be anecdotal (Qualification Systems 2007, p. 57).
- b. Attention to VET teaching: Teaching vocational subjects requires special competencies. However, unlike the teaching of reading, writing and mathematics, there has not been a lot of attention to pedagogy of VET - except in the German tradition (Education Policy Analysis, p. 37).
- c. Flexibility and choice: Enrolment patterns depend strongly upon the nature of the pathways that countries provide after compulsory education: where the choice between general education and vocational pathways equates with the choice between obtaining a qualification that leads to work and one that leads to tertiary study, participation in vocational pathways seems to be less attractive than if it were open to either destination (Transition 2000, p. 63-66).
- d. Efficiency gains and improvements in recruitment and remuneration can be gained from introducing standards and evaluation procedures

Evidence

- a. VET standards: Some countries emphasize assessment of vocational abilities, recognized in qualifications, as important for employment stability, improved remuneration, and quick and efficient recruitment. Standardization and recognition of vocational ability is also expected to reduce risks related to employment, on both the employer's and the employee's side, by preventing mismatches arising from lack of information on workers' skills (Qualification Systems 2007).
- b. Recognition of prior learning: Recognition of prior learning can reduce total learning time and may encourage workers to participate in learning but there is diversity in assessment methods to ensure such recognition (Equity in Education 2007, p. 69, and Promoting Adult Learning).
- c. Conditions for mobility: Some of the institutional arrangements to facilitate mobility, such as accreditation of prior learning and credit transfer are well established, though there is uneven evidence on actual utilisation. In order for individuals to exercise mobility, however, they need to have a clear understanding of what the options are, how they can be accessed, and with what effect. Guidance and counselling, and other sources of information, are crucial (Co-Financing 2004, p. 47).

Issue 3: Financing: the Economic Costs and Benefits of VET

6. There is very little comparative evidence on the costs and benefits of VET except for the field of tertiary vocational education where students' returns seem to be lower than for their non-vocational counterparts

Evidence

- a. Expenditure on VET: Some evidence on expenditure on post-secondary education is available and shows substantial variation across OECD countries (Education at a Glance 2006, section B).
- b. Economic benefits: Economic benefits of vocationally oriented tertiary education (tertiary-type B) are not always easy to measure. Either because the institutions are too new to have been extensively evaluated. Or, in countries with more extensive histories, much information about economic benefits is anecdotal, for want of appropriate data (Education Policy Analysis, 2005, p. 37). Hence, no conclusions or judgements as to the superiority of a particular national training system over another can be made based on available data (Workers' Skills 2003, p. 43).
- c. Returns to tertiary education: Adults with tertiary-type vocational qualifications (ISCED level 5B) earn on average 26% more than those with just upper secondary qualifications (this premium ranges from 10% to 50% and is substantially less than type 5A qualification that are more theoretically oriented). While detailed data, disaggregated by gender and type of institutions and field of study exist on national level, comparable cross-country evidence is inconclusive. Returns to education vary substantially depending on education institution, type of occupation, whether or not the course has been completed (low completion rates are a concern) and whether individuals are employed in their field of study (Education Policy Analysis 2005, p. 38).
- d. Returns to training: Young, well-educated workers tend to receive more training than their older, less educated counterparts despite evidence that the impact of training on employability of workers varies little by age group or skill level (Employment Outlook 2006, p. 110).

7. Inefficiencies arising from under-provision of CVT might be mitigated by targeted funding mechanisms and a more coordinated involvement of the social partners

Evidence

- a. Problems with underinvestment: Underinvestment in training might be due to two factors: First, labour market relevance and quality and hence the returns to training may be unclear to workers. This is why in most OECD countries, firms pay for more than 70% of the vocational training courses of their employees. Second, employers are reluctant to pay for general training rather than firm specific skills for fear of losing the trained workers to competitors. This problem can be mitigated by introducing contractual arrangements that provide employers with greater insurance (Employment Outlook 2006, p. 110/112).
- b. Targeted funding: Given the considerable private returns to adult education on the one hand and the market failures which may distort and reduce participation on the other, there is a strong case for co-

financing. While performance-based financing may increase aggregate efficiency, it needs to be accompanied by either needs-based funding or matching grants designed in such a way that low-skilled adults are likely to benefit. Individual learning accounts, which governments, firms or adults invest in and that are used only for learning purposes, can facilitate adult learning for the low skilled (Promoting Adult Learning 2005, p. 56, NB: the evidence concerns adult learning in general with no separate consideration of VET issues).

- c. Employer incentives: However tax deductions or train-or-pay levy schemes can create deadweight because they subsidise training that would have taken place anyway. Much of the additional training benefits workforce groups who already receive above-average training instead of the less-privileged (Employment Outlook, 2006, p. 113).
- d. Role of social partners: Collaboration with social partners can help mitigate problems of unequal provision. Sectoral or company-level training funds have been established through collective bargaining in several countries. However, rigorous evaluation evidence is lacking concerning the relative effectiveness of these different forms collaboration between social partners and the impact of different funding schemes (Employment Outlook 2006, p. 115/116).

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