OECD Reviews of Vocational Education and Training

A SKILLS BEYOND SCHOOL COMMENTARY ON ISRAEL

Simon Field and Małgorzata Kuczera

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Summary: strengths and challenges

Israel has many different programmes in postsecondary vocational education and training, including practical engineering and technician programmes and vocational courses which are the main focus of this commentary. Drawing substantially on the Israeli self-assessment in MOITAL (2012), this OECD commentary assesses the strengths and challenges of the system as follows.

Strengths

- A diverse range of different postsecondary options offer upskilling opportunities for most groups in most circumstances.
- There is an active framework of government-led reform; both employers and unions are very keen to engage more fully with the vocational education and training system.
- Cost-efficiencies have been sought through a programme of contracting out training provision and training vouchers.
- The examination system provides an effective means of upskilling. Some 70 000 people each year take the MOITAL-organised professional examinations.
- Although data remain a challenge, research and analysis are well-developed by international standards.

Challenges

- The main programmes are managed and delivered without the extensive involvement of the social partners; employers and unions have now proposed a public council on VET.
- Workplace training plays a limited role in postsecondary programmes, despite its outstanding attractions as a learning method.
- The programme of vocational courses to promote labour market insertion presents continuing challenges such as optimum course length, and access to provision given limited funding.
- Graduates of practical engineering programmes sometimes have to repeat similar courses on entry to bachelor programmes in universities.

- Data on labour market outcomes and private sector training provision are limited. Analysis of stocks and flows of skills would also be helpful.
- For the workforce of teachers and trainers, there are challenges in maintaining up-to-date industry knowledge, and in replacing an anticipated wave of retirements.
- Budgetary constraints and cutbacks mean that financial barriers could be preventing some students from fully benefiting from postsecondary vocational education and training.
- Navigating through postsecondary courses and career paths will often require more accessible and effective guidance than is currently available.

The commentary on Israel and its place in the OECD study

This commentary[1] is one of a series of country reports on postsecondary vocational education and training (VET) in OECD countries, prepared as part of an OECD study (see Box 1). The series includes *reviews*, involving an in-depth analysis of a country system leading to a set of policy recommendations backed by analysis. The *commentaries* are simpler exercises, largely descriptive but also including an assessment of strengths and challenges in the country system. The commentaries are designed to be of value as free-standing reports, but are also prepared so that they can become the first phase of a full review, should a country so wish.

Box 1. Skills beyond School: the OECD study of postsecondary vocational education and training

Increasingly countries look beyond secondary school to more advanced qualifications to provide the skills needed in many of the fastest growing technical and professional jobs in OECD economies. The OECD study, *Skills beyond School,* is addressing the range of policy questions arising, including funding and governance, matching supply and demand, quality assurance and equity and access. The study will build on the success of the previous OECD study of vocational education and training *Learning for Jobs*[1] which examined policy through 17 country reviews and a comparative report. The study also forms part of the horizontal OECD *Skills Strategy* (OECD, 2012a).

Full country policy reviews are being conducted in Austria, Denmark, Egypt, Germany, Korea, Switzerland, the United Kingdom (England), and the United States (with case studies of Florida, Maryland and Washington State). Shorter exercises leading to an OECD country commentary will be undertaken in Belgium (Flanders), Canada, Iceland, Israel, Romania, Spain, Sweden and in Northern Ireland and Scotland in the United Kingdom. Background reports will be prepared in all these countries, and in France, Hungary and Mexico.

See *www.oecd.org/education/vet*

This commentary describes the context of the wider OECD study, outlines the main features of the Israeli VET system, and compares its main features with those of other countries. It also sets out a number of key statistical indicators comparing Israel with other OECD countries. These cover both the education system and the labour market. It then provides a brief assessment of the main strengths of the system, and the policy challenges which needs to be addressed by Israel in the future.

This commentary was prepared using a standard methodology. The Israeli authorities provided a background report (MOITAL, 2012) following which an OECD team made a visit to Israel on 18 – 20 April 2012, where the team discussed issues arising with a range of policy makers, stakeholders and staff and students in training institutions.

The background: education, training and the labour market in Israel

The labour market

The Israeli economy has coped well with the global economic crisis. In 2011, 5.6% of the Israeli labour force was unemployed while in the Euro zone and the US unemployment reached 9% (OECD, 2012b). But Israel has

a relatively large number of people outside the labour market, with working age labour force participation at 66% compared to the OECD average of 77% (OECD, 2012b). Arab-Israelis and Haredi (ultra-orthodox) Jews are particularly affected by high unemployment and inactivity rates. According to OECD (2010a), at least half of the Arab population and 60% of the Haredi population live in poverty.

Of Israel's mainly urban population, three quarters are Jewish and most of the remaining quarter are Arab-Israelis (20% of the total population). In the 1990s a wave of relatively well-educated Jewish immigrants from Russia, (now accounting for 8% of the population) filled the need for higher level technical and engineering skills in industry. But many of these migrants are now approaching retirement age. This phenomenon, alongside technology-driven demand, will fuel increased demand for higher level skills in the future.

Self-reports suggest that demand for upskilling in the workforce is relatively high. In Israel 33% of employees reported needing further training to carry out their duties at work, more than the OECD average of 22%. One quarter of employees identify themselves as over-qualified, similar to the OECD average (Quintini, 2011).

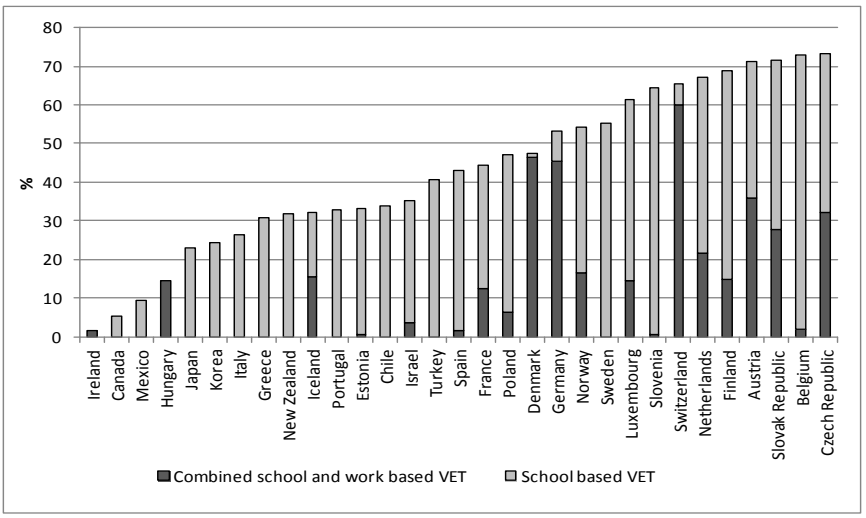
Education and training for young people

Compulsory education

Education is free and obligatory for children aged 5-18 in twelve grades of compulsory education. Upper secondary education lasts three years (grades 10 to 12) and the typical entrance age is 15 (CBS, 2011). The majority (60%) enrol in general academic upper-secondary education, one third opt for technological programmes and only 3% enrol in apprenticeship pathways combining school and work based training (see Figure 1 for comparable figures from other OECD countries). General and technological upper secondary education both lead to the *Bagrut* matriculation exam, normally required for entry to academic postsecondary education. Apprentices do not take the full *Bagrut* examination, thus limiting their postsecondary options to some vocational postsecondary institutions where entry requirements are typically lower.

Figure 1. How many upper secondary students are enrolled in vocational programmes?

2009



Source: OECD (2011a), *Education at a Glance 2011: OECD Indicators*, Table C1.3, OECD Publishing. doi: *10.1787/eag-2011-en*

Dedicated, vocational tracks in the Israeli school system were abandoned in the 1970s in favour of a more comprehensive school system, and the remaining technical and vocational elements in high school education were further reduced in scale between 2003 and 2007. (The OECD team was told that historically the move towards comprehensive high schools was because of the risk that tracking would become associated with ethnicity). There are now signs that this trend may be reversed, as the Ministry of Education has agreed to launch new centres of technical education and training to provide support for the vocational education and training of high school students.

Tertiary education

Higher education in Israel takes place in seven campus universities, the Open University, and 50 academic colleges and colleges of education (OECD, 2009). In 1993 the system was reformed to expand the offer, yielding a binary system of universities focusing on research, and colleges concentrating on teaching. Both universities and colleges grant academic degrees. Enrolment has doubled since the 90s with almost half of the

students leaving Grade 12 transferring to higher education (Volansky, 2010).

In 2007, 42% of 25-34 year-old Israelis had a tertiary qualification, rather more than the OECD average of 34%. Only 26% of 25-34 year-old Arabs hold a tertiary qualification and tertiary attainment is very low among Haredis. The government has launched a number of initiatives to increase educational attainment in these populations, and in recent years the number of Haredi students pursuing tertiary education has risen from 500 to about 3 300 (OECD, 2009).

Role of the army

National military service is compulsory at the age of 18 for most Israeli citizens; Arab-Israeli and Haredi Jewish citizens are exempt. Men serve three years while women serve two years. By entering a technician or practical engineering programme students can postpone their military service for two years and then enter technology-related positions in the army (MOITAL, 2012).

Postsecondary vocational education and training

Diverse forms of provision

For practical reasons this commentary focuses on two main types of provision, the "technician" and "practical engineering" programmes and vocational courses, described below. But postsecondary VET for adults also includes many other programmes. These include:

- The Israeli Ministry of Industry Trade and Labour (MOITAL) co-operates with employers in providing training in companies. There are three main programmes: On the Job Training in Industry (OJT), "a Class in the Workplace" and internships (MOITAL, 2012).
- Other ministries also provide training programmes in the sectors for which they are responsible, such as the tour guide programme offered by the Ministry of Tourism.
- There are many vocational programmes at bachelor level and above in universities and other tertiary academic institutions.
- Occupational examinations are administered by MOITAL in more than one hundred different professions.

- A wide range of *ad hoc* courses and programmes, without accreditation or regulation, are provided by the private sector.
- During military service many Israelis learn or are taught different vocational skills, but they are often not formally accredited.

Practical engineering and technician programmes

Practical engineering programmes are two years full-time or three years part-time (2 200 hours of study), leading to a postsecondary diploma. A much smaller number of people (around 5-10% of those pursuing practical engineering programmes) pursue technician studies, which are one year in full-time education and two years part-time (1 600 hours of study) leading to a lower level postsecondary diploma. These two programmes, provided in 73 technical colleges across the country, lead to national exams and a national qualification. Typically people pursue these programmes after national military service (when they may be in their early 20s), but also at later ages. The number of students enrolled in practical engineering and technical programmes increased by 6% between 2007 and 2011 as a result of higher participation in practical engineering programmes. In 2010 technician students constituted 7% of practical engineering and technician students, a year later the ratio dropped to 4%.

There is no internship as a formal part of the curriculum, although the schools and colleges aim to make connections with industry (see discussion below under "challenges").

Admission to these programmes normally requires 12 years of schooling and a matriculation examination in mathematics, Hebrew and English passed at the minimum level (less demanding than the entry requirements for universities typically requiring passes in six subjects). Those who do not meet these entry requirements can enrol in preparatory courses leading to an admission test (MOITAL, 2012). 42% of those in preparatory courses pass the test and enrol in a programme. Admission criteria for individuals over 30 include eight years of relevant work experience in addition to twelve years of schooling (*i.e.* less than partial matriculation). Those who meet these requirements can enrol in a special program of 1 200 hours instead of 1 700.

Graduates of the technician programmes can continue their studies by entering a practical engineering programme, often in the same institution. Graduates of practical engineering programmes can continue their education in a university through a bachelor degree, although this transition depends on individual arrangements between institutions (see discussion below under "challenges").

The practical engineering programmes may be compared with similar short cycle programmes in many countries – for example the short cycle technical programmes in Danish academies, two-year associate degrees in technical subjects in community colleges and private colleges in the United States, the two-year programmes in *Fachschulen* in Germany, and two-year postsecondary programmes in Spain. All these programmes provide qualifications which allow for direct labour market entry, as well as potential entry to university programmes.

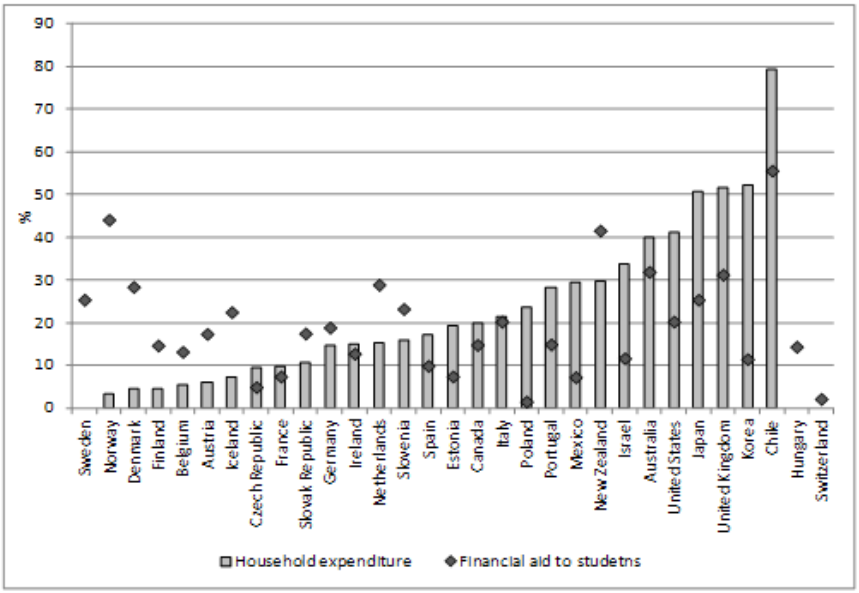
Funding

In Israel most forms of postsecondary education and training require fees. In practical engineering programmes fees for full-time students are approximately ILS 8 500 (EUR 1 700) per year (MOITAL, 2012). These fees cover about half the costs, the remainder being covered by public subsidy.

Household expenditure on tertiary education, (at one third of the total) is higher than in many other OECD countries (OECD, 2011a, Table B3.2). In many countries this burden is alleviated by subsidies for grants and loans but in Israel this only represents 12% of the total public expenditure on tertiary education (OECD, 2011a Table B5.3), less than many other countries charging tuition fees at postsecondary level such as the US, Canada and Japan (see Figure 3 below).

Figure 2. How much do families spend on tertiary education?

Household expenditure and financial aid to students as a percentage of total expenditure for tertiary education (2008)



Note: Financial aid to students includes: scholarships and grants to households, and student loans.

Note: Reference year 2007 for Canada, 2009 for Chile.

Source: OECD (2011a), *Education at a Glance 2011: OECD Indicators*, Table C1.3, OECD Publishing. doi: *10.1787/eag-2011-en*

The Ministry of Defence plays an important funding role for veterans. After discharge, a veteran is eligible for a study grant during five years. Discharged soldiers in preparatory courses and in the first year of practical engineering studies benefit from a 90% discount on the fees. In some sectors (like mechanical engineering) this can be continued into the second year. Up to 50% of the students therefore receive substantial discounts. Soldiers from disadvantaged backgrounds can also participate in a training programme sponsored by the Ministry of Defence and MOITAL facilitating their reinsertion into civilian life (MOITAL, 2012).

Vocational courses founded by the government

The main function of these courses is labour market insertion or reinsertion. Students are primarily young adult job seekers (typically 28-35

year-olds) who report to the employment service and are referred for vocational training. About half are trainees in receipt of income support, the other half are unemployed job seekers and those with low skilled or unsteady jobs who wish to upgrade their skills. Counsellors in the employment agency advise on course choice. In certain courses there is an entry examination– for example when there is a mathematical requirement. But in these cases there are also access courses to develop the relevant skills.

The training and retraining is typically provided through government training centres and private providers under the supervision of MOITAL, and cover a wide range of occupations, for example electricians furniture makers, mechanics, jewellers, computer technicians, builders, secretaries and book-keepers.

Courses are 3-11 months in length with an average of six months (*e.g.* courses in technological subjects last 10 months). The courses are mostly full-time 40 hours per week, but some are run on a part-time basis. Those who want to make a change in career direction are often already in work and therefore usually wish to study in the evenings and on Fridays. In some courses there are short internships of one to two months with employers during the last few months of the programme. Courses end with an exam managed by an external body. About 90% of those who start the courses take the exam.

Some special programmes are organised for disadvantaged groups including Haredi Jews and Arab Israelis. The percentage of non-Jewish participants has increased from 13.2% in 2001 to 24% in 2010, reflecting declining total numbers as much as any absolute growth in the number of non-Jewish participants (MOITAL, 2012). The Haredi community requires women to be segregated from men – so the training facility, and the working arrangements of firms need to reflect this. Haredi men often go just for eight years of school in religious schools for the Haredi focusing on Talmudic education. As a result they often lack basic skills (*e.g.* in mathematics) potentially hindering their participation in vocational education and training and any other type of postsecondary education.

Between 2000 and 2010 the number of graduates leaving vocational courses run by the state diminished fivefold while over the same time the number of graduates in programmes run by private providers increased by 20%. The *OECD Review of Labour Market and Social Policies: Israel*, (OECD, 2010a) reports a significant decline in public expenditure on vocational training since 2002 and changes in legislation that made eligibility for unemployment benefit stricter. The new rules also created disincentives for recipients of unemployment benefit to take vocational training, among others benefits of those who study in vocational courses

were reduced by 30%. As a result, in 2005 only 1.6% of unemployment benefit recipients participated in vocational training, down from 14% prior to the spending cuts. Israel is among ten OECD countries spending the least on vocational training for the unemployed (OECD, 2010a).

Labour market outcomes

Good quality data on the labour market outcomes of graduates from vocational training, and technician and practical engineering programmes are scarce. According to available data from an unrepresentative survey, 74% of those who participated in vocational courses were employed five years after completion, with 40% of them working in an occupation for which they were trained, 12% were unemployed and 14% were outside the labour market. Among those who graduated from the practical engineering programme 13% were unemployed five years after graduation. Both types of graduate earned more if they worked in a sector they were trained for. These data should be treated with caution since they were collected through follow-up studies in an unrepresentative sample of students (MOITAL, 2012).

Table 1 below provides an indication of how graduates from postsecondary VET programmes perform in selected OECD countries. These programmes can be compared with Israeli technician and engineering programmes. The table shows that in all countries labour market performance of postsecondary VET graduates is normally better than average.

Table 1. Labour market outcomes of VET graduates aged 25-34

2009

Country and programme	Unemployment rate of postsecondary VET graduates	Unemployment rate of all graduates (all education levels combined)	Inactivity rate of postsecondary VET graduates	Inactivity rate of all graduates (all education levels combined)
Switzerland: federal professional examinations and technical colleges	4.4%	5.6%	9.9%	10.7%
Denmark: professional academies providing two years vocational and technical education and training	7.1%	8.3%	7.4%	12.8%
Spain: postsecondary two year vocational programme leading to a higher technician qualification.	14.1%	22%	9.5%	11.9%

Source: Author's calculations based on Eurostat, EU Labour Force Survey 2009.

Note: Unemployment rate – percentage of unemployed in the labour force.

Previous OECD analysis and recommendations

The 2009 OECD Economic Survey for Israel (OECD, 2009), the 2010 Review of the Labour Market and Social Policies for Israel (OECD, 2010a) and the OECD Higher Education in Regional and City Development review for the Galilee region (OECD, 2011b) are all relevant to the current exercise.

The Economic Survey argues that better incorporation of minorities into the education system would help to address the lower educational outcomes of Arab Israelis. It notes the substantial attainment and achievement differences within the Arab-Israeli population, with Bedouins at the bottom end of the distribution, while the attainment of Druze and Christian populations is as high as those of the Jewish majority (OECD, 2009).

The Survey points to the lower level of participation in postsecondary education among Haredi men and argues that more vocationally-oriented

learning is needed. Stronger vocational skills, particularly among men, should lead to an increase in the employment rates. It also recommends that state funding for Haredi primary and secondary schools should depend on the use of a government-mandated core curriculum (OECD, 2009).

The OECD review of labour market and social policies in Israel (OECD, 2010a) argues that differences between the Jewish and Arab education systems are among the factors causing poor socio-economic outcomes for the Arab-Israeli population. Other factors include socio-cultural restrictions on women in Arab communities, inadequate policies designed to include minorities and discrimination on the labour market by individual employers (OECD, 2010a).

At the same time, the OECD has recognised the initiative of the government in fostering partnerships to help integrate minorities into the labour market. One example is "TEVET", a partnership between the Israeli government and the American Jewish Joint Distribution Committee designed to help young people in vulnerable groups get jobs through vocational programmes. In addition, a series of active labour market policies have been pushed forward by the Prime Minister's office including the establishment of private investment funds, the promotion of employment among Arab women, wage subsidies, and research and development (R&D) centres in the North of the country (c.f. OECD, 2010a).

The OECD Higher Education in Regional and City Development review for the Galilee region in Israel (OECD, 2011b) recommends that tertiary education institutions monitor the labour outcomes of graduates so as to better adapt their programmes to regional labour market needs, and to improve labour market outcomes for their students (OECD, 2011b).

Strengths and challenges

This section of the commentary provides an initial assessment both of the strengths of the Israeli postsecondary VET system and the challenges it faces. It looks in particular at the programmes which form the particular focus of this study. These strengths and challenges draw substantially on those identified in the Israeli background report (Ministry of Industry Trade and Labour, 2012).

Strengths

Effective diversity

Across OECD countries, postsecondary VET systems serve diverse purposes for different client groups. They can provide higher level

job-specific training for young upper secondary graduates (such as in teacher training and nursing programmes in university colleges in Denmark); upskilling for working adults in mid-career (for example industrial master examinations in Germany, which prepare skilled workers to be foremen); "second chances" for working adults who dropped out of earlier education or training programmes (the US community colleges with open access policies serve this function among others); and opportunities for career shifts or to support a return to the labour market. An effective system should be able to meet all of these quite diverse needs.

In Israel, the system is diverse, with relatively good labour market outcomes for graduates of the system. Bearing in mind the range of different options, including not only the practical engineering and technician training, and vocational courses, but also the professional examinations, university programmes, diverse private sector courses, as well as a range of targeted programmes directed at disadvantaged groups, the system offers options for most of the relevant client groups.

Dynamic policy reform

Across OECD countries, policy development in vocational education and training offers particular challenges because of the wide range of different stakeholders involved. Alongside the students, teachers and parents that play a role in all education systems, labour market actors such as employers and unions are critically important. Nationally and regionally the involvement of the social partners helps to ensure that the overall design of the system, the content of programmes, and the mix of training provision meet labour market needs. Some degree of consensus among the different stakeholders is important, but needs to be balanced by effective leadership to ensure that consensus does not become a formula for inertia, with a multiplicity of stakeholders each holding an effective veto on necessary reforms.

In Israel, there are two key strengths in the policy machinery. First, there is an active framework of government-led reform in MOITAL and other government ministries and agencies, with plans to put vocational education and training on a statutory basis through legislation (it has not been approved by the government yet). Tendering arrangements, in practice since the early 1990s and the voucher system have resulted in active competition in the provision of vocational courses. Second, the social partners – both employers and unions – are well-organised and it is very clear from their discussions with the OECD team that they are very keen to engage more fully with the vocational education and training system. Employers are starting to work informally with MOITAL to develop and update curricula. The industry association is setting up two advanced

practical workshops in Haifa and ber-Sheva, funded by the Ministry of Education but at the request of industry to provide VET training for a range of potential users, including adults, as well as high school students. This high level of industry engagement is a key strength on which to build.

These issues are further discussed below under the heading of challenges.

Innovation in delivery

Across OECD countries different approaches are being adopted to ensure efficiency in training delivery, often using market mechanisms, or exploiting an existing private market in training provision.

In Israel, up to the early 70s the vocational courses were all delivered by training centres directly owned and managed by the government. Since then 15 out of 20 of these centres have closed, with the objective of increasing efficiency in provision through market measures. The five centres retained provide a wide range of courses, including courses in sectors where there is heavy capital investment in equipment – for example CNC machines – where it is unlikely that an effective market for training provision could be created. A large proportion of the training has therefore been outsourced to the private sector – through two separate initiatives. One is a tendering arrangement in which blocks of training are purchased from private training providers that follow required standards and are supervised by MOITAL. The second arrangement grants eligible persons "vouchers" that they can use to obtain training from accredited training providers, and get reimbursed 80% of their tuition fees. The course duration cannot exceed 12 months (MOITAL, 2012).

A system of professional examinations

Across OECD countries many professions organise examinations designed either to allow initial access to a profession or to achieve a higher level within the profession. In the Germanophone countries such examinations are used in particular to provide higher level technical and commercial qualifications, and "master craftsman" qualifications to qualified apprentices with some years of work experience in their trade who want to run their own small business. While such industry-led examinations are regulated in the Germanophone countries, they are quite unregulated in the United States, where such exams (or "certifications") are very common. In some cases the examinations are linked to licensed professions, such as electricians, where passing the exam is legally required to work in the profession, or to run a small business. Typically those examinations are tests of competence. While examinees very commonly pursue a course designed

to prepare for the exam such courses are not usually obligatory. Examinations of this type therefore have the attractive quality of avoiding the normal constraints of educational programmes of requiring fixed "seat time" to acquire the qualification. They can also provide a practical way of recognising prior formal and informal learning, often acquired on the job.

In Israel, the examination system provides an effective means of upskilling. Occupational examinations are administered by MOITAL in more than one hundred different professions. Preparation courses for the exams are optional but common. Some 70 000 people each year take these examinations.

Capacity for analysis

Across OECD countries, the development of VET policy depends on good data, and the analytic and research capacity to make use of data and conduct evaluations of policy and policy reform. Such a foundation is essential to ensure that policy can be guided by a strong evidence base. As a means of addressing this issue many countries have created dedicated research centres, whose function is to conduct analysis on VET issues. Thus, Australia has developed the National Centre for Vocational Education Research (NCVER), Germany has the Federal Institute for Vocational Education and Training (BIBB (*Bundesinstitute für Berufsbildung*), and Korea the Korea Research Institute for Vocational Education and Training (KRIVET).

In Israel, although data remain a challenge, research and analysis are well-developed by international standards, with a strong capacity for research in academic universities and research institutes, often with international reputations. This is also evidenced by the quality of the background report (Ministry of Industry Trade and Labour, 2012).

Challenges

In Israel a set of challenges was identified in the course of this exercise, where the OECD also has relevant international experience and evidence – recognising that there are also some challenges which are more country-specific. These are as follows:

Engagement of the social partners

Across OECD countries, one of the main challenges is to ensure that training meets the needs of the labour market. This means that institutional mechanisms should be in place so that the changing needs of the labour market can be reflected in training systems. As argued above under the

heading of strengths, the engagement of social partners – both employers and unions - is essential to this process. But the degree of engagement in VET policy varies markedly among countries (OECD, 2010b). Some different approaches to this issue are set out in Box 2. One key variable is the extent of influence over the VET system which is granted to employers and unions. A very limited advisory role is likely to be self-defeating since employers and unions will not invest in a consultative body unless they obtain significant leverage.

Box 2. Structures to engage stakeholders in the postsecondary VET system

The Swiss partnership arrangements between the Confederation, cantons and the social partners are established by law. The Confederation is responsible for strategic planning and development; the cantons for implementation and supervision; and the social partners for definition of course content and provision of apprenticeships in companies. Major decisions are discussed and taken jointly and all three partners are represented at both national and cantonal level (OECD, 2010b).

In Denmark, both the employers' and the employees' sides are very engaged in the planning, design and the steering of the system. The involvement of social partners and other stakeholders is reflected in a special Council, with responsibility for the postsecondary level, set up by the Minister for Education in 2008. It advises on the development of postsecondary VET programmes, the mix of provision, work placements, and quality assurance. The social partners may also be represented in the educational advisory committees which the institutions set up within the various disciplines of their programmes. The committees advise on the quality and relevance of existing and future programmes of study (Danish Agency for Higher Education and Educational Support, 2012).

In the United Kingdom, the Commission for Employment and Skills was created in 2008, with the intention to strengthen the voice of employers in VET reforms and implementation and to simplify the skills systems in the four nations of the UK. It has an advisory role on how UK skills and employment programmes can respond more effectively to labour market needs (OECD, 2010b). The organisation is led by commissioners including representatives of large and small employers across a wide range of sectors, trade unions and representatives from the different governments sectors.

In Israel, as explained above, there is a need to build on the interest shown by the social partners in the VET system. At present the main postsecondary VET programmes are managed and delivered without the extensive involvement of the social partners and there are relatively few

mechanisms – particularly formal mechanisms - for consultation on VET issues between government and the social partners.

The employer organisations have now proposed, with the support of the union side, that a public council to promote VET should be established. In their view it should define strategy and policy, define plans for advancing VET, promote research on VET, and ensure incentives to employers to become actively involved. The government supports this initiative.

These are very promising developments. The challenge now is to develop the right architecture and mandate for the body that is created.

Workplace training

Across OECD countries effective use needs to be made of workplace learning. Workplaces provide a strong learning environment in which to develop hard skills on modern equipment, and soft skills through real world experience of teamwork, communication and negotiation; workplace training facilitates recruitment by allowing employers and potential employees to get to know each other, while trainees contribute to the output of the training firm. Workplace learning opportunities are also a direct expression of employer needs, as employers will be keenest to offer those opportunities in areas of skills shortage. But the benefits of workplace learning depend on its quality. In the absence of quality control, workplace training opportunities for young people can degenerate into a masked form of cheap labour, or involve very narrow and firm-specific skills.

Outside formal apprenticeships, where workplace training is the central element, postsecondary VET programmes make variable, but sometimes extensive use of workplace training as a component of programmes, often in the form of fixed "blocks" such as three month internships. In some cases the requirement is mandatory. For example the Spanish two year higher vocational education programmes include a required three month internship right at the end of the programme (sometimes facilitating labour market insertion); in Denmark short cycle Academy programmes include a mandatory three month internship, while the professional bachelor programmes include a mandatory six month internship. A mandatory arrangement is sometimes initially difficult, as employers and vocational training institutions adjust. Courses designed primarily for part-time students who are in work often make less formal use of workplace training, since it is often assumed that students are already gaining relevant experience through their ordinary work.

For some examples of OECD analysis of the value of workplace training and recommendations for how to develop it in different national contexts see Kis and Field (2009) on Chile, and Kuczera and Field (2010) on China.

In Israel workplace training is used to a limited extent in vocational courses and in technician and practical engineering programmes. Typically, provided training depends on local arrangements between a specific college and local industry. In selected study fields in practical engineering there are plans to introduce some workplace training with the support of employers. Overall, the system lacks a formal framework setting out the rights and obligations of employers and students involved in training, and students cannot at present have their relevant work experience recognised with credits.

Some other forms of workplace training receive government support in Israel. The government contributes to the cost of employer specific training if it leads to employment of the trained person or increases the overall employment level. In the "On the Job Training" programme a new recruit/trainee is employed full-time and receives the minimum wage. Training is provided by an instructor assigned from the company staff. If the new recruit/trainee is employed for at least 12 months (including the training period) the employer gets reimbursed the cost of training and part of the wage costs. In the framework of "A class in the Workplace", the state pays for courses designed to meet employer needs, while in exchange the employer must ensure that at least 65% of graduates find employment. The training is employer specific but must meet certain minimum requirements (MOITAL, 2012). Employers have also been encouraged to provide internships to those who graduated from formal study programmes, but employer participation is limited, apparently because of low perceived benefits compared to the cost of training.

Vocational courses

Across OECD countries, in many cases facing sharp increases in unemployment as a result of the global economic crisis, there are many programmes to train or retrain adults so that they may enter or re-enter the labour market. The logic of such retraining efforts is compelling, particularly when workers have been displaced from declining jobs and industries. But evidence of success has sometimes been limited, and highly dependent on the nature of the training provided. See for example Impaq International (2008) for an analysis of the mixed evidence emerging from retraining efforts in the United States.

In Israel, the employment outcomes of the vocational courses are apparently good – three quarters of participants were in employment five years after having completed the course (MOITAL, 2012). But the added value of the course in terms of employment rates and wages, remains unclear. Other issues remain regarding the appropriate and cost-effective length of each course, and access to provision given limited funding.

Pathways to further qualifications

Across OECD countries, most VET systems face the challenge of ensuring that graduates of the initial VET system have access to further learning opportunities. Such opportunities are desirable because growing technological complexity is increasing the demand for higher level skills, because students themselves are aspiring to higher level qualifications and because the absence of such opportunities would leave initial VET pathways as low status dead ends. Graduates of initial VET can often pursue two sorts of upskilling – first, higher level or more specialised professional training, such as the master craftsman qualifications often offered to qualified apprentices and linked to the ability to run a small trade or craft enterprise; second, more academic qualifications at bachelor or master level that may open up different or wider career opportunities.

Many countries also face a challenge in "articulation", whereby graduates of lower level programmes (such as one-to two year programmes) can enter higher level programmes (such as three to four year programmes in universities) with the learning outcomes from the lower level programmes being recognised through access to the higher level and course exemptions. Many countries report challenges in such articulation. Often the problem is a lack of transparency in terms of how different programmes relate to one another, but it may also reflect financial disincentives on the part of some higher level institutions to offer course exemptions. The effect can be multiple inefficiencies – for the student because they have to repeat course material, for funding bodies that pay for such repetition and for institutions that often have to laboriously negotiate articulation agreements on a programme by programme and institution by institution basis. As an indicator of the potential workload, the US state of Washington reports having more than 4 000 separate articulation agreements.

The main potential solutions pursued by countries are first, measures to improve transparency in course content so that overlaps can be rapidly identified and addressed through course exemptions, and second, co-ordination mechanisms to try to simplify, or sometimes to regulate articulation arrangements including the option of adjusting curricula to ensure that they are articulated with one another. For example, in the US state of Florida a course numbering system is used systematically to identify overlapping course content that would lead to a course exemption.

In Israel, while there are pathways from technician to practical engineering programmes, the transition from practical engineering programmes to relevant bachelor degrees offered at tertiary academic institutions is not straightforward. While, practical engineering studies last two years full-time, graduates are typically awarded only 30 credits for their

practical engineering diploma, equivalent to only one semester in a bachelor programme (the full programme requires 160 credits). Some technical colleges providing practical engineering have agreements with specific tertiary institutions about the transfer of their students to bachelor programmes. But this practice is not systematic and depends on individual institutions.

There are now proposals to increase the number of credits for practical engineering. MOITAL has asked the council for higher education for 80 credit points. The negotiations have just begun. Such negotiations might be assisted by better information on the approaches adopted in different countries to such articulation agreements.

Data for policy development

Across OECD countries, information underpins the link between vocational education and training and the labour market. Knowledge of job prospects allows students to make informed choices about training programmes, and policy makers to see whether graduates are obtaining relevant work; clear information about learning outcomes helps employers to understand what qualified recruits have learnt. Better data can be provided either through one-off surveys of those leaving vocational programmes, or by tracking cohorts of individuals through vocational programmes into employment. Such data need to be supported by the institutional capacity to analyse and make use of the data, as discussed above.

In Israel, as explained above, there is a good capacity for research and analysis, but in some areas data are lacking. For example, information on labour market outcomes of graduates from different VET programmes is scarce. Such data will help education providers to adjust provision to labour market needs and assist students in making informed choices about their future career and education. Too little is known about the many courses provided by and funded by the private sector.

There currently appears to be no analysis of stocks and flows of skills in the labour market, covering the evolution of workforce skills over time, mapping the effects of demographic developments, migration, and the input of skills from newly trained young people and the effect of adults entering or leaving the labour market.

The VET teaching force

Across OECD countries, the quality of the teaching and training profession is as critical in vocational programmes as it is in general

education (OECD, 2010b). Hereafter the term "teachers" refers to teachers and trainers in vocational subjects. Often there are challenges in recruiting and retaining teachers who meet the demanding twin requirements of pedagogical skills, and practical professional expertise. While most countries require teachers to have pedagogical preparation, and usually practical experience in their specialism, keeping that practical knowledge of the workplace up-to-date is often more of a challenge. This challenge is typically addressed in two ways. First, part-time working arrangements, with practitioners continuing to work in their field while also working as trainee teachers, has obvious advantages. Second, directly recruiting practitioners from industry in mid-career is useful. Both strategies require a suitably flexible framework of pedagogical preparation suitable to persons in this position (rather than one merely adapted to younger entrants to the profession).

In Israel, teachers of vocational subjects in vocational courses supervised by the Bureau of Training are required to have appropriate professional and teaching experience in the subject they are teaching (MOITAL, 2012). In technician and practical engineering programmes under MOITAL supervision an academic qualification is required. While pedagogical training is not required for those entering the profession as teachers, it is necessary for those wishing to become permanent. Practical industry experience is not formally required at any point of a teacher's career. But in practice many institutions prefer to recruit teachers with work experience in industry and some institutions employ professionals from industry as teachers on part-time contracts.

In-service training is not generally obligatory for vocational teachers, and depends on individual arrangements and institutions. In an Australian study Dalton and Smith (2004) report that vocational teachers tend to think they are too busy to update their skills and knowledge unless in-service training is formally integrated and recognised as part of their job. So ensuring that teachers are up-to-date professionally remains a challenge.

Many teachers, including teachers who migrated from Russia to Israel in the 1990s, are approaching retirement age and will need to be replaced. However the profession attracts few candidates since teacher salaries are low in comparison with those of well-trained employees in the private sector.

Funding

Across OECD countries, the economic benefits of vocational training are often shared, with some benefit going to the trained person as higher wages, some to employers in the sector that extract more profit from a better

trained workforce, and some to society at large that gains from economic growth. The problem with shared benefits is that each party has incentives to free-ride on the training efforts of others and training is therefore less than optimal. Solutions are often some form of cost-sharing.

In Israel, the level of state funding per student in comparable fields is lower in technician and practical engineering programmes than in academic programmes. Total expenditure per student-year in academic programmes for engineers is about ILS 37 000 (EUR 7 600). (The cost of academic education varies greatly across areas; courses in engineering are without doubt among the most expensive). The government pays two thirds of this cost and tuition fees cover the remaining one third. Technician and practical engineering programmes cost about ILS 17 000 (EUR 3 500) per full-time student-year and the government pays about half, leaving the other half to the students. So tuition cost per student-year in practical engineering programmes is less than half of what it is in academic engineering programmes.

Vocational courses cost ILS 8 000 (EUR 1 600) per student on average. Typically there are no fees for participants in courses funded by the Bureau of Training which target unemployed or under-employed persons referred to vocational courses by the National Employment Service. As reported above, the total budget for training for the unemployed has been drastically cut in recent years. Consequently, the number of participants has dropped.

At this level of funding, institutions providing vocational courses, and technician and practical engineering programmes reported that it was often hard to recruit staff, particularly good quality staff at the salaries they could afford. The challenge here is to address wider principles of a common approach to government funding of adult and postsecondary education and training across the field. One potential gap is that there appear to be few effective government or other supported loan schemes.

Career guidance and counselling

Across OECD countries, more complex careers, with more options in both work and learning, are expanding opportunities. But they are also making decisions harder as young people face a sequence of complex choices over a lifetime of learning and work. Helping young people to make these decisions is the task of career guidance. But in many countries career guidance faces a number of challenges: too often those offering guidance are inadequately acquainted with labour market issues, with career guidance sometimes playing a subsidiary role to psychological counselling; guidance services can be fragmented, under-resourced and reactive, so that those who need guidance most may fail to obtain it; advice sometimes lacks objectivity

because guidance personnel are based in education institutions with a pro-academic bias; relevant labour market information is not always available or readily digestible and comprehensible; and the evidence base on "what works" in career guidance is too weak. For OECD analysis of this issue in the context of Belgium Flanders see Kis (2010), and for the Czech Republic, see Kuczera (2010).

In Israel, under the Employment Service Law, the Israeli Employment Service is responsible for the guidance and counselling of unemployed jobseekers. This will typically include guidance on vocational courses designed for jobseekers. The employment counsellors involved have experience in the area of job placement but they do not have professional training in occupational psychology. Training colleges and institutes themselves offer information both directly and on the Internet.

Navigating a path through the quite complex set of postsecondary VET courses and transitions to further education or work would be challenging for anyone, and many will need guidance. Further investigation is needed to establish the existence and extent of any unmet need in this area.

Notes

1. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

References

CBS (Central Bureau of Statistics) (2011), *Statistical Abstract of Israel 2011*, Central Bureau of Statistics, Israel, accessed at: *www1.cbs.gov.il/reader/shnaton/shnatone_new.htm?CYear=2011&Vol=62&CSubject=8*

Dalton, J., and P. Smith (2004), "Vocational Education and Training in Secondary Schools: Challenging Teachers' Work and Identity", *Journal of Vocational Education and Training,* Vol. 56, No. 4, Taylor and Francis Group.

Danish Agency for Higher Education and Educational Support (2012), *Skills beyond School: OECD Review of Post-Secondary Vocational Education and Training – National Background Report for Denmark, http://en.fivu.dk/publications/2012/oecd-review-skills-beyond-school/oecd-review-skills-beyond-school-denmark.pdf*

Eurostat (2009), *EU Labour Force Survey, 2009*.

Impaq International (2008), *Workforce Investment Act Non-Experimental Net Impact Evaluation: Final Report*, *www.nawdp.org/Content/NavigationMenu/ResearchReports/2009-10-WIANon-ExperimentalNetImpact.pdf,* accessed 6 June 2012.

Kis, V. and S. Field (2009), *OECD Reviews of Vocational Education and Training: A Learning for Jobs Review of Chile 2009*, OECD Reviews of Vocational Education and Training, OECD Publishing. doi: *10.1787/9789264113725-en*

Kis, V. (2010), *OECD Reviews of Vocational Education and Training: A Learning for Jobs Review of Belgium Flanders 2010*, OECD Reviews of Vocational Education and Training, OECD Publishing. doi: *10.1787/9789264113718-en*

Kuczera, M. (2010), *OECD Reviews of Vocational Education and Training: A Learning for Jobs Review of the Czech Republic 2010*, OECD Reviews of Vocational Education and Training, OECD Publishing. doi: *10.1787/9789264113756-en*

Kuczera, M. and S. Field (2010), *OECD Reviews of Vocational Education and Training: A Learning for Jobs Review of China 2010*, OECD Reviews of Vocational Education and Training, OECD Publishing. doi: *10.1787/9789264113749-en*

Ministry of Industry Trade and Labour (MOITAL) (2012), *Vocational Education and Training (VET): Background Report for Israel, OECD Project: Skills Beyond School*, Ministry of Industry, Trade and Labour, The Manpower Training and Development Bureau, Israel, prepared by King, J. and Y. Eyal from Myers-JDC Brookdale Institute.

OECD (2009), *OECD Economic Surveys: Israel 2009*, OECD Publishing. doi: *10.1787/eco_surveys-isr-2009-en*

OECD (2010a), *OECD Reviews of Labour Market and Social Policies: Israel*, OECD Publishing. doi: *10.1787/9789264079267-en*

OECD (2010b), *Learning for Jobs*, OECD Reviews of Vocational Education and Training, OECD Publishing. doi: *10.1787/9789264087460-en*

OECD (2011a), *Education at a Glance 2011: OECD Indicators*, OECD Publishing. doi: *10.1787/eag-2011-en*

OECD (2011b), *Higher Education in Regional and City Development: The Galilee, Israel 2011*, OECD Publishing. doi: *10.1787/9789264088986-en*

OECD (2012a), *Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies*, OECD Publishing. doi: 10.1787/9789264177338-en

OECD (2012b), OECD.Stat website, *http://stats.oecd.org*, accessed October 2012.

Quintini, G. (2011), "Right for the Job: Over-qualified or Under-skilled?" OECD Social, Employment and Migration Working Papers No. 120, OECD, Paris.

Volansky, A. (2010) "The Israeli Education System – Structure and Challenges", in E. Baker, P. Peterson and B. McGraw (ed.) *International Encyclopaedia of Education*, 3rd Edition, Elsevier, Oxford.

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Contents

Further reading

OECD (2010), *Learning for Jobs*, OECD Reviews of Vocational Education and Training, OECD Publishing.
See also ***www.oecd.org/education/vet.***
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