



OECD Reviews of Vocational
Education and Training

A Skills beyond School Review of Egypt

José-Luis Álvarez-Galván



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Executive summary

Post-secondary vocational education and training (VET) in Egypt embodies a large community formed by a number of colleges and different public entities. Drawing substantially on the self-assessment exercise undertaken by the local team in the background report (SPU-MoHE, 2012), the OECD team visit to Egypt, previous OECD work in the country, and the comparative *Skills beyond School* framework, this OECD review assesses the opportunities/strengths and challenges of post-secondary VET in Egypt as follows:

Opportunities/strengths

Diversity in provision

Post-secondary VET in Egypt offers many programmes in different specialties and through different types of institutions. There are approximately 108 different technical programmes covering 22 disciplines. In total, Egyptian post-secondary VET and its 68 institutions had 127 440 enrolled students in 2009/2010. Although post-secondary VET could be encouraged to offer more services for some specific groups or purposes (up-skilling, adult education, second chance education, and career shifts) the current institutional and curricula mixture reflects the importance of Egyptian VET for both economic prosperity and social cohesion.

Aiming at a single body for co-ordination

The revival of a Supreme Council on Human Resources would represent a major initiative in response to the fragmentation and lack of adequate co-ordination in VET. At the moment, there are multiple public entities involved in the delivery of VET which makes co-ordination difficult and costly. A new body could take overall responsibility for the entire VET system at upper secondary and post-secondary levels, including the relationship with social partners. The OECD team noted a widely shared commitment across different stakeholders to work together to improve co-ordination, address policy reform and to work with partners in industry; a newly established council must take advantage of this environment.

Interest in enhancing social partners engagement

In Egypt, the importance of social partners in VET is well-recognised. For the technical clusters initiative, the involvement of social partners is essential to create those synergies aiming to provide vocational and technical education of high quality and to tackle local labour market needs more effectively. The key point of the cluster is to ensure that the resources are integrated to achieve the highest level of utilisation and set up a clear progression path to higher technical skills for students – that must be also transparent and understandable to employers. The first cluster is already operating in Cairo (Ameeria).

Assessment is inspired by policy development

The OECD team identified in Egypt a good capacity for data and information collection as well as for diagnosis in relation to VET policy making. This allows Egypt to develop a good understanding of the issues which need to be addressed, and often how to do so. One example is the background report prepared by the local team for this review. The Ministry of Higher Education undertook a survey of employers, stakeholders, and VET graduates to provide data for the background report alongside several meetings and discussions with relevant stakeholders. The background report contains a self-assessment of the challenges faced by VET whose main points have been agreed. These data collection practices could usefully be reinforced and take place more systematically for the use and benefit of local institutions, students, and social partners.

A reasonable level of international co-operation

The VET authorities in Egypt are already taking advantage of all kinds of international collaboration opportunities, working with a wide range of partners in other countries and with international organisations. Some relevant examples are: *i)* The Egyptian-German Initiative for Dual System; *ii)* The VET Reform Programme; and *iii)* European Training Foundation Projects in Egypt.

Challenges and recommendations

Despite all the strengths mentioned above, there remain, inevitably, some significant challenges for post-secondary VET in Egypt. These challenges are set out below in summary. What might be done to address them forms the subject of chapters 2-6.

Challenge 1

The quality of the system. Today, VET in Egypt remains an option that is often perceived as low status, where institutional co-ordination is insufficient, and where quality assurance should improve. The challenge of quality impacts on the social perception and prestige of the education and training provided which, in turn, erodes VET visibility and utilisation.

Recommendation:

- Egyptian post-secondary VET should reinforce efforts to improve its quality in three essential areas: i) improve co-ordination in the system; ii) improve the assessment of learning outcomes; and iii) facilitate a clear and coherent governance structure for quality assurance.

Supporting arguments:

Improve co-ordination in the system. Managing multiple vocational institutions and programmes to deliver strategic coherence and co-ordination without damaging diversity and innovation is a major challenge. Institutional autonomy, while promoting local innovation, can add to the challenge of coherence and co-ordination. In the face of these challenges, countries often maintain co-ordination bodies designed to provide an overall steer for the VET system.

Improve the assessment of learning outcomes. The aim of effective quality assurance mechanisms should be to identify areas for improvement and not to punish poor performers. Students should be placed at the centre because the primary purpose of evaluation and assessment is to improve student learning. Employers might play a significant role in collaborating with technical schools in designing instruments and mechanisms to test students' skills and make sure that they can test them in the right context.

Facilitate a clearer governance structure for quality assurance. The recently created National Authority for Quality Assurance and Accreditation in Education in Egypt might benefit from the experience of other countries in managing quality assurance mechanisms across a range of different institutions and levels of government. For example, a certain level of autonomy for each government level can help to make quality assurance mechanisms more effective.

Challenge 2

Lack of adequate employer engagement. There are cases where programmes and curricula seem to be designed to match labour market

needs with a substantial involvement of employers themselves, but this does not take place systematically.

Recommendation:

- Take action to enhance employers' engagement in Egyptian VET: i) to ensure the labour market relevance of VET programmes; and ii) to reinforce those structures and frameworks already in place.

Supporting arguments:

Ensure the labour market relevance of VET programmes. The objective of VET is to prepare students for good jobs. Employers' participation and interest in the programme is fundamental to achieve this goal. The accreditation procedure of VET programmes should assess labour market demand for the programme depending on employment opportunities and career prospects for graduates.

Arrangements currently in place might range from advisory boards to decision-making bodies. Whatever role employers might play their contribution must be meaningful and significant to the system. If they participate in advisory groups, the information provided by employers should truly reflect workforce skills needs. At the same time, if they participate in decision-making bodies, these bodies must have a real impact on VET.

Challenge 3

Limited use of workplace learning. In the strongest VET systems, workplace learning plays a central role, while in Egypt, it seems to be relatively absent from many post-secondary VET programmes. Workplace learning is a powerful tool for developing both hard and soft skills, for transitioning students into employment, engaging employers and linking the mix of training provision to employers' needs.

Recommendation:

- Develop workplace learning as a systematic, credit-bearing, quality assured and mandatory element in vocational programmes and convince employers of the benefits that can be obtained.

Supporting arguments:

High quality workplace learning can be integrated into post-secondary programmes. Outside formal apprenticeships, where workplace learning is the central element, post-secondary VET programmes make

variable, but sometimes extensive use of workplace learning as a component of programmes, sometimes in the form of fixed “blocks” at the end of the programme with the aim of labour market insertion. In some cases the requirement is mandatory.

Convince employers of the benefits of workplace learning and enhance quality assurance mechanisms. There are two main benefits to the employer of work placements – one is the production benefit in that trainees undertake productive work. The second is the recruitment benefit in that training enterprises can identify the most useful and skilled trainees during a work placement and offer them jobs, saving the employer the costs of recruitment.

Challenge 4

Weak basic skills among those entering the system. Many students entering VET in Egypt have weak numeracy and literacy skills – and they need targeted help. This support should be seen as a priority in the educational system as a whole because, as jobs are becoming more technical, basic literacy and numeracy skills are becoming even more crucial.

Recommendation:

- Identify weaknesses and target support to improve numeracy and literacy and encourage course completion, strengthen workforce skills, and support transition from VET to academic education.

Supporting arguments:

Screen students for weaknesses, and target help to those who need it most. Two factors emerging from international evidence argue for systematic screening of literacy and numeracy difficulties among VET students: many people are unaware of their problems, and some of those who are aware of them may be reluctant to admit them.

Stronger basic skills support course completion, participation in further education and improve labour market outcomes. General subjects play a crucial role in supporting the completion of vocational courses as well as the transition to tertiary education. Improving general skills decreases the probability of unemployment and increases earnings. At the same time, strong literacy and numeracy skills are also associated with entrepreneurship.

Challenge 5

Lack of sufficient information to support career guidance. There are insufficient data to support the development of strong career guidance services for students across different institutions. Stronger data and information might help career guidance services to collaborate more effectively in matching VET graduates labour market demand and supply, support the vocational choices of students and avoid dropouts.

Recommendation:

- Improve data and information available to support policy and operational decisions and enhance guidance to support students' educational choices.

Synthesis of supporting arguments for this recommendation:

Obtain better data through a destinations survey. One way of finding out what happens to VET graduates is simply to ask them. A graduate destinations survey, administered to those leaving vocational programmes around one year after completion, establishes whether graduates are working and in what occupation, whether they are pursuing further study, and if they are unemployed or otherwise not in the labour market. This allows the success or failure of different vocational programmes to be assessed.

Use data to enhance guidance for students. Reliable information and advice on different options can help students to decide on whether or not to enrol in VET programmes. With good career guidance, students' enrolment decisions and choices of subjects can reflect their needs, expectations and abilities as well as help them to complete their studies successfully. Some countries have made substantial efforts to provide students with comprehensive information about labour market conditions in order to inform career choices.

Chapter 1

Introduction and initial assessment

This chapter describes the OECD policy study of post-secondary vocational education and training (VET), the review of Egypt, summarises the main features of the country system and sets out an assessment of its particular opportunities/strengths. The challenges, dealt with in subsequent chapters, are also listed.

The review of Egypt and its place in the wider OECD study

This review is one of a series of country reports on post-secondary vocational education and training in OECD and non-OECD countries, prepared as part of an OECD study (see Box 1.1). The series includes *reviews*, involving an in-depth analysis of a country system leading to a set of policy recommendations backed by analysis. In addition there are *commentaries*. These simpler exercises are 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 1.1 Skills beyond School: The OECD study of post-secondary 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* which examined policy through 17 country reviews and a comparative report. The study also forms part of the horizontal OECD *Skills Strategy* (OECD, 2012).

Full country policy reviews are being conducted in Austria, Denmark, Egypt, Germany, Israel, Kazakhstan, Korea, Netherlands, South Africa, 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 now being undertaken in Belgium (Flanders), Canada, Iceland, Romania, Spain, Sweden and in Northern Ireland and Scotland in the United Kingdom. Background reports are being prepared in all these countries, and in France and Hungary.

See: www.oecd.org/education/vet

This review was prepared using a standard methodology. The Egyptian local team provided a background report (SPU-MoHE, 2012) following which an OECD team made a visit to Egypt, where the team discussed issues arising with a range of policy makers, stakeholders and staff and students in training institutions.

The structure of the report

This first chapter places the review of Egypt in the context of the wider OECD policy study of post-secondary VET, presents the structure of the report, describes the main features of the post-secondary VET system in Egypt and examines its opportunities/strengths and challenges.

The following chapters advance policy recommendations. Each chapter is set out as:

- *The challenge* – the problem that gives rise to the recommendation.
- *The recommendation* – the text of the recommendation.
- *The supporting arguments* – the evidence that supports the recommendation.

The background: Education, training and the labour market in Egypt

Recent macroeconomic and social context

Having fallen to below 3% in fiscal year 2001-02 (1 July to 30 June), Egypt's real GDP growth rate rose steadily from 2003-04 and averaged 7% in the three years from 2005-06 to 2007-08 on the back of economic reform and strong external demand which pushed up export growth. Robust domestic demand, not least fast-rising investment, accounted for a part of the increase in GDP growth (OECD, 2010a:36).

During the global economic recession, which began in the last quarter of 2008, Egypt's real GDP growth slowed in 2008-09 to 4.7% year on year, still a very respectable performance at a time when most developed economies were in recession. Although investment demand fell sharply in 2008-09, private consumption remained buoyant, especially in comparison with most OECD member countries. Regionally, Egypt also outperformed most of its peers, continuing to attract foreign investment and avoiding a steep slowdown (OECD, 2010a:36). But statistics from the World Bank indicate that Egypt's economic growth has slowed down to about 2% in 2011 and 2012 (World Bank, 2013), similar to the rate of population growth and therefore implying no growth in per capita GDP.

Social challenges contrast with macroeconomic growth. The *Egypt Human Development Report 2010*, by the UN Development Programme, indicates that the major challenges are a weak labour market (especially for the young and women), gender discrimination and sanitation (AfDB, 2012). The World Health Organization 2011 report indicated that most of the population in Egypt has easy access to health care and public expenditure on

this matter represents about 6.4% of total GDP (AfDB, 2012). Also, it is estimated that 27% of young people aged from 18 to 29 do not complete basic education (17% drop out of school and 10% never enrol) and public education is of poor quality and fails to provide the necessary skills for the job market. The overall illiteracy rate is approximately 30%, with a higher rate among women, especially in rural areas. There are approximately 5.8 million illiterate people in the 10-35 age range, meaning there are twice as many illiterates as there are registered upper secondary and university students (AfDB, 2012).

Egypt has a large higher education system which produced 320 000 graduates in 2010. As in other North African and OECD countries, the profile of Egyptian graduates is heavily tilted towards social sciences, business and law; more than half of all students are in these fields while only 10% of graduates are in engineering and science (AfDB, 2012).

The labour market

Given rapid population growth (around 2% per annum), Egypt needs to absorb between 600 000 and 700 000 new labour market entrants each year. This puts enormous strain on public services and on the government. The official rate of unemployment fell from above 20% in the late 1990s, to around 9% at the end of 2009 but the official rate might conceal considerable hidden unemployment and under-employment, as a large share of the population escapes statistics, either by simply not registering, or by working in the informal economy (OECD, 2010a:37).

To create sufficient jobs to match expanding labour supply, it is estimated that real annual GDP growth needs to exceed 7% at current productivity rates (and more if productivity increases) (OECD, 2010a:38).

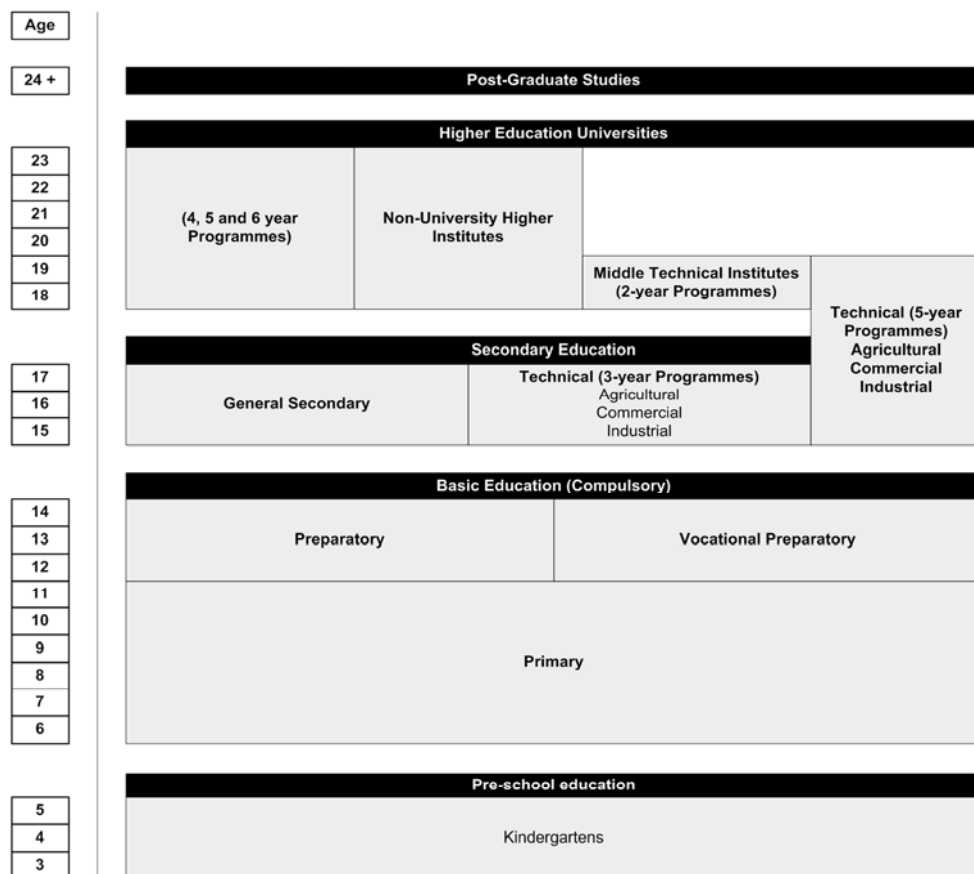
Education and training for young people

Educational levels

Egypt considers education to be a top priority. The goal of universal education was reflected in the first Egyptian constitution in 1923. Article 19 stated that elementary education is compulsory for all Egyptian children.¹ This helped to establish a unified compulsory primary education system. In 1981, another law (Education Law No. 139) stressed that the state should extend compulsory education to further levels. An additional law in 1999 (No. 23) established nine years of compulsory education² (SPU-MoHE, 2012:20).

Basic schooling (primary and preparatory levels): Nine years of basic education (six years of primary schooling plus three years of “preparatory” schooling) are a right for all Egyptian children from the age of six. After the six years of primary education, students join either a general three-year “preparatory” school (around 97% of the total preparatory system), or they enrol in a vocational preparatory school which is also a three-year programme. After completing this vocational preparatory education, graduates can enter the labour market or enter three-year vocational secondary education (SPU-MoHE, 2012:20). Students that have finished general preparatory levels (grade 9) can either join general secondary schools or technical secondary schools.

Figure 1.1 The education system in Egypt



Source: Adapted from Strategic Planning Unit-Ministry of Higher Education of Egypt (SPU-MoHE) (2012), *Post-secondary Vocational Education and Training in Egypt. Country Background Report*.

General secondary schooling: This lasts for three years from grade 10-12 and aims to prepare students for work and life, as well as for higher education. Graduates with a general secondary education normally continue into higher education through a very competitive process based mainly on the results of the secondary school final exam (*Thanaweya Amma*) (SPU-MoHE, 2012:20).

Technical secondary schools: Studies at technical secondary schools take place at two levels. The first level prepares technicians via a three-year programme. The second level prepares senior technicians via a five-year programme. The graduates from both tracks are entitled to enter higher education according to their results in the final exam, but their transition rates are very low when compared to graduates of general secondary education, and the vast majority join the labour market (SPU-MoHE, 2012:20).

Higher education: This takes place in universities, specialised institutes, technical colleges and/or middle level education institutes. The duration of study ranges from two years in middle technical institutes and technical colleges, to four, five, or six years in universities, colleges and higher institutes. Masters and PhD degrees need at least two years and three years, respectively, to be awarded. There is a small private higher education sector, including 17 private universities and 141 private institutes (Table 1.1) (SPU-MoHE, 2012:20).

Table 1.1 The higher education system in Egypt (2009-2010)

Higher Education Institutes		Number of Institutes	Student Enrolment	% of Total Enrolment	% of Total Enrolment	Enrolled in Post-Graduate Studies (PG)	% of Total PG
Public Universities	<i>Full Time</i>	17	1 036 641	42.2	79.3	276 449	90.7
	<i>New Modes</i>		498 158	20.3			
Al-Azhar		1	318 956	13.0		19 227	6.3
Public Technical Colleges and Middle Institutes		77	93 699	3.8		-	-
Private Universities		17	70 443	2.9		1 631	.5
Private Higher Institutes*		141	410 182	16.7	20.7	7 364	2.4
Private Middle Institutes**		24	27 274	1.1		-	-
Total		-	2 455 353	100.0	100.0	304 671	100.0

Notes: * Private higher institutes include three post-graduate institutes, three private academic institutes and 11 branches of the Workers' University (bachelor's degree level).

**Private middle institutes include 11 branches of the Workers' University (diploma level).

Source: Strategic Planning Unit-Ministry of Higher Education of Egypt (SPU-MoHE) (2012), *Post-secondary Vocational Education and Training in Egypt. Country Background Report*. pp. 24.

Al-Azharite education: *Al-Azharite* (religious) education follows the same standards as general education in terms of hours of study for each school subject, but *Al-Azhar* offers religious instruction as part of the curriculum. The share of *Al-Azharite* education at primary level is large but progressively declines at higher levels. Azhar schools are found all over the country (SPU-MoHE, 2012:21).

Post-secondary vocational education and training

Post-secondary VET institutions and programmes³

In Egypt, post-secondary VET serves five sectors in particular: *i*) engineering (or industrial); *ii*) commercial; *iii*) tourism and hotel services; *iv*) medical; and *v*) social work. Within these five sectors, there are

approximately 108 different technical programmes in 22 different disciplines. Table 1.2 shows these disciplines and those institutions associated with them (SPU-MoHE, 2012:30).

Table 1.2 Post-secondary VET disciplines and institutions in Egypt

Sectors	Disciplines	Post-secondary VET Institutions Offering these Disciplines
Commercial	Management and Operation of Small Projects	Technical Colleges – Workers' University
	Taxation and Social Insurance	Technical Colleges
	Financial Institution Calculation	Technical Colleges
	Marketing and Storage Management	Technical Colleges
	Executive Secretarial Studies	Technical Colleges
	Information Technology	Technical Colleges
	Management of Ports and Customs	Technical Colleges
	Sciences of Law	Technical Colleges
Social work	Social Work	Technical Colleges – Private Middle Institutes
Tourism and hotel services	Tourism	Technical Colleges
	Hotel Services	Technical Colleges - Private Middle Institutes
Engineering (or industrial)	Electrical Engineering Skills	Technical Colleges – IECs – Workers' University – ITEC –TCC – TIDI
	Computers and Information Technology	Technical Colleges – TIDI
	Automotive	Technical Colleges – IECs
	Mechanical Engineering Skills	Technical Colleges – IECs – Workers' University – ITEC – TCC – TIDI
	Civil Engineering Skills	Technical Colleges – IECs
	Architecture	Technical Colleges – IECs
	Garments, Yarn and Weaving	Technical Colleges – IECs –TCC - Private Middle Institutes
	Health and Biological Industries	Technical Colleges – IECs – TIDI
Medical	Health technician	Technical Health Institutes
	Medical services	Technical Health Institutes
	Nursing	Technical Health Institutes – Technical Nurses Institutes

Notes: IECs = Industrial Education Colleges; ITEC = Integrated Technical Education Cluster; TCC = Technology Competency Centre; TIDI = Technical Institute for Developed Industries.

Source: Strategic Planning Unit-Ministry of Higher Education of Egypt (SPU-MoHE) (2012), *Post-secondary Vocational Education and Training in Egypt. Country Background Report*. pp. 30-31.

Institutes of post-secondary vocational education and training in Egypt are classified into eight different categories. All institutes have two-year programmes that lead to a diploma (there is only one exception in the faculties of industrial education which offer a bachelor's degree through a

four-year programme) (SPU-MoHE, 2012:26). The Egyptian post-secondary VET system is composed of 68 institutions (105 before grouping the previous 45 technical institutes into only eight technical colleges), grouped in eight different categories with 127 440 enrolled students in 2009/2010 (Table 1.3).

Table 1.3 Basic indicators of post-secondary VET institutes

2009-2010				
Post-secondary VET Institutes	Public/ Private Institutes	Number of Institutes	Number of Enrolled Students	Percentages of Total Enrolment in Post- secondary VET Institutes
Technical Colleges	Public	8*	73 952	58.03
Technical Health Institutes	Public	12	16 678	13.09
Technical Nursing Institutes	Public	17	2 565	2.01
TIDI/TCC	Public	2	277	0.22
Private Middle Institutes	Private	13	1 868	10.88
Workers' University	Private	11	13 406	10.52
Integrated Technical Education Cluster	Private	1	227	0.18
Faculties of Industrial Education	Public	4	6 467	5.07
Total Number of PVE Institutes		68	127 440	100

Note: *Before grouped in eight technical colleges they were 45 different institutions.

Source: Adapted from Strategic Planning Unit-Ministry of Higher Education of Egypt (SPU-MoHE) (2012), *Post-secondary Vocational Education and Training in Egypt. Country Background Report*. pp. 26.

In 2002, the Ministry of Higher Education with support from the World Bank launched a higher education enhancement project which re-grouped the 45 middle technical institutes into eight new bodies known as technical colleges. These colleges are, by far, the largest provider of post-secondary

VET in Egypt absorbing 58% of enrolled students in 2009/2010. These technical colleges are found in: Matareya (Cairo), Sahafa (Cairo), Quesna, Great Mahalla, Alexandria, Port-Said, Middle of the Valley and in the South of the Valley (SPU-MoHE, 2012:27).

In addition to the technical colleges, there are: *i)* technical health institutes offering a degree equivalent to the diploma from technical colleges; *ii)* technical nursing institutes established within the framework of public universities; *iii)* technology competency centre (TCC) which is the result of a co-operation agreement between the Egyptian and the German governments; this industrial institute is administered by the Ministry of Industry and Foreign Trade alongside the Middle Technical Institute for Developed Industries (TIDI) which is administered by the Ministry of Military Production; *iv)* middle technical institutes which are private institutes equivalent to the technical colleges; *v)* The workers' university that has two divisions: technological development and industrial relations, and belongs to the Egyptian Trade Union Federation; *vi)* the integrated technical education cluster where student enrolment started from the 2009/2010 academic year; and *vii)* the industrial education colleges which offer four-year programmes leading to a Bachelor of Industrial Education Degree (SPU-MoHE, 2012:29-30).

The Egyptian post-secondary VET system is administered by a multitude of government agencies that often work independently (see Table 1.4) so a broad consensus exists on the need for a new regulatory framework. This need has been identified by the declaration for action of the National Conference on Higher Education Reform in February 2000 and mentioned as a priority by external policy reviews (SPU-MoHE, 2012:35). In addition, this consensus of support for reform and the establishment of a single co-ordinating body for post-secondary VET was confirmed by the OECD team that visited Egypt for this review.

Table 1.4 Categories of post-secondary VET institutes

Post-secondary VET Institutes	Public/Private	Under the Jurisdiction / Supervision of
Technical Colleges	Public	Supreme Council of Technical Colleges / Ministry of Higher Education
Faculties of Industrial Education	Public	Public University / Ministry of Higher Education
Technical Nursing Institutes	Public	Public University/ Ministry of Higher Education
Technical Health Institutes	Public	Ministry of Health and Population
TIDI/TCC	Public	Ministry of Military Production and Ministry of Industry and Foreign Trade
Integrated Technical Education Cluster (ITECs)	Private	Education Development Fund
Private Middle Institutes	Private	Council for Private Higher Institutes
Workers' University	Private	Egyptian Trade Union Federation

Source: Strategic Planning Unit-Ministry of Higher Education of Egypt (SPU-MoHE) (2012), *Post-secondary Vocational Education and Training in Egypt. Country Background Report*. pp. 35.

Labour market outcomes of post-secondary VET in Egypt

Lack of data on the labour market outcomes of post-secondary VET graduates makes it difficult to estimate the extent to which current VET provision meets labour market demand. At the same time, other local factors impose serious limitations to the data needed including: *i*) a very large informal economy; and *ii*) disincentives for formal economy employers to fully report on their employee numbers (e.g. social security provisions relating to worker's insurance and protection against dismissal) (SPU-MoHE, 2012:146).

To fill the data gap, the Strategic Planning Unit of the Ministry of Higher Education (SPU-MoHE), undertook a survey in 2011 with businessmen and industry managers regarding VET. Half the respondents believed that the demand for post-secondary VET graduates will grow

during the next few years. As a result, the contribution of VET graduates to the Egyptian labour force would grow from 47% in 2012 to 52% in 2016 (SPU-MoHE, 2012:143).

It is difficult to understand the growing unemployment rate among post-secondary VET graduates (from 15.2% in 2006 to 16.6% in 2010) when there is a decreasing number of them and, at the same time, their skills are apparently in increasing demand according to employers. This contradiction might be explained by two possibilities: first, the low level of skills of some of the post-secondary VET graduates could make them not qualified enough for those jobs available; and second, some of the employers and stakeholders might not be fully aware of what VET programmes and their graduates might offer (SPU-MoHE, 2012:144).

The labour market outcomes of post-secondary VET are shaped by programme, specialisation and institution. Nearly 48% of graduates of post-secondary VET said that they got their jobs easily, particularly in health and nursing and tourism and hotel services but graduates of the industrial, commercial and social work sectors spent more time and effort in finding their jobs (SPU-MoHE, 2012:148).

Current VET curricula in Egypt might not be well-adapted to labour market needs, according to the same survey. When graduates were asked about the suitability of the technical material they studied in relation to labour market needs, only one-third of post-secondary VET graduates said that it was appropriate. Nearly two-thirds of the graduates working in their area of specialisation agreed that their education was suitable and helped them in the labour market, while only 14.2% of the employees who were working outside of their area of specialisation supported this view (SPU-MoHE, 2012:150).

Finally, the self-reported degree of VET suitability for labour market requirements also varied across specialisations in Egypt. The nursing sector had the most positive results because graduates saw what they had studied as appropriate for the labour market (77.8%). Health followed by 70.5%, and tourism and hotel services came in third place at 49.2%. The worst results reported were those of the social work sector (43%) followed by the industrial (35.1%) and commerce (33.8%) sectors where most graduates did not see a good match between their studies and labour market requirements (SPU-MoHE, 2012:150).

Recent policy developments: the creation of a technical university to improve pathways to post-secondary VET

There are limited pathways for accessing post-secondary VET in Egypt. The main access is through secondary education in the form of general secondary schools, technical secondary schools as well as foreign secondary education (this category refers to international certificates issued in and out of Egypt but to a much lesser extent than the other two categories). Graduates from technical secondary schools can access post-secondary VET institutes and colleges according to their area of specialisation. Although graduates with general secondary school education can join all the categories of the post-secondary VET system, they normally apply to access them only when their grades are below the level needed to enroll in university education.

Mobility across programs in the post-secondary VET system in Egypt, including transitions into academic tertiary programs (at universities and higher institutes), is also very restricted⁴.

In order to tackle the challenges mentioned above, the most recent strategy in higher education in Egypt has set as a priority to improve vocational education pathways to post-secondary education through the establishment of a new university specialised in vocational fields, which will offer master's and PhD degrees in technical and vocational areas.

Previous OECD analysis and recommendations

The OECD *Review of Higher Education in Egypt* (OECD, 2010b) mentions that VET is not widely perceived as an attractive educational option in Egypt because of its quality. For this reason, this review suggests that renewing the VET system should be a priority, including: *i*) enhancing the status of VET qualifications; *ii*) upgrading facilities; and *iii*) improving the quality, relevance and status of technical and vocational education and training at both the secondary and tertiary levels with the purpose of substantially expanding enrolments in post-secondary VET (OECD, 2010b:16-23).

According to the same report, the transition of students from the general and vocational/technical tracks of upper secondary education to higher education in universities, colleges, and other tertiary institutions is a significant challenge. A major problem, according to the report, from both efficiency and equity perspectives, is the skewed representation of

secondary school students in tertiary education. The students entering technical colleges are mainly general secondary track students who failed to gain admission to university while students of the technical and vocational education and training sub-system face a dead-end in terms of their prospects for further learning (OECD, 2010b:29).

The *Review of Higher Education* also argues that many VET institutions in the country lack adequately trained instructors, training resources and equipment. The lack of suitable instructors can be largely explained by inadequate funding and low wages. Instructors who were graduates of the technical secondary schools usually had little work experience, while instructors who had acquired skills through work experience usually did not have formal pedagogical training or preparation as certified trainers.

Students in higher education and its VET sub-sector complain about insufficient choice of field of study relevant to their career preferences; that inadequate preparation for employment occurs as a result of curriculum irrelevancies; and that they lack practical skills because of an over-emphasis on memorising content, passive pedagogies and lack of facilities and equipment (Academy for Educational Development, 2008; OECD, 2010b:170).

The *Review of Higher Education* reports that a Supreme Council for Human Resources was established in 2000 to design a national training and employment strategy completed in August 2002 (OECD, 2010b). The goal was a VET system responsive to market needs, a new legal and institutional framework for technical schools and centres to make them more autonomous, and to enhance labour mobility. One result was the reorganisation and consolidation of VET programmes. Also, the Supreme Council was developing definitions of skill standards for professions (OECD, 2010b:259).

Finally, the *Africa Economic Outlook* (2012), prepared by the African Development Bank, the United Nations Development Programme, the United Nations Economic Commission for Africa and the OECD, argues that Egypt must address human development shortfalls and social inequality, which disproportionately affect women and the rural population. According to the *Outlook*, the poor quality of education fails to meet job market needs; the youth unemployment rate is 23%, twice the national average. A National Action Plan on Youth, aiming at increasing youth employability, has failed to produce results. The *Outlook* mentions that most jobs created in Egypt are of poor quality are in the informal sector (AfDB, 2012:193).

A brief assessment of the post-secondary VET system in Egypt – key opportunities/strengths

This section of the review provides a brief assessment of the opportunities/strengths of the Egyptian post-secondary VET system. The assessment set out here rests on the analysis undertaken by the Egyptian background report informing this review (SPU-MoHE, 2012), the findings of the OECD mission to Egypt and previous OECD work. The framework for the assessment is provided by the analysis of vocational education and training systems developed by both the OECD *Learning for Jobs* exercise – undertaken in 17 countries— and the more recent *Skills beyond School* exercise that is also taking part in a number of countries (Box 1.1). The challenges identified in the Egyptian system and policy recommendations to address them are presented subsequently.

Diversity in provision

Across OECD countries

Post-secondary VET systems serve diverse purposes. 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); up-skilling 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 VET system should be able to meet all of these quite different needs.

In Egypt

Post-secondary VET offers many programmes in different industries and through different types of institutions. These programmes are intended to be informed by the needs of local employers and students’ interests. As mentioned, post-secondary VET in Egypt is oriented mainly to five sectors (engineering/industrial; commercial; tourism/hotel; medical; and social work) and there are approximately 108 different technical programmes covering 22 disciplines. In total, the Egyptian post-secondary VET system and its 68 institutions had 127 440 enrolled students in 2009/2010. Although post-secondary VET could be encouraged to offer more services for some specific groups and purposes (up-skilling, adult education, second chance, and career shifts) the current institutional and curricula mixture reflects well

the importance of Egyptian VET for both economic prosperity and social cohesion.

Aiming at a single body for co-ordination

Across OECD countries

Policy co-ordination and 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 authorities and 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 Egypt

The revival of a Supreme Council on Human Resources would represent a useful initiative in response to fragmentation in the VET system. A new body could take overall responsibility for the entire VET system at upper secondary and post-secondary levels, including the relationship with social partners. The OECD team noted a widely shared commitment across different stakeholders to work together to address policy reform and to work with industry partners; a newly established council must take advantage of this environment.

The idea of a Supreme Council is not new. An earlier Council for Human Resources established in 2000 sought to design a national training and employment strategy. According to the information available in other OECD reports and the background report provided by the local team, a significant consequence of the implementation of this strategy was the reorganisation and consolidation of VET programmes in recent years (OECD, 2010b; SPU-MoHE, 2012:37). However, it is understood that this previous Council is no longer in operation.

Interest in enhancing social partners engagement

Across OECD countries

Evidence across OECD countries shows that the engagement of social partners – employers, unions, and professional associations — is necessary to ensure that the content of vocational programmes meet the needs both of the labour market and students (OECD, 2010c). Social partner engagement is also crucial for national level policy development and to ensure adequate implementation of policy but in many countries it is difficult to engage employers, unions, and professional associations at the level required for an effective provision of vocational education and training.

In Egypt

In Egypt, the importance of social partners in VET is well-recognised. For the “technical clusters” initiative, the involvement of social partners is essential to create those synergies aiming at providing vocational and technical education of high quality. The key point of the cluster is to ensure that the resources are integrated to achieve the highest level of utilisation and set up a clear progression path to higher technical skills for students – that must be also transparent and understandable to employers. These clusters have four components: a technical secondary school; a technical institute; an advanced technical institute; and a vocational training centre. Crucially, the curricula and programme design of these clusters at all levels is meant to be inspired by local labour market needs. The first project is the cluster in Cairo (Ameeria) in 2009/2010 and the next cluster will be in Fayoum.

Assessment is inspired by policy development

Across OECD countries

The development of VET policy depends on reliable information and the analytic and research capacity to make use of it. Such a foundation is essential to ensure that policy can be guided by a strong evidence base. For VET, 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 and information can be provided either through one-off surveys of those leaving vocational programmes, or by tracking cohorts of individuals through vocational programmes into employment. At the same time, collaboration across different ministries, levels of government, and social partners

associations should also allow the VET system to have a clearer picture of labour market demand and career prospects for its graduates as well as to undertake policy reform when required.

In Egypt

The OECD team identified in Egypt a good capacity for data and information collection as well as for diagnosis in relation to VET policy making. This should allow Egypt to develop a good understanding of the issues which need to be addressed, and often how to do so. One example is the background report prepared by the local team for this review. The Ministry of Higher Education undertook a survey of employers, stakeholders, and VET graduates to provide data for the background report alongside several meetings and discussions with relevant stakeholders. The background report also contains a self-assessment of the challenges faced by the system whose main points have been agreed with key stakeholders. These practices could usefully be reinforced and take place more systematically for the benefit of local institutions, students, and social partners.

A reasonable level of international co-operation

Across OECD countries

International co-operation in VET is a valuable instrument for peer learning. Although in the past, most attention has been devoted to VET at upper-secondary level, 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 their economies. However, in many countries, the post-secondary VET segment is less developed and visible than the upper-secondary one. For this reason, the OECD study, *Skills beyond School*, is addressing the range of policy questions arising from the analysis and comparison of post-secondary VET across different countries, including funding and governance, matching supply and demand, quality assurance, equity and access, social partners engagement, training and support for teachers and trainers, among others (Box 1.1).

In Egypt

VET authorities in Egypt are already taking advantage of all kinds of international collaboration opportunities, working with a wide range of partners in other countries and with international organisations. Some relevant examples are:

- *The Egyptian-German Initiative for Dual System.* This initiative is the result of a technical cooperation project with Germany introduced in 1994. To date, it is offered in 22 out of 29 governorates and 68 technical secondary schools participate in the scheme. By 2008, there had been 20 000 graduates of the scheme – 18% of them female students (SPU-MoHE, 2012:119).
- *The VET Reform Programme.* This is a project co-funded by the European Union and Egypt. The project started in July 2005, and is expected to run for six years with a budget of EUR 66 million. The objective is to develop flexible mechanisms as well as practical capacities for the formulation and implementation of a national VET policy reform designed to support economic development. According to Egypt, this programme has also created a major and strategic alliance with the Industrial Modernisation Centre, co-funded by the EU, and the Skill Development Project co-funded by the World Bank (SPU-MoHE, 2012:122).
- *European Training Foundation Projects in Egypt.* The European Training Foundation is supporting several projects and studies in Egypt, ranging from assessments of what is up-to-date in the reform process to issues of accessibility and mobility in VET. The European Training Foundation is also involved in the regional initiative on qualifications in the Mediterranean. In terms of labour market analysis, the European Training Foundation continues to support the labour market observatory in Egypt through expert input, policy analysis and capacity building initiatives. Finally, the European Training Foundation also supports national authorities in the dissemination of a study about skills linked to migration patterns (SPU-MoHE, 2012:122).

Challenges

Despite all the strengths mentioned above, there remain, inevitably, some significant challenges for the post-secondary VET system in Egypt. These challenges are set out below in summary. What might be done to address them forms the subject of chapters 2-6.

- *The quality of the system.* Today, VET in Egypt remains an option that is often perceived as low status, where there is inadequate institutional co-ordination, and where quality assurance should improve. The challenge of quality impacts on the social perception and prestige of the education and training provided which, in turn, erodes VET visibility and utilisation.

- *Lack of adequate employer engagement across the whole sector.* There are cases where VET institutions work in co-ordination with local employers, where programmes and curricula seem to be designed at aiming at matching labour market needs with a substantial implication of employers themselves, but this does not take place systematically.
- *Limited use of workplace learning.* In the strongest VET systems, workplace learning plays a central role, while in Egypt, it seems to be relatively absent from many post-secondary VET programmes. Workplace learning is a powerful tool for developing both hard and soft skills, for transitioning students into employment, engaging employers and linking the mix of training provision to employers' needs.
- *Weak basic skills among those entering the system.* Issues to do with basic skills are very challenging across the whole spectrum of educational options including VET. Many students entering the VET system in Egypt have weak numeracy and literacy skills – and they need targeted help. This support should be seen as a priority in the educational system as a whole because, as jobs are becoming more technical, basic literacy and numeracy skills are becoming even more crucial.
- *Lack of sufficient information to support career guidance.* At the moment, there are insufficient data to support the development of strong career guidance services for students across different institutions. Stronger data and information might help career guidance services to collaborate more effectively in matching VET graduates labour market demand and supply; support the vocational choices of students and avoid dropouts.

Notes

1. Egypt is also one of the countries that signed the Universal Declaration of Human Rights in 1948 whose Article 26 states that everyone has the right to education.
2. The new constitution (2014) is proposing the extension of compulsory education to include secondary education (12 years of compulsory education).
3. For a detailed description of post-secondary VET institutions in Egypt and their governance system please check the background report elaborated by the Egyptian local team (SPU-MoHE, 2012).
4. In general, students that have participated already in a specific post-secondary programme cannot access another one except in the following circumstances: i) when they have exhausted repetition chances in university or higher education they may enter post-secondary VET according to the type of secondary education received and grade obtained (i.e., if the student has a general secondary certificate, she/he can access any program in post-secondary VET institutes or colleges). However, if the student has a technical secondary certificate, she/he can only apply to a program that matches her/his specialisation at technical secondary education; and ii) students that have exhausted their repetition chances in any post-secondary VET institute or college can have an additional opportunity only if they change their area of study from one sector to another and their secondary education grade and specialisation is accepted by the new sector.

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Chapter 2

Improving quality

Vocational education and training (VET) in Egypt remains an educational option that is widely perceived as facing quality challenges. This chapter identifies three areas in which post-secondary VET in Egypt should improve its quality: i) co-ordination in the system; ii) the assessment of learning outcomes; and iii) a clear and coherent governance structure for quality assurance.

Challenge

Improving quality

Good quality is essential for the success of VET. Quality in VET means how well the system is organised and co-ordinated; how well the system offers those skills demanded by employers; how well this provision reflects students' and families' preferences; and how well these skills are delivered by well-trained teachers and trainers. In other words, quality in VET requires a holistic approach embracing all the factors responsible.

Quality requires adequate co-ordination to ensure the participation of multiple stakeholders of varied profiles. A clear allocation of responsibilities would make co-ordination easier. At the moment, there are eight different types of institutions operating independently in post-secondary VET in Egypt and being supervised or under the jurisdiction of different entities (e.g. the Supreme Council of Technical Colleges; Ministry of Higher Education; Ministry of Health and Population; Ministry of Military Production; Ministry of Industry and Foreign Trade; among others). A clearer division of tasks between college types and their supervising bodies should help to improve co-ordination, policy development and implementation.

Also, quality in Egypt should be improved in the assessment of learning outcomes and quality assurance itself. The OECD team visiting Egypt confirmed one of the main conclusions of a previous OECD report (OECD/The World Bank, 2010) that VET is widely perceived as an unattractive option by Egyptian society and is not seen as high quality and that this, in turn, erodes VET visibility and utilisation.

The establishment of the National Authority for Quality Assurance and Accreditation in Education (in 2007) as an independent quality assurance and accreditation body linked to the prime minister is an important development. The work of this body has the potential to contribute to the overall quality assurance and accountability framework within which universities, technical colleges and other higher education institutions could be granted increased substantive and procedural autonomy. Strategic planning at the institutional level is one of the requirements for accreditation as specified by the National Authority for Quality Assurance. The government has allocated one billion Egyptian pounds to support the Continuous Improvement and Qualifying for Accreditation Project which requires that institutions implement an action plan to improve the undergraduate/graduate education process, enhance community service, and sustain the internal quality assurance systems (SPU-MoHE, 2012:43). In

order to support the work undertaken by the National Authority for Quality Assurance, the Ministry of Education has also created a Quality Assurance Division (SPU-MoHE, 2012:53).

At the same time, Egypt is trying to change and develop its traditional education and training systems to upgrade its international competitiveness. To do so, Egypt is building a National Qualifications Framework whose main objective is to replace the old qualifications system that recognises only certificates obtained through formal educational pathways, with a new system that gives more emphasis to lifelong learning, flexibility and that tackles the problem of dead ends in learning pathways. By developing a National Qualifications Framework based on broader criteria linked to international standards, the intention is to enhance Egypt's educational quality (SPU-MoHE, 2012:43).

In 2007, Egypt started (in collaboration with the European Training Foundation) to develop a National Qualifications Framework as part of the reform strategy “Education and Training”. Developments included those priorities identified for education and training in national competitiveness reports, the newly adopted VET strategy, as well as bilateral negotiations between Egypt and other countries regarding labour market mobility. Key stakeholders believed that a qualifications framework was an important tool that would help Egypt to improve competitiveness, labour market and other social issues. However, a consensus has not yet been reached among government stakeholders on how to manage the introduction of a qualifications framework that encompasses the main sub-sectors of education and training (SPU-MoHE, 2012:44-45). In 2010, the National Agency for Quality Assurance was assigned to take over the responsibility of engaging the relevant ministries and other stakeholders in completing the matrix for the qualifications framework, agreeing upon the quality assurance principles, and setting up appropriate management processes. In this respect, an umbrella organisation that can co-ordinate efforts at the national level without taking away the existing functions of ministries and accreditation agencies (like the National Authority for Quality Assurance) would be supported by different stakeholders (SPU-MoHE, 2012:45); this could be a task for a renewed Supreme Council for Human Resources.

There are also promising initiatives to develop competence standards for specific occupations, and the National Skills Standard Project, established in 2000 by the Social Fund for Development, supported by a group of national and international organisations, led by the British Council and in close affiliation with employers' associations in three sectors: manufacturing, tourism, and construction. The aim is to develop standards for workers' certification of their competencies, to help develop transferable credits that might carry students across different education or training routes; and

provide independent assessment mechanisms and accreditation procedures (SPU-MoHE, 2012:53).

The Ministry of Education in Egypt established, in 2006, the Teachers' Cadre and, in 2007, the Professional Academy for Teachers, initiatives that may also have a positive impact on improving learning outcomes for students. Their aim is to contribute to the enhancement of professionalism of teachers in pre-university education including technical education. They are also designed to link incentives, salaries and promotions to teachers' performance and standards, and to provide a framework for the professional development of teachers (SPU-MoHE, 2012:53).

Recommendation

Egyptian post-secondary VET should reinforce efforts to improve its quality in three essential areas: i) improve co-ordination in the system; ii) improve the assessment of learning outcomes; and iii) facilitate a clear and coherent governance structure for quality assurance.

Supporting arguments

Improve co-ordination in the system

Managing multiple vocational institutions and programmes to deliver strategic coherence and co-ordination without damaging diversity and innovation is a major challenge. Institutional autonomy, while promoting local innovation, can add to the challenge of coherence and co-ordination. In the face of these challenges, countries often maintain co-ordination bodies designed to provide an overall steer for the VET system.

Recently, the Egyptian government has sought to bring about more co-ordination and cohesion to VET policies by establishing the Supreme Council on Human Resource Development (SCHRD). This tripartite body aims to deliver: *i)* a qualifications framework to foster lifelong learning; *ii)* a VET system that is responsive to the demands of the economy; *iii)* a new legal and institutional basis for governing VET institutions; and *iv)* enhanced labour mobility. A number of short-term priorities emerged out of these objectives including: *i)* involving the SCHRD in management; *ii)* establishing an integrated VET framework including a focus on employment opportunities; *iii)* creating a qualifications framework for VET; *iv)* reviewing relevant donor-supported initiatives with a view to preparing options for continuing and sustaining worthwhile initiatives; *v)* reforming the administration of government training centres by monitoring their performance and providing them with greater financial responsibility and

accountability for their operations; and vi) developing a substantial training market that is not reliant on government resources (SPU-MoHE, 2012:38).

The Supreme Council on Human Resources initiative is not necessarily new in Egypt. There is a need to identify why the previous council did not work as expected and how to prevent this happening again. A Council for Human Resources was established in 2000 in order to design a national training and employment strategy. The objectives of the strategy were to design a technical and vocational education and training system that was responsive to market needs; develop a new legal and institutional framework for VET schools and centres to make them more autonomous; and enhance labour mobility. According to the information available in other OECD reports and the background report provided by the local team, a significant consequence of the implementation of this strategy was the reorganisation and consolidation of VET programmes in recent years (OECD/The World Bank 2010; SPU-MoHE, 2012:37). However, we understand that the previous Supreme Council is no longer in use.

The responsibilities assigned to a single co-ordinating body are huge and cover many different fronts and actors. OECD countries often maintain co-ordination bodies designed to provide an overall steer for the VET system, just as Egypt is trying to do with its National VET Council. Box 2.1 provides some examples of institutional arrangements. The frameworks in Denmark and Switzerland build on strong industrial bodies (employer organisations and trade unions) and a long tradition of engagement in VET. The industry-led UKCES in the United Kingdom involves high profile representatives of large and small employers as well as other stakeholders.

Box 2.1 National strategic bodies steering VET policy

In Denmark the Council of Academy Profession Programmes and Professional Bachelor Programmes (i.e. short and medium cycle post-secondary VET) was set up in 2008. The board has up to 21 members, including those appointed by the Minister of Science, Innovation and Higher Education after nomination by various employer organisations (8 members), trade unions (2), the organisation of Danish regions (1), organisation of local governments (2), student organisations (2), University Colleges (1) and Academies of Professional Higher Education (1). The Council meets six times a year and advises the Minister about the development of new programmes, the mix of provision, quality assurance and improvement. It also provides a yearly report, which reviews existing programmes and describes new initiatives.

In Switzerland, the involvement of professional organisations in VET policy making is required by law. The term “professional organisations” in Switzerland refers to trade associations, employer associations and trade unions, and includes both companies and business people. Professional organisations have the leading role in the content and examination process of both secondary and post-secondary VET programmes (in Switzerland post-secondary VET is referred to as “professional education and training”, PET). Professional organisations in post-secondary VET, as in secondary level VET, draft core curricula for PET college degree programmes, which are then approved by the Swiss authorities (Confederation). National examinations leading to a federal diploma are also led by professional organisations. They ensure those federal PET diplomas are relevant to the needs of the profession and the labour market. Professional organisations draft examination rules, which cover admission requirements, occupational profiles, the knowledge and skills to be acquired, qualification procedures and the legally protected title. They also conduct examinations. The role of Swiss authorities (at Confederation level) includes approving examination rules, supervising examinations and issuing federal diplomas.

In the United Kingdom, the UK Commission for Employment and Skills (UKCES) was launched in April 2008 with the aim of increasing the employer voice in the United Kingdom’s VET system and promoting investment in skills to drive enterprise, jobs and growth. It is led by commissioners from large and small employers, trade unions and the voluntary sector. It also includes representatives of further and higher education institutions and from the Devolved Administrations. Its strategic objectives are: *i*) to provide world-class labour market intelligence which helps businesses and people make the best choices for them; *ii*) to work with sectors and business leaders to develop and deliver the best solutions to generate greater employer investment in skills; *iii*) to maximise the impact of changed employment and skills policies and employer behaviour to help drive jobs, growth and an internationally competitive skills base. The UKCES works with government departments and agencies, as well as with researchers across the UK to develop an evidence base and pool expertise. The UKCES also funds and manages the Sector Skills Councils and oversees their relicensing process. As a UK-wide body, it helps ensure a strategic approach to skills development that covers all four nations (with devolved administrations for education and training policy) of the UK.

Box 2.1 National strategic bodies steering VET policy (*continued*)

A recent shift in the approach to employer engagement encourages employers to own their skills agenda and develop their own initiatives, rather than relying on a policy agenda set by government with incentives for employers to join in. In 2011 the prime minister announced a fund of up to GBP 250 million to test out approaches that empower employers to take control of skills development. The UKCES is working closely with government to develop this approach.

Source : 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://fivu.dk/en/publications/2012/oecd-review-skills-beyond-school-2013-national-background-report-for-denmark>; Fazekas, M. and S. Field (2013), *A Skills beyond School Review of Switzerland*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, doi: <http://dx.doi.org/10.1787/9789264062665-en>; UK Commission for Employment and Skills (UKCES) (2013), *OECD Review: Skills beyond School. Background Report for England. Briefing Paper February 2013*, www.ukces.org.uk/publications/oecd-skills-beyond-school-england

Improving the assessment of learning outcomes

The aim of effective quality assurance mechanisms should be to identify areas for improvement and not to punish poor performers. The primary purpose of evaluation and assessment is to improve student learning (OECD 2013:15). In addition, employers might usefully play a more significant role in collaborating with technical schools in designing instruments and mechanisms to test students' skills in the right context.

Effective assessment mechanisms can play an essential role in improving learning outcomes. The use of standardised assessments is often useful but a balance should be considered to be aware of variations in terms of the different skills measured and how they are doing so. The assessment of vocational skills might imply extra complications as practical competencies should be assessed in the right setting. This is why, as mentioned above, employers' collaboration is essential.

In many OECD countries, the focus on student learning outcomes has underlined the importance of educational standards for the quality of the work of schools and school agents, and to encourage measures designed to monitor progress towards those standards. Educational standards “refer to descriptions of what students should know (content standards) and be able to do (performance standards) at different stages of the learning process” (OECD 2013:19). For many countries, the use of ambitious educational standards can be a strong basis of assessment and accountability where student performance can be assessed against a desired measurable outcome

(OECD 2013:19). Examples from Austria and Denmark post-secondary VET are shown in Box 2.2.

Box 2.2 Student assessment in post-secondary VET

Universities of applied science – Austria

All professional bachelor and master programmes are accredited and evaluated by the Council of Universities of Applied Science (*Fachhochschulrat*). Programmes are modularised, and each module prescribes qualifications and competences that students should have obtained upon completion of the course. Each institution can develop curricula for the programmes it provides, but each programme must be accredited and the proposed curricula must be approved as part of the accreditation procedure.

Similarly, each institution can set its own examination procedures, but these must be approved through accreditation. Students are tested typically after completion of the relevant module to check whether they have acquired these skills. Examination assignments are developed by teachers, based on the curriculum. At the end of the programme, students prepare a diploma thesis in an area relevant to their occupational field. They also must pass an oral examination in front of a board of examiners. The composition of the examination board must be approved in the accreditation process.

Source: FH Council (2010), *Guidelines of the Fachhochschule Council for the Accreditation of Bachelor's, Master's and Diploma Degree Programmes*, www.fhr.ac.at/fhr_inhalt_en/00_documents/AR_08102010_Version1.1.-en.pdf

Short and medium cycle post-secondary VET programmes – Denmark

Post-secondary VET programmes include both internal and external examinations. External examinations must cover the main content areas of the programme. Students must be assessed by external examiners for at least half of the programme content (measured in academic credits).

Each post-secondary VET programme must contain at least three examinations:

- An internal or external examination before the end of the second semester to assess whether the student has achieved the learning outcomes defined for the first year of study.
- An internal or external examination after the student's work placement (such placements are mandatory) to assess whether the student has achieved the learning outcomes defined for the work placement.
- An external examination related to the final examination project.

The results of all the examinations are used to assess whether the learning outcomes of the education programme have been achieved.

Source: 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://fivu.dk/en/publications/2012/oecd-review-skills-beyond-school-2013-national-background-report-for-denmark>

A clearer governance structure to facilitate quality assurance

Clear governance structures support quality assurance instruments. The recently created (2007) National Authority for Quality Assurance and Accreditation in Education in Egypt might benefit from the experience of other countries in managing quality assurance mechanisms across a range of different institutions and levels of government. For example, a certain level of autonomy for each government level can help to make quality assurance mechanisms more effective. The assessment of learning outcomes has some particular features in the context of VET. In Canada, for example, quality assurance is the responsibility of provincial governments. Denmark has a more centralised system involving mechanisms for schools, students and access to public funding. Switzerland offers a good example of how a quality assurance system works in a decentralised country with the co-ordination and co-operation of federal authorities, provincial governments and professional associations (see Box 2.3).

Box 2.3 Quality assurance in different countries

In **Canada**, post-secondary education is the responsibility of provincial and territorial governments, and regulated and quality assured by them (CICIC, 2013). For example, Ontario has developed quality audits to ensure quality and continuous improvement in Ontario's colleges. The Quality Assurance Process Audit supports the responsibility of each college to manage the quality of its own programmes. The audit involves the regular and cyclical review of quality assurance practices in college programmes, leading to a report that compares college quality assurance processes with exemplary ones and provides recommendations on how to further improve quality criteria (Ontario College Quality Assurance Service, 2013). The audit procedure does not apply to the private sector.

Denmark's more centralised system involves three mechanisms:

1. Internal quality assurance - all post-secondary VET institutions are required to conduct quality assurance of their programmes and make this information available on a website (Danish Evaluation Institute, 2010).
2. Assessments of student skills and knowledge can be carried out by external examiners, ensuring consistency of standards in the relevant programme (Danish Evaluation Institute, 2010).

Box 2.3 Quality assurance in different countries (*continued*)

3. Accreditation is mandatory and a precondition for accessing public funding for new and existing programmes. It is based on predefined (in the law) criteria for quality and relevance (employability). Accreditation in the post-secondary sector is divided into two strands: accreditation of degrees at and above bachelor level provided at universities, and accreditation of all post-secondary VET and other professionally oriented post-secondary degrees. VET post-secondary accreditation is carried out by The Danish Evaluation Institute (EVA), an independent institution under the auspices of the Danish Ministry of Education. Accreditation is carried out at the programme level every six years, involving an institutional self-evaluation and a site-visit to the institution. Formal accreditation status is awarded by the Ministry based on the EVA assessment (Danish Evaluation Institute, 2010).

Switzerland provides an example of how quality control can be organised in a decentralised country. Post-secondary VET is the joint responsibility of the federal government, cantons (regional units) and professional organisations.

Professional organisations and industry bodies identify and define competencies in the profession and on this basis develop core curricula of college programmes and professional examinations.

The federal government recognises VET programmes and approves core curricula and professional examinations. For example, the federal authority ensures that there is a clear distinction between existing and new programmes and qualifications (OPET, 2011). The federal authorities also support professional organisations in the development of college programmes and professional examinations.

Cantons are responsible for the supervision of college programmes, conducting regular reviews to make sure the conditions for federal recognition are met (OPET, 2011).

At the same time, some additional mechanisms might help to make the governance and organisational structure for quality assurance mechanisms more effective. Linking quality to access to public funding can help to guarantee a good level of quality provision of VET, at least, this has been the case for some OECD countries (see the example of the UK in Box 2.4).

Box 2.4 Linking funding to quality criteria: The UK experience

Public funding of post-secondary VET (qualifications level 3 and 4) in England and Wales depends on the level of qualification, the age of the participant and the purpose of studies (first degree or retraining). Programmes for young people (19-24 years-old) are either free of charge or co-funded by the government. Adults 24 and older pay full fees largely funded by income contingent loans (UKCES, 2013).

All providers (public and private) receiving public funding are subject to various quality checks. First of all the programme should lead to a qualification developed by a recognised awarding organisation (UKCES, 2013). An independent non-ministerial body accountable to parliament (Ofqual) ensures the value of qualifications by regulating examinations and linked assessments (UKCES, 2013) while the Office for Standards in Education, Children’s Services and Skills (Ofsted) inspects provision in post-secondary VET. The frequency of inspections depends on the performance of the provider (Ofsted, 2013).

Every training provider signs a contract with a public authority. When the quality of the provision is below the minimum standards the amount of public subsidy is reduced, encouraging good quality providers to expand and limiting provision in institutions with poor performance (Skills Funding Agency, 2011).

Source: Kuczera, M. and S. Field (2013), *A Skills beyond School Review of the United States*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, doi: <http://dx.doi.org/10.1787/9789264202153-en>.

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Chapter 3

Employer engagement

In Egypt, vocational education and training (VET) institutions sometimes work in co-ordination with local employers with the aim of matching programmes to labour market needs. But such arrangements are not systematic. This chapter advances recommendations designed to enhance the engagement of employers, and in turn the responsiveness of the VET system to labour market needs.

Challenge

Different approaches to structures for employer engagement internationally

The central challenge in VET is to ensure that programmes meet 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. 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, 2010). 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.

Evidence suggests employer engagement in Egypt is currently inadequate

In Egypt, there is a clear interest in involving social partners in VET but employers' engagement could still improve substantially. Employers and graduates are often not well-informed about what VET programmes might offer, and this may partially explain the growing unemployment rate of VET graduates even though their numbers are decreasing in the face of increasing labour market demand. Adequate employer engagement could be crucial to address this problem.

As part of the reform programme of the VET sector, a public-private partnership mechanism was developed to support demand driven reforms such as the Enterprises Training Partnerships; a form of partnership which might help to improve the labour market relevance of VET programmes. In principle, such training partnerships were created in those sectors perceived as having the potential for development (SPU-MoHE, 2012:53). In formal terms, the programme seems promising but still very general. The focus of the programme is to develop education and training activities in industries with strong potential and increasing human capital productivity (SPU-MoHE, 2012:53).

The level of employers' co-operation with vocational institutions is insufficient and not evenly distributed. Nearly 80% of Egyptian employers report no active co-operation with vocational and training institutions. For those employers that co-operate with VET, this mainly occurs in the form of offering training for students and, sometimes, it is about training VET staff (SPU-MoHE, 2012:44-154). The level of employer engagement varies greatly across different economic sectors and occupational fields. The

highest reported level can be seen in the industrial sector with 33% of the employers reporting cooperation with VET, but falling to only 5% in the commercial sector. Social services and tourism and hotels have similar levels of co-operation with employers (20%) while the medical sector also experiences a moderate level in terms of the number of employers participating (13.2%) (SPU-MoHE, 2012:44-154).

Firms in Egypt seem to be well-aware of the importance of training and having an adequate skilled workforce. The proportion of firms in Egypt that offer formal training is relatively large for the region (Middle East & North Africa) but size and other firm characteristics seem to have a considerable impact on it. In Egypt, 22% of the firms offered some kind of formal training according to the 2008 version of the World Enterprise Surveys, which is higher than the average for the Middle East and North Africa region. But there are some important differences across sectors. For instance, firms in services are more likely to offer formal training than those in manufacturing; on average, around one-third of large firms (more than 100 employees) offered training but less than 15% of small firms do so; also, those companies more oriented to exports are more likely to offer formal training and those that are more oriented to the domestic market. Finally, those companies in Egypt with at least 10% of foreign participation are almost twice as likely to offer formal training to their employees (Table 3.1).

In manufacturing, one-third of workers in Egypt are unskilled which is higher than the average for countries in the Middle East and North Africa region (25%). This skills mix varies little across sectors and types of enterprise. About half of the firms operating in Egypt identify weaknesses in workforce skills as a major constraint on their development, a proportion that again varies little across sectors (see Table 3.1).

Table 3.1 Workforce training and skills in Egypt, 2008

Subgroup Level	Percentage of firms offering formal training	Percentage of unskilled workers (out of all production workers) (%)*	Percentage of firms identifying an inadequately educated workforce as a major constraint
Middle East & North Africa	10	25	29
Egypt total	22	34	50
Sector			
Manufacturing	20	35	53
Services	26	31	42
Size			
Small (5-19)	13	30	51
Medium (20-99)	20	34	51
Large (100+)	35	38	48
Exporter Type			
Direct exports are 10% or more of sales	35	34	47
Non-exporter	19	34	51
Ownership Type			
Domestic	21	34	50
10% or more foreign ownership	42	30	42

Note: * This indicator is computed using data from manufacturing firms only.

Source: Adapted from The World Bank (2014), *Enterprise Surveys*, www.enterprisesurveys.org, The World Bank, accessed February 2014.

Recommendation

Take action to enhance employer engagement in Egyptian VET: i) to ensure the labour market relevance of VET programmes; and ii) to reinforce those structures and frameworks already in place.

Supporting arguments

Ensure the labour market relevance of VET programmes

The objective of VET is to prepare students for good jobs. Employers' participation and interest in the programme is fundamental to this goal, while remaining sensitive to the aspirations of students and their families in relation to their choices in education and training. It is important to provide students with the tools and information to make informed decisions about their VET choices and potential labour market outcomes within a framework that reflect both individuals' preferences and firms' needs (data and career guidance is the topic of Chapter 6 of this review). Box 3.1 presents some mechanisms designed to balance employers' needs with students' preferences in VET.

Box 3.1 Mechanisms for balancing students preferences and employers needs

Some specific mechanisms can help to balance student preferences and employers' needs, such as:

- Linking programmes and places to employers' willingness to provide workplace learning.
- Assessing existing shortages and future skill needs through consultations with employers and unions and/or through systematic forecasts or assessments.
- Providing effective career guidance that includes good information about labour market prospects.
- Using financial incentives to encourage students to train in specific areas, to boost the amount of workplace learning offered, or to expand off-the job training opportunities to address demand.
- Financial incentives or competition between providers can stimulate a quick response although obtaining new equipment and qualified staff may be expensive and take time.

Source: OECD (2010), *Learning for Jobs*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, doi: <http://dx.doi.org/10.1787/9789264087460-en>

Accreditation of VET programmes needs to be linked to labour market relevance. The accreditation procedure for new VET programmes should be transparent and follow clear pre-established criteria. The procedure should

assess labour market demand for the programme based on data at the appropriate level of disaggregation (e.g. sectorial employment/unemployment rates by geographical unit) and an assessment of employment opportunities and career prospects for graduates (e.g. using interviews with HR managers in relevant companies). The proposal for a new VET programme should also provide strong evidence that it will attract enough students by identifying those geographical areas from which the programme will receive them; it would also be required to describe already existing related VET programmes and their enrolment numbers, as well as specifying how many students might be enrolled in the proposed new VET programme.

For re-accreditation of existing programmes the VET applicant institution could conduct the analysis itself. The analysis of labour market demand for an existing programme might look at employment outcomes of graduates and the relevance of their studies to the jobs held by graduates. It could assess course contents in relation to the current employment situation of graduates, and institutions could collect feedback from companies and organisations that employ their graduates. Crucially, institutions should be expected to provide information on the number of applicants and enrolled students, as well as updated information on related VET programmes. This accreditation and re-accreditation procedure for VET programmes is inspired by the Austrian example (FH Council, 2010).

Reinforce structures to enhance employer engagement

Arrangements for employer engagement might range from advisory boards to decision-making bodies. However, whatever role employers might play their contribution must be meaningful and significant to the system. If they participate in advisory groups, the information provided by employers should truly reflect their workforce skills needs; if they participate in decision-making bodies, these bodies must have a real impact on VET. The connection between employers and VET is fundamental to the success of this system. Box 3.2 presents some examples from Switzerland and Denmark.

Box 3.2 Structures to engage stakeholders in post-secondary VET

The Swiss partnership arrangements between the Swiss 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, 2010).

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 post-secondary level, set up by the Minister for Education in 2008. It advises on the development of post-secondary 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 Switzerland, for example, professional education and training (PET) is mainly steered at federal level. The national body responsible, (The Federal Office for Professional Education and Technology, OPET) carefully manages a partnership with labour market organisations and the relationship with training providers, engages in constant dialogue with stakeholders and provides strategic leadership. Its latest effort in facilitating peer learning among professional examiners and managers as well as among professional colleges are good examples of initiating systemic level improvement without excessive state intervention. Cantons, while preserving their autonomy, effectively complement OPET's work, for example, by carrying out regular inspections of PET providers.

In Austria, social partners have high levels of engagement in the post-secondary VET system, notably through the role of the Economic Chamber (*Wirtschaftskammer Österreich, WKO*) and Chamber of Labour (*Arbeiterkammer, AK*). According to some authors (Trampusch, 2009), this level of participation is strong,¹ even compared to other countries where social partners are also traditionally strongly engaged. In the Austrian case, social partners are active members of many commissions and co-ordination councils and have substantial influence on the VET system. Some of this participation is very direct to the extent that some social partners have their own training institutions. For example, the education and training programmes of the Economic Promotion Institute

(*Wirtschaftsförderungsinstitut, WIFI*, employers' side) of the Economic Chambers serve apprentices, skilled workers and executives. Course topics range from management and corporate leadership, personal development and languages, to training for specific sectors. The *WIFI* also acts as a provider of *Fachhochschulen* programmes, part-time industrial master programmes, courses preparing for other professional exams, and professional in-service training for many trades. Another example of social partners' direct participation in Austria is The Vocational Training Institute (*Berufsförderungsinstitut, bfi*) which is the training institution of the Chambers of Labour and of the Austrian Trade Union Federation. Its programmes include personal development and management, short courses, office and business administration, languages, courses for social and healthcare occupations, preparatory courses for examinations and educational support for unemployed people and those threatened by unemployment (Musset et al., 2013).

Notes

1. This is because all firms in the Austrian Federal Economic Chamber's domain are legally obliged to be members; and similarly for the Chamber of Labour in respect of employees (Musset et al., 2013).

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Chapter 4

Developing workplace learning

In the strongest vocational education and training (VET) systems, workplace learning plays a central role, while in Egypt, it seems to be relatively absent in many post-secondary VET programmes. Workplace learning is a powerful tool for developing both hard and soft skills, for transitioning students into employment, engaging employers and linking the mix of training provision to employers' needs. This chapter advances recommendations to develop workplace learning as a systematic, credit-bearing, quality assured, and mandatory element in vocational programmes.

Challenge

Developing 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 learning 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 learning opportunities for young people can degenerate into a masked form of cheap labour, or involve very narrow and firm-specific skills (OECD, 2010).

In Egypt, workplace learning seems to be relatively absent from many post-secondary VET programmes which is unfortunate given its many benefits. Other countries have effectively transitioned their VET systems to ones involving mandatory workplace learning or giving it more presence in the curricula; but there is a large variation across countries in how much time is devoted to it. In countries such as Australia or Austria, between 26 and 50% of vocational students are in a programme in which 75% of its length consists of work experience. In countries such as the United States or Finland, at least 76% of vocational students are in a programme in which less than 25% of its length consists of work experience (Table 4.1). If Egypt wants to address this issue more effectively it would be very important to design the workplace learning component of VET in close co-operation with local employers. At the same time, Egypt should note that a mandatory arrangement is sometimes initially difficult, as employers and vocational training institutions adjust. Workplace learning needs to be adequately aligned with VET programmes. For example, courses designed primarily for part-time students who are in work often make less formal use of workplace learning or simply assume that there is a strong link between the courses and the current job of the student (OECD, 2010).

Table 4.1 Time spent by vocational students in work experience

	Students in work placement with employers, by the work experience duration			
	75% or more of programme length in work experience	Between 50% and 75% of programme length in work experience	Between 25% and 50% of programme length in work experience	Less than 25% of programme length in work experience
Australia/1	••	-	-	-
Austria	••	-	-	•••
Czech Republic	-	-	-	••••
Denmark	-	••••	-	-
Finland	•	-	-	••••
France	•	-	-	•••
Germany/2	-	•••	-	•
Netherlands	-	••	•••	-
Norway/2	-	••••	-	-
Sweden/2	-	-	-	•••
Switzerland/1	•	••••	-	-
United States	-	-	-	••••

Notes: Estimated percentage of vocational students: - 0%; • 1-25%; •• 26-50%; ••• 51-75%; •••• 76-100%.

1. In Australia and Switzerland the amount of workplace learning depends on the institution and programme.

2. Some data are missing, not all programmes are represented.

Source: Kuczera, M. (2010), *The OECD International Survey of VET Systems*, OECD Publishing, Paris.

Recommendation

Develop workplace learning as a systematic, credit-bearing, quality assured and mandatory element in vocational programmes and convince employers about the benefits that can be obtained.

Supporting arguments

High quality workplace learning can be integrated into post-secondary programmes

Outside formal apprenticeships, where workplace learning is the central element, post-secondary VET programmes make variable, but sometimes extensive use of workplace learning 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, a practice that also helps to facilitate labour market insertion (Field, Kis and Kuczera, 2012).

In Denmark, work placement has been mandatory in all programmes since August 2009, to make sure that all programmes were clearly professionally oriented and of relevance for the employers and thus the students. All “academy” post-secondary two-year programmes include three months of workplace learning and all “professional bachelors” programmes, normally three to four years, include at least six months workplace learning (Danish Agency for Higher Education and Educational Support, 2012).

In Sweden, all two-year higher vocational programmes have a considerable amount of work placement (at least 25 % of total programme hours), usually in several blocks. This mandatory work-based component of all programmes allows good co-operation between education providers and employers. They are designed so that students apply concepts learned in the study programme at the workplace, with specific attention given to the links between theory and practice. The education provider is responsible for quality assurance of the selected workplace and many education providers choose to appoint a placement co-ordinator to facilitate the process (Swedish Ministry of Education, 2013).

Box 4.1 Mandatory workplace learning in school-based VET programmes

Spain

In Spain all post-secondary (as well as upper secondary) VET programmes include a compulsory module of workplace learning. Only students who have at least one year full-time relevant work experience may be exempted. The work placement lasts between 10 and 20 weeks, depending on the qualification targeted by the programme. The objectives of work placements include complementing school-based learning to facilitate transition into the labour market, learning about work environments, promoting professional identity and maturity, and evaluating learning outcomes that cannot be assessed outside a work context. Generally, students participate in workplace learning after successful completion of the other modules included in the programme. But if the type of training or the availability of places in companies requires it, work placement may be completed at another point of the programme. During the work placement students receive guidance and support from a teacher at the VET institution they attend and from the person who supervises their work at the company.

Source: Spanish Ministry of Education and Science (2007), *Real Decreto 1538/2006, Boletín Oficial del Estado*; Spanish Ministry of Education, Culture and Sport (2011), *El portal de la formación profesional*, www.todofp.es, accessed December 2011.

Box 4.1 Mandatory workplace learning in school-based VET programmes (*continued*)

Denmark

Participation in workplace learning has been mandatory in all post-secondary VET programmes since 2009. The aim of making it mandatory was to ensure that programmes are professionally oriented, and relevant to employers and students. In the majority of occupations vocational provision is limited to the availability of workplace learning opportunities – institutions cannot increase student intake if work placements are not available for additional students. In a small number of occupations (e.g. teachers, nurses) provision is regulated by government defined quotas. The duration of the work placement is three months in short-cycle (academy) programmes and six months in medium-cycle (professional bachelor) programmes and it can take place at one or several companies. VET institutions are responsible for ensuring that the work placement is adapted to the content of the programme. Although not required by law, many institutions prepare an agreement with the company that offers workplace learning, setting out the content of the work placement. At the end of their placement students are individually assessed to check that they have acquired the targeted competences.

Source: 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://fivu.dk/en/publications/2012/oecd-review-skills-beyond-school-2013-national-background-report-for-denmark>

Convince employers about the benefits of their participation in workplace learning and enhance quality assurance mechanisms for this practice

Many institutions tend to operate in silos, and education and training institutions are no exception. Reaching out to employers means the breaking out of these silos. It also means overcoming a natural resistance on the part of classroom teachers to the idea that students can learn much in the workplace that they cannot learn so readily in the classroom. So institutions need strong incentives to establish the partnerships with employers that facilitate an effective workplace learning element in programmes. Employers also need incentives. Sometimes employers believe (often wrongly) that offering work placements is an unnecessary cost, that they can reasonably avoid, while still benefiting by recruiting from the graduates of a vocational programme.

Box 4.2 Quality assurance mechanisms for workplace learning in Denmark

Quality assurance mechanisms for workplace in Denmark have three key features:

- The quality assurance process is built into the work placement arrangements: these are a decisive factor for the accreditation of new programmes by the Danish Evaluation Institute.
- Attention is given to making these placements as useful as possible for both VET programmes and employers and the analysis of those links forms part of the accreditation process by the Danish Evaluation Institute.
- The work placement arrangements are designed to be closely linked to learning outcomes. Subsequently to their placement, students report back to their institutions and they are assessed to see if they have met their learning objectives. To ensure this, each student has a teacher or a supervisor for guidance.

Source: Field, S., et al. (2012), *A Skills beyond School Review of Denmark*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris,
doi: <http://dx.doi.org/10.1787/9789264173668-en>

Against this background, making work placements mandatory can operate as a game-changer. It means that programmes will only be funded when training institutions develop and maintain the active partnerships that support work placements. Under these conditions training providers will see employer partnerships as central to their mission, while employers will see that, unless they are willing to offer work placements, the programme from which they draw their recruits may close or contract, and government funding shift to another sector, or another region. Many currently reluctant employers will choose to offer work placements under these conditions, assuming that they value the training programmes. Potentially it also means that some programmes which are of little interest to employers may need to consider reducing training places, or even close. This gives employers a desirable influence over the mix of training provision, allied with the principle that the greatest influence goes to those employers that are prepared to contribute most, by way of the offer of work placements.

One of the big challenges in extending workplace training as part of vocational programmes is persuading employers of the benefits. There are two main benefits to the employer of offering such work placements – one is the *production benefit* in that trainees undertake productive work. The

second is the *recruitment benefit* in that training enterprises can identify the most useful and skilled trainees during a work placement and offer them jobs, saving the employer the very substantial costs of a recruitment exercise which typically is in any case usually less effective in terms of selecting good recruits than the direct evidence of observing the potential recruit while in training (see OECD, 2010 for a more detailed discussion). Sometimes these benefits, particularly the recruitment benefit, are not well-recognised or understood by employers, so some work with employers may be necessary so that they can see the value of offering work placements.

Work placements need to have some level of quality assurance to avoid them degenerating into a form of cheap or free unskilled labour that serves no training purpose. Given the need to encourage and support workplace training, quality control may need to take the form of supportive measures for employers, rather than a bureaucratic obstacle to firms wishing to undertake workplace training. The *QualiCarte* project in Switzerland provides an example of a tool that supports employers in improving their training (Box 4.3). Although this is applied in the context of apprenticeship, the same principle, of light touch supportive assistance that would help employers get the most out of work placements, as well as supporting the interests of students, would be applicable in Egypt.

Box 4.3 The QualiCarte Project in Switzerland

Under the QualiCarte Project in Switzerland, host companies are responsible for checking the progress of students. Developed with the social partners, the *QualiCarte* provides a checklist of 28 quality criteria describing key aspects of workplace training (including the engagement of the company, particular aspects of the initial phase of the training and the subsequent training process). These criteria are used by companies for self-assessment. Local (cantonal) authorities control the quality of workplace training by issuing licences, which host companies must obtain in order to provide workplace training to VET students. To acquire a license, companies must meet technical and personal criteria, and demonstrate that their training programme complies with quality standards and the content of training matches the needs of the occupation.

Source: OPET (Federal Office for Professional Education and Technology) (2008), *Bericht der Arbeitsgruppe Masterplan zur interkantonalen Finanzierung der höheren Berufsbildung*, OPET, Bern.

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Chapter 5

Improving literacy and numeracy skills

Issues to do with basic skills are very challenging across the whole spectrum of educational options and vocational education and training (VET) is not an exception. It is clear that many students entering the VET system in Egypt have weak numeracy and literacy skills – and they need targeted help. This support should be seen as a priority in the whole educational system because, as jobs become more technical, basic literacy and numerical skills are becoming even more crucial to make sure that students can get the most of their choices in education and training. This chapter advances recommendations to systematically address these challenges and target remedial action.

Challenge

Literacy and numeracy are of increasing importance

In modern economies an increasing number of jobs require sound generic skills. A study from the United States (Autor, Levy, and Murnane, 2003) suggests that technological change (in particular computerisation) has made problem solving and complex communication skills much more important in the labour market. Although skills requirements inevitably vary among industrial sectors, virtually all workers will need to acquire new skills during their career. In sectors facing rapid technological change, the ability to learn is crucial and the generic skills which underpin this ability are highly valued by employers (Smits, 2007; Ghost, 2002). Labour markets change rapidly and often unpredictably, so skills like literacy, that assist the acquisition of new skills are particularly valuable in the long run (Kézdi, 2006). In low-technology industries and at lower skill levels generic competencies may be less valued by employers, but workers need to be able to switch jobs, since they are precisely the ones at risk of job loss due to diminishing job opportunities (Smits, 2007). Good literacy and numeracy skills are necessary to the development of problem-solving and complex communication skills (Levy and Murnane, 2004). More generally, learning – both in initial VET and in lifelong learning – is difficult without strong basic skills. In a study of workplace literacy requirements in Central and Eastern Europe, Köllő (2006) argues that most marketable competences are developed through basic skills closely tied to literacy. While these studies were conducted in economies more developed than that of Egypt, the same principles will undoubtedly apply there.

In OECD countries, many students following vocational tracks at upper secondary level continue into tertiary education – either a vocational programme which effectively continues their upper secondary studies, or a sideways move into something different. Thus, for example one-quarter of Dutch upper secondary VET students continue into tertiary education, and around three-quarters of Korean upper secondary VET students do so (OECD, 2010a). This trend has been accelerating with the global expansion of tertiary education. The implication is that the aspiration of VET students to enter tertiary education is quite consistent with the experience of OECD countries. It also implies in Egypt as elsewhere that vocational programmes need to prepare students not only for direct labour market entry, but also for a range of further educational and training programmes including tertiary education. This implies sufficient emphasis on core literacy and numeracy skills to underpin further learning. Basic skills provide the base for fruitful learning as well as being directly applicable in the labour market. Advancing

technology means that numeracy and literacy are of increasing importance in the labour market and, in many countries, weaknesses in these fields are common among those in vocational programmes. Such problems (often unrecognised) may increase the risk of drop-out, and reduce the prospect of further career development and lifelong learning. Vocational programmes need to give sufficient weight to these skills, and students may often need to be assessed at the point of entry to vocational programmes so as to ensure a basic minimum of skills and identify those in need of targeted support.

Basic skills in Egypt are weak

In Egypt, many people entering VET have weak numeracy and literacy skills – and need targeted help. This is a challenge that Egypt shares with many other countries and international experience might help, for example, when trying to prevent people leaving education before completing compulsory education (Box 5.1). During the visit to Egypt, the OECD team observed that authorities at all levels are well-aware of this challenge. In some cases, remedial courses are implemented; in others, teachers dedicate individual assistance to those in need of extra help. But there is no single co-ordinated action plan to deal with this challenge and disadvantaged students do not seem to receive coherent and systematic help most of the time.

Box 5.1 The importance of strong and inclusive basic education

The age of 15 is a key watershed just before the end of full-time compulsory education. In the majority of OECD countries, the age of compulsory education is 16 but there are some exceptions such as Belgium and Poland where education has been made compulsory up to the age of 18 with the option of studying part-time between the ages of 15/16 and 18.

In most OECD countries, the number of people who leave school at the minimum leaving age is falling, but in Germany, Japan, Mexico, Poland, Turkey and the United States, their numbers continue to rise (OECD, 2009). However, young people who leave school at the minimum leaving age without a qualification are likely to spend a long time out of work during their working life. In fact, in most countries over half of low-qualified unemployed 25-34 year-olds are in long-term unemployment (OECD, 2009).

In Egypt, employers' assessment of post-secondary VET graduates basic skills indicates that this is an important concern. Basic skills of VET graduates were evaluated as “strong” by only 38% of employers; 58% of employers assessed basic skills as “medium” and the remaining 4.3% of employers assessed graduates proficiency in basic skills as “weak”. In

contrast, post-secondary VET graduates technical skills were assessed as “strong” by almost 51% of employers; as “medium” in almost 45% of the cases; and as “weak” in the remaining 4.4% (SPU-MoHE, 2012:156). There is a different distribution across specialisations, one with the highest level of satisfaction among employers (for both technical and basic skills) recorded in the medical sector (Table 5.1). In no specialty in Egypt were graduates’ basic skills assessed as “strong” by employers according to the survey presented in the background report (SPU-MoHE, 2012).

Table 5.1 Employers’ evaluation of post-secondary VET graduates’ skills by specialty

Specialty	Skills	Post-secondary VET Graduates Skills Assessment by Employers (percentages)		
		<i>Strong</i>	<i>Medium</i>	<i>Weak</i>
Industrial	Basic	35.9	58.8	5.4
	Technical	52.2	42.2	5.5
Medical	Basic	43.6	52.5	3.9
	Technical	55.6	41.7	2.7
Tourism and Hotel Services	Basic	36.7	59.8	3.5
	Technical	44.3	51.3	4.4
Social Services	Basic	36.6	63.4	0
	Technical	53.7	46.3	0
Commercial	Basic	33.3	60.7	6
	Technical	37.3	57.7	5
TOTAL	Basic	37.9	57.8	4.3
	Technical	50.9	44.7	4.4

Source: Adapted from Strategic Planning Unit-Ministry of Higher Education of Egypt (SPU-MoHE) (2012), *Post-secondary Vocational Education and Training in Egypt. Country Background Report*.

Recommendation

Identify weaknesses and offered targeted support to improve numeracy and literacy to encourage course completion, strengthen workforce skills, and support transition from VET to academic education.

Supporting arguments

Screen students for weaknesses, and target help to those who need it most

For some people, very weak basic skills are a serious problem. Two factors emerging from international evidence argue for systematic screening of literacy and numeracy difficulties among VET students: many people are unaware of their problems, and some of those who are aware of them may be reluctant to admit them. A number of studies show that many people cannot adequately assess their own literacy and numeracy weaknesses. Data from various British cohort studies show that many people with weak basic skills do not recognise that they have difficulties, particularly in respect of numeracy (Bynner and Parsons, 2006). Data from a literacy survey in Canada found that the average correlation between self-assessed scores and test scores (both on a scale of one to five) was only 0.42 (Finnie and Meng, 2005). This study also suggests that individuals assess their literacy skills relative to a sort of “local norm”, e.g. school mates, friends or colleagues, so they may be entirely unaware of literacy problems if those in their environment have similar levels of literacy. The same study also shows that learning disadvantages (e.g. having experienced learning difficulties as a child) have a greater effect on individuals’ perceptions of their skills than on their actual literacy levels. In other words, people with learning disadvantages are more likely to report difficulties, while those who did not are more likely to overestimate their skills.

Greater awareness of literacy and numeracy problems encourages many people to seek help. An analysis from British cohort studies (Bynner and Parsons, 2006) found that once people were aware of weaknesses in their basic skills, they tended to be interested in improving these. This is in line with an earlier study of Further Education (FE) students (Basic Skills Agency, 1997), which found that a major barrier to taking up basic skills support was that many people did not know that basic skills were essential to the successful completion of their course. Conversely some of those who know they have literacy and numeracy problems are reluctant to admit it. A study of FE colleges in the United Kingdom (Basic Skills Agency, 1997) found that there was a stigma attached to poor basic skills, which then became a deterrent to taking up basic skills support.

Although literacy and numeracy deficiencies among VET students are rooted in weaknesses in basic education, the evidence shows that later interventions to tackle these problems can improve learning outcomes in VET programmes, with one study showing that such interventions can have a dramatic impact (see Box 5.2).

Box 5.2 Basic skills support successful completion

A study from the United Kingdom (Basic Skills Agency, 1997) explored the relationship between basic skills support and drop-out, retention and completion rates in further education (FE) colleges. It drew on data from 19 FE colleges on withdrawal, retention, completion and achievement, as well as demographic and student characteristics and basic skills provision within each college.

In the study over 15 000 students were assessed and over 4 400 were identified as in need of basic skills support, 90% of them in a vocational course. The study followed up these students – less than half of them received literacy and numeracy support, while the majority did not get any additional support with basic skills.

Reasons for not taking up support. Some students were not told the results of the basic skills assessment or did not understand what the results meant. Others could not take up support because of their timetable. In fact take-up was higher where support was offered as part of the course rather than as an optional extra. But the most important barrier was attitude – young adults in particular were reluctant to take up support because of the stigma attached to poor basic skills. Also many were not aware of the need to improve their basic skills to get through their course.

Forms of basic skills support. Basic skills support was available through workshops offering drop-in and timetables support for individuals and groups. Some colleges developed partnership-teaching, in which basic skills specialists and course tutors worked together to offer support as part of a course. This approach had two advantages: it allowed to support those who were reluctant to attend targeted workshops, and it related basic skills development to the student's course.

Did basic skills support make a difference? Those who received basic skills support were three times less likely to drop out. They also had better completion (those on a two-year course) and qualification rates (those on a one-year course) than those who did not receive support.

	Drop-out	Completed the year / achieved a qualification		
	Withdrawal rate	Completed/ achieved	Not completed	Not assessed/results not known
Support	10%	74.7%	15.5%	9.8%
No support	30%	54.0%	33.3%	12.7%

Source: Basic Skills Agency (1997), Staying the Course. The Relationship between Basic Skills Support, Drop Out, Retention and Achievement in Further Education Colleges, Basic Skills Agency, London.

Systematic screening of literacy and numeracy difficulties helps identify people in need of support. At the same time it is important to handle this test carefully, so that it is not seen as a mere instrument of selection and a barrier to entry. Egypt might consider developing systematic ways of providing “basic skills support” to all VET students in need. A study of basic skills support in FE colleges in the United Kingdom (Basic Skills Agency, 1997) argues that support measures should be designed in a way that encourages take up: support should be easily available, adapted to the needs of different course groups and individual students, they should suit the needs of students with low motivation and limited independent learning skills, and marketed in a positive way to avoid them being stigmatised.

Stronger basic skills support course completion, participation in further education, and improve labour market outcomes

It is sometimes suggested that graduates of initial vocational education are unable to follow academic tertiary studies because they lack general academic skills (Moodie, 2008; Fazekas and Field, 2013). Where student transfer policies are strong and evaluated as successful general subjects play a crucial role in supporting the transition from vocational post-secondary to tertiary education (Moodie, 2008; Fazekas and Field 2013). Stronger numeracy and literacy study in vocational programmes could not only improve the access of graduates to academic tertiary education, but also contribute to a stronger credit transfer system (Fazekas and Field, 2013).

Stronger numeracy and literacy among VET graduates could also contribute to a higher participation rate in continuing education, as even within the group of tertiary graduates those with stronger document reading skills are more likely to participate in continuing education (Notter et al., 2006; Fazekas and Field, 2013).

Effective data collection mechanisms and information are essential to detect those students in need of support to improve their basic skills. As shown by the example of the Netherlands in Box 5.3 (below) improving support for those with weak basic skills might benefit enormously from a system that facilitates information across institutions and teachers. When this information is comprehensive it also might allow policy development to tackle and anticipate the needs of certain student groups.

Box 5.3 The use of data for school and student improvement in the Netherlands

An important source for research and monitoring is the Personal Identification Number (PGN), which has been issued to every child in the country over the age of three and a half. Commonly referred to as the education number, it is the same as the tax and social insurance number. Schools pass on the PGN together with certain other data on pupils to other schools, as the child progresses through education. These data are increasingly used for purposes such as monitoring pupils' school careers, school attendance or dropout.

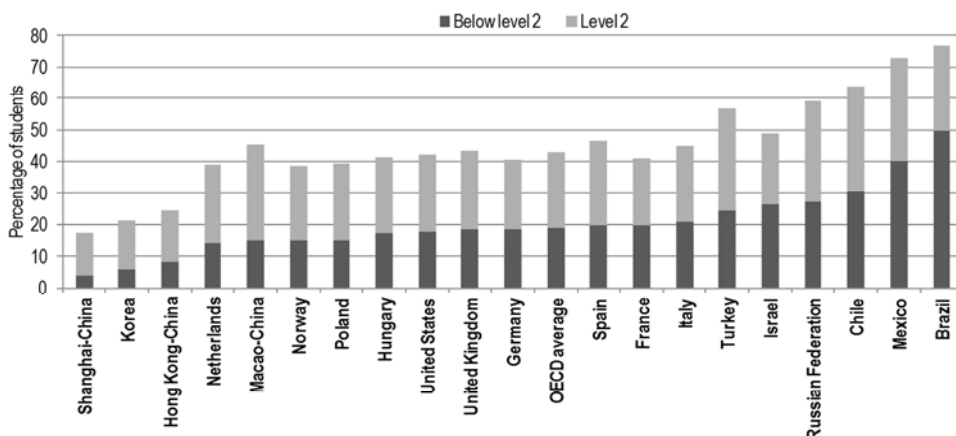
The PGN is very useful in the action plan against dropout, because it offers complete and reliable figures on rates nationally, regionally and at municipal and district levels. All schools in secondary education are expected to register absenteeism, disengagement and dropout, and a monthly report is available to municipalities and schools to allow them to give priority to those at risk. Also, these data are linked to socio-economic data (including demographics, native Dutch citizens, ethnic minorities, unemployment, people entitled to benefits, etc.) by region, city and district, which provides a wealth of information for implementing and adjusting policy. This monitoring of results enables the authorities to assess what works and what doesn't, and therefore to disseminate good practices.

Source: Akkerman, Y., et al. (2011), *Overcoming School Failure: Policies that Work, Background Report for the Netherlands*, Ministry of Education, Culture and Science, Den Haag. www.oecd.org/edu/equity

Much research suggests that improving general skills such as literacy and numeracy decreases the probability of unemployment and increases earnings (Thorn, 2009; Green and Riddell, 2001; OECD/Statistics Canada, 2000). This argues for stronger general skills training to increase the adaptability of the labour force (Fazekas and Field, 2013). Strong literacy and numeracy skills are also associated with entrepreneurship. For the World Bank study *Jobs* success in business activities might also “depend on having core skills such as numeracy and literacy” (World Bank, 2012:117). The same study also confirms that the risk of living in poverty declines with the acquisition of numeracy and literacy skills (World Bank, 2012:176).

Figure 5.1 A significant number of students do not master basic skills

15 year old students attainment at Level 2 or below Level 2 of the PISA reading scale (2009)



Source: OECD (2010b), *PISA 2009 Results: Overcoming Social Background: Equity in Learning Opportunities and Outcomes (Volume II)*, PISA, OECD Publishing, Paris, doi: <http://dx.doi.org/10.1787/9789264091504-en>

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Chapter 6

Better data and stronger guidance for students

Currently, there are insufficient data in Egypt to support the development of strong career guidance services for students across different institutions. Stronger data and information might help career guidance services to collaborate more effectively in matching vocational education and training (VET) graduates labour market demand and supply; support the vocational choices of students and avoid dropout. This chapter sets out recommendations to address this challenge and develop better data systems.

Challenge

Lack of sufficient data

One of the defining characteristics of vocational education and training is that it aims to provide learners with useful occupational skills. But sometimes little is known about what happens to students once they complete their training, i.e. whether the learning leads to relevant jobs. Although obtaining such information is hard, as graduating students are mobile and hard to trace, labour market outcomes are a fundamental measure of the extent to which vocational programmes are meeting labour market needs. Such data help VET institutions to adjust provision to labour market needs, help public authorities to support the most relevant programmes and institutions, and help students to choose vocational programmes, target occupations and VET institutions. 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 for analysis and policy research.

In Egypt, there are not enough data to evaluate whether different vocational programmes are yielding good labour market outcomes. One key bit of data is whether graduates of particular programmes and institutions get good jobs that use the skills they have learnt. This shows whether a particular programme is working or not working for students, employers and policy makers. The OECD team visiting Egypt for this report saw how those responsible for vocational education and training, at all levels, were conscious of this necessity. The background report submitted for this review is a clear example of how good data and information can assist a country in the strengthening of its VET sector.

Inadequate career guidance

Across 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. Some students become disengaged from their vocational training programme because they find they have made a wrong career choice, or because they are not receiving sufficient support. Wrong choices can lead to loss of motivation, self-confidence and resources, and ultimately, dropout.¹ While growth in post-secondary programmes is expanding opportunities, it is also increasing the complexity and difficulty of choices that young people need to make. Providing students with

information and advice on different options can help students to decide on whether or not to enrol in post-secondary programmes: thanks to good career guidance, students' enrolment decisions and choices of subjects can reflect their needs, expectations and aspirations.

In Egypt, there is inadequate career guidance for students in the post-secondary VET sector and good data should be one of the pillars to build these services. Without adequate guidance students do not have enough information to guide their educational choices and the gap between labour market needs and the corresponding supply of VET graduates might increase in certain specialisations.

Recommendation

Improve data and information available to support policy and operational decisions, and enhance guidance to support students' educational choices.

Supporting arguments

Obtain better data through a destinations survey

One way of finding out what happens to VET graduates is simply to ask them. A graduate destinations survey, administered to those leaving vocational programmes around one year after completion, establishes whether graduates are working and in what occupation, whether they are pursuing further study, and if they are unemployed or otherwise not in the labour market. This allows the success or failure of different vocational programmes and sometimes VET institutions to be assessed. A survey can also ask graduates about what they thought of their vocational programme – whether it was well taught and provided them with relevant skills for example. In this way such surveys also become a tool to monitor quality in vocational programmes. There is much international experience with leavers' surveys, typically in higher education but also increasingly at secondary school level (see Box 6.1).

Box 6.1 Destinations surveys

In **Australia** the Student Outcomes Survey is conducted annually among students who completed some vocational training. Conducted by the National Centre for Vocational Education and Research since 1997, it is funded by the Australian government and provides information on the employment and further study outcomes, the relevance and benefits of training, and student satisfaction. The information collected supports the administration, planning and evaluation of the VET system (DEEWR, 2010).

In **Ireland**, the School Leavers Survey is based on a national sample of school leavers, contacted 12 to 18 months after leaving school. Face-to-face interviews, used in this survey since its beginning in 1980, have become more difficult as a result of declining response rates and high costs (McCoy, Kelly, and Watson, 2007). Therefore the 2007 School Leavers Survey used a mix of approaches. The selected individuals were asked to complete an online questionnaire and could also ask for a paper copy. Participants were offered an incentive to complete the questionnaire, with their names being entered in a draw for prizes. Those who were particularly difficult to reach (e.g. early school leavers) were followed up by telephone initially and then face-to-face (personal communication from the Irish Economic and Social Research Institute, 11 April 2008).

The development of VET policy not just depends on good data and information but also on the analytic and research capacity to make use of data to 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).

Use data to enhance guidance for students

Reliable information and advice on different options can help students to decide on whether or not to enrol in VET programmes. With good career guidance, students' enrolment decisions and choices of subjects can reflect their needs, expectations and abilities as well as help them to complete their studies successfully. Some countries have made substantial efforts to provide students with comprehensive information about labour market conditions in order to inform career choices. Students and their families need as much information as possible about the links between educational

options, labour market outcomes and career prospects in a way that can make options truly and easily comparable. In Mexico, career guidance information is made available using portable memory devices and, in some states of the United States, there is detailed and complementary information for students about educational options and labour market conditions (see Box 6.2). Career guidance services and data should develop within the framework of a coherent career guidance profession, independent from psychological counselling and with close connection with relevant authorities and shareholders – such as ministries of labour or industry associations (OECD, 2010).

Box 6.2 Data and VET programmes

The Mexican Ministry for Education has developed “Career guidance in my memory” (*Orientación vocacional en mi memoria*), a USB stick distributed to students and also available through the Internet. It includes tools that help students to identify their strengths and interests, information on institutions offering particular programmes, and data on labour market outcomes. Thanks to data on outcomes collected by the Mexican Labour Market Observatory (*Observatorio Laboral Mexicano*), students can compare different career options, exploring whether graduates work in an occupation related to their training, how much they earn and their average working hours. Although currently it does not cover all occupations and levels, it is an interesting example of a user-friendly, interactive guidance tool, which takes advantage of new technology (SEMS, 2010).

The Occupational Outlook Handbook (OOH), published by the U.S. Department of Labor, compiles information on education and training requirements, growth projections, working conditions, and earnings for the over 250 occupations that comprise nine out of ten jobs in the US economy (www.bls.gov/OCO). The *Career Guide to Industries* (CGI) complements the OOH by providing information on earnings, expected job prospects, working conditions, and education and training requirements for 40 industries that generate two out of every three jobs in the US economy (www.bls.gov/oco/cg/). Career Voyages, a joint project of the departments of education and labor, aims to provide information on in-demand occupations and related education and training requirements. It provides resources and career decision-making guides for students, parents, career changers and career advisers, and gives lists of apprenticeships and tertiary programmes linked to jobs in high growth industries (www.careervoyages.gov/).

Denmark offers a good example of a comprehensive career guidance system, where relevant social partners are involved and where the system is supported by specific legislation² (Box 6.3).

Box 6.3 Career guidance in Denmark

In Denmark there are measures that effectively combine widening access to different academic and vocational options with support for students. In this country, education institutions must, by law, refer students that wish to drop out or change programmes to regional guidance centres (Danish Agency for Higher Education and Educational Support, 2012). Very importantly, municipalities are legally obliged to make contact with, and offer guidance to, young people that are not working and not enrolled in education at least twice a year up to the age of 19 but some municipalities extend the system beyond this age (Field et al. 2012).

Career guidance in this country is widely available for young people, through a range of services, many of them within the education system. Denmark is unusual among OECD countries in having specific legislation on educational and vocational guidance (OECD, 2002). The Ministry of Science, Innovation and Higher Education is responsible for the seven regional guidance centres and other services including a national guidance portal and a call centre (Field et al., 2012).

In Denmark, career guidance aims primarily to assist the transition of young people between secondary and post-secondary education, offering information both about available programmes and the careers associated with them. In co-operation with the different stakeholders – in particular social partners and local municipalities - different workshops, seminars, career fairs, individual and group guidance sessions are also developed and organised; also, the centres provide their services in different settings (e.g. schools, public libraries) (Danish Agency for Higher Education and Educational Support, 2012).

Finally, the quality of guidance *in Denmark* is underpinned by linkages between guidance services and all relevant stakeholders, making it relevant for both education institutions and the labour market. A decentralised and flexible structure *in Denmark* produces a diversity of practice and exchange of experiences, knowledge and best practice, with strong local ownership by the several stakeholders involved – including youth education and higher education institutions, and the social partners in industry and commerce (Danish Agency for Higher Education and Educational Support, 2012).

Source: 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://fivu.dk/en/publications/2012/oecd-review-skills-beyond-school-2013-national-background-report-for-denmark>; Field, S., et al. (2012), *A Skills beyond School Review of Denmark*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, doi: <http://dx.doi.org/10.1787/9789264173668-en>

Notes

1. This risk is particularly high for students from more disadvantaged backgrounds that cannot rely on their parents for advice (OECD, 2010).
2. An act on vocational guidance was passed in the mid-1950s. It was replaced in 1981 by an act on educational and vocational guidance, which was revised in 1996. From 2004 a new act on educational and vocational guidance was implemented.

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OECD (2010), *Learning for Jobs*, OECD Reviews of Vocational Education and Training, OECD Publishing.

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