

QUALITY ASSURANCE IN VOCATIONAL EDUCATION AND TRAINING IN ISRAEL

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CONTENTS

1.	INTRODUCTION	4
1.1	National context	4
1.2	Statistics	4
1.3	The VET system	5
2.	QUALITY ASSURANCE IN VOCATIONAL EDUCATION AND TRAINING	7
2.1	Overview	7
2.2	General information on quality assurance at VET system level	8
2.3	Quality assurance related to key VET areas	8
3.	STRENGTHS, DEVELOPMENTS, NEEDS	10
4.	GOOD PRACTICE EXAMPLES	10
	LIST OF ACRONYMS	11

1. INTRODUCTION

1.1 National context

Israel is an OECD high-income country with a population of almost 8.8 million inhabitants. The society includes different communities and religions.

In 2018, Israel's economy continued to register remarkable macroeconomic and fiscal performance: gross domestic product (GDP) growth stood at 3.3%. The economy is dominated by services, which contributed 69.4% of GDP in 2017. Services include a variety of sectors such as the hospitality, food, administration and support sectors. Industry, which focuses mostly on manufacturing products with high added value, contributed 19.6% of GDP in 2017. The major industrial sectors include high-tech metal products, electronics and biomedical equipment, agricultural products, processed foods, chemicals and transport equipment. The high-tech sector (combining the industrial sectors of electronics, pharmaceuticals and aircraft with software and research and development services) is performing very well. At the same time, the primarily non-high-tech Israeli economy is characterised by relatively low productivity, a low level of skills and low salaries.

Israel has unusual fertility patterns with the highest average number of children per woman (3.1) in the OECD (2015). Combined with high life expectancy rates and low infant mortality rates, these fertility patterns lead to an expectation of population growth.

1.2 Statistics

TABLE 1. POPULATION

	Size of population	Size of youth population (% 15–24)
2010	7,552,000	25
2014	8,135,000	24.8
2018	8,798,000	25

Source: Central Bureau of Statistics

TABLE 2. EMPLOYMENT

	Employment rate (15+)	Employment rate of young people (15–24)
2010	53.5	27
2014	60.4	44.5
2018	61.4	43.7

Source: Central Bureau of Statistics

TABLE 3. EDUCATIONAL ATTAINMENT OF ACTIVE POPULATION (% AGED 15+)

	Low	Medium	High
2010	12.1	36.0	51.9
2014	10	35.2	54.7
2018	9.5	34.3	56.3

Note: Low – International Standard Classification of Education (ISCED) 0–2; Medium – ISCED 3–4; High – ISCED 5–8

Source: Central Bureau of Statistics

TABLE 4. PARTICIPATION IN VOCATIONAL EDUCATION AND TRAINING (VET) (STUDENTS IN VOCATIONAL PROGRAMMES AS A PERCENTAGE OF TOTAL UPPER SECONDARY STUDENTS)

	Upper-secondary (ISCED 3) VET	Post upper-secondary (ISCED 4) VET
2010	38.2	N/A
2014	40.8	N/A
2018	40.8	N/A

Source: Central Bureau of Statistics

TABLE 5. SPENDING ON GENERAL EDUCATION AND VET

	Spending on ISCED 3–4 all education (including VET) as % of total public expenditure	Spending on ISCED 3–4 VET only as % of GDP
2010	14.6	N/A
2014	15.8	N/A
2018	16.6	N/A

Source: Eurostat estimations

1.3 The VET system

Governance

VET governance is centralised under the Ministry of Education (MoE), which covers 90% of VET students, and the Ministry of Labour, Social Affairs and Social Services (MoLSS). Both ministries work in collaboration with the Manufacturers Association of Israel (MAI).

A formal system of social partnership is lacking but employers are represented through MAI's frequent involvement in VET policy development and reform activities. Employers have a strong voice in decision-making on education and training reforms.

The national Technical and Vocational Education and Training (TVET) Committee is a mechanism established in 2010 to improve the governance of education and training. It is a platform for exchanges that involve all stakeholders, such as policy makers, TVET providers and social partners.

Vocational training in Israel is mainly the concern of the labour-focused bodies operated by the Ministry of Labour. This includes the Department of Vocational Training, MAHAT (the government-run

Institute for Training in Technology and Science) and the Employment Administration for Special Populations. These entities offer vocational studies for the entire population at technology colleges for adults. Technology education for students in post-secondary school programmes (Grades 13 and 14) is run by the MoE. Most vocational training provided under the auspices of the Ministry of Labour is supervised by the Department of Vocational Training. Additional organisations and institutions offer professional courses in their respective fields. These include government ministries, such as the Ministry of Culture and Sports, the Ministry of Transport, the Ministry of Tourism, the Ministry of Agriculture, the Ministry of Health and the Ministry of Immigration and Integration, as well as education networks, industrial companies and private training companies.

Professional/subject committees are key coordination mechanisms among VET stakeholders. Membership of each committee includes an academic, an MoE subject inspector, representatives of the Israel Defence Forces, the Manufacturers Association of Israel and the relevant industry professional body, as well as school personnel. There are approximately 19 such committees.

Financing

Government, mainly through local authorities, provides the main funding for TVET under the MoE. The state's multi-year budgets for technology education are set by government decision through budget agreements with the Ministry of Finance. TVET schools under the Ministry of Labour have a separate budget.

Budget allocations are made in accordance with the principle of equality, but they are also based on each college's results and performance. Israel pursues a policy to enhance fairness in the allocation of financial resources, and awards grants in line with national priorities to colleges located in geographically peripheral areas. In addition, increased budgets are earmarked for the training of specific populations, such as Bedouin and ultra-Orthodox populations. Recently approved reforms include significant budget increases. Other recently implemented programmes seek to encourage industry involvement in the training of technicians and practical engineers by giving limited budget incentives. These programmes include budget support for non-governmental organisations.

The Manufacturers Association of Israel and its members contribute directly to training initiatives and through the provision of facilities.

Regulatory frameworks

Most technology education is provided in secondary schools that are run in accordance with the Compulsory Education Law of 1949. In the last few decades, comprehensive reform of the 1949 law has resulted in the cancellation of tracking programmes and greater flexibility in choosing courses of study and in sitting matriculation exams.

According to the national review of the implementation of the Sustainable Development Goals carried out in 2019, the main areas for future action in the education sector include: improving the relevance of education, undertaking specific initiatives to improve the achievements of the Arab and Ethiopian populations, improving education in mathematics, science and technologies for girls, and reinforcing education for a sustainable environment, gender equality and students' rights.

The trend is to continue strengthening technology education, while also methodically and consistently increasing the numbers of students in technology programmes until the strategic goal of having 48% of all secondary school students in technology and vocational tracks is achieved.

To increase the attractiveness of VET, the MoE, working in cooperation with all key stakeholders, developed a new strategic plan in 2017 to strengthen professional technology education in Israel from 2017 to 2022. The plan supports the relaunch of VET by increasing the number of students, improving the quality of technology education and ensuring that it is provided in strong cooperation with industry.

Main provision/programme types and main provider institution types

The MoE covers two separate paths: science and technology education and vocational (occupational) education. VET takes place in (i) high schools (for those aged 16 to 18 at ISCED level 3; (ii) schools offering post-secondary studies (aged 18 and above at ISCED level 4); and (iii) technology colleges. Initial VET is also provided at privately managed schools run by technology education networks and supervised by key ministries. The MoE also supervises self-paid continuing vocational training for adults.

The MoLSS covers the following VET tracks: (i) apprenticeships; (ii) pre-VET/initial VET provision for specific youth populations in education network schools; (iii) frameworks for certified technicians and practical engineers through the National Institute for Training in Technology and Science (NITTS); and (iv) continuing vocational training, including training for jobseekers and employer-led training for adults. VET under the MoLSS is delivered at (i) vocational schools for young people, where courses include apprenticeships and one- or two-year courses combining study and practical experience; (ii) academic colleges (for NITTS-certified courses); and (iii) adult training centres and on-the-job training.

The Israel Defence Forces play an important role in skills development, providing a wide range of courses and programmes to people in compulsory military service. The training varies in length and level from remedial and supplementary education to courses at a post-graduate level. It is largely competency-oriented and leads to skills that are relevant to the civilian labour market.

2. QUALITY ASSURANCE IN VOCATIONAL EDUCATION AND TRAINING

2.1 Overview

The MoE is responsible for ensuring that the efficiency and relevance of all technology and vocational programmes are at maximum levels and meet the needs of the market. With regard to the availability and adequacy of quality assurance arrangements, measures and practices, the ministry has a unit that deals with the measurement and assessment of the entire education system: RAMA (the National Authority for Measurement and Evaluation in Education).

The MoE and MoLSS, in consultation with various bodies, are responsible for setting quality standards for providers' learning environments and for their learning outcomes. There is a degree of linkage with the Manufacturers Association of Israel through the steering committees on which MAI representatives sit and there are inspectors to check on this cooperation. Minimum thresholds in quality standards are in place for the accreditation of MoE and MoLSS providers.

The Inter-Ministerial Accreditation System Team was recently set up to streamline and align accreditation across TVET sub-systems. The MoE's Accreditation Department aims to create a flexible TVET accreditation system to enable student to make progress through the accreditation levels.

2.2 General information on quality assurance at VET system level

There is no specific legislation on quality assurance in VET.

TVET regulatory frameworks and mechanisms include:

- MoE and MoLSS quality standards for providers' learning environments and for their learning outcomes;
- MoE's teaching standards established through a uniform curriculum and the required use of authorised textbooks;
- MoE's inspection of technology subjects.

2.3 Quality assurance related to key VET areas

Evidence – statistics, and research and development

Despite all the recent developments, a notable shortcoming is the lack of a system capable of making useful labour market information available to education and training planners. Israel collects data on the labour market, including data on job vacancies, and it participates in the international labour market survey. However, while some of the available data are used for local or sectoral purposes, there is no formal national mechanism for processing labour market data to make it accessible to education and training policymakers for the purposes of planning and supplying education and training.

The national TVET Committee was set up in 2010 to respond to the need for better mechanisms to forecast and regularly monitor skills. The committee includes representatives from the Ministry of Education, Ministry of Economy, the ORT and AMAL education networks, the Manufacturers Association of Israel and the General Federation of Labour. The committee is a coordinating body that seeks to establish closer and more structured relationships between the education and business sectors, including all the actors involved in human capital development (and the army). It plays a significant role in defining strategy and policy and in developing plans to advance TVET, promote research, and ensure employers' active involvement at both central and local levels.

RAMA, which is a unit within the MoE, deals with the measurement and assessment of the entire education system.

The Ministry of Labour uses satisfaction surveys to assess and obtain feedback on its youth and adult training programmes. The surveys are completed by graduates of the training centres. Levels of student satisfaction are obtained not only through online surveys, but also through professional supervision and statistical reports, and rankings are produced. System failures or initiatives that have been too successful are identified and the data are analysed in order to optimise existing training processes in the various study tracks available to young people and adults.

Quality assurance and the qualifications cycle

Ministries are responsible for curricula, examinations and qualifications and they strive to increase employers' involvement to determine the skills needed in the labour market. Specialist MoE committees develop and assure the quality of curricula and the MoE requires a uniform curriculum and authorised textbooks in its schools. A school may determine approximately 30% of its curriculum. The MoLSS updates its youth and adult curricula every year, based on the forecast of market demand.

Employers are involved in the development of programmes and accreditation, including the development of curricula, vocational training and accreditation relevant to the labour market. Professional committees with employer representatives have been set up within the MoE Accreditation Department with the aim of validating and developing accreditation with labour market relevance. In 2016, committees were formed for industry, tourism and vehicles.

RAMA, the National Authority for Measurement and Evaluation in Education, creates and administers external national student assessment under the supervision of chief inspectors and advisory committees that include the social partners. This highly supervised system ensures high-quality matriculation and vocational certificates. The assessment of MoLSS students is conducted under one of three models: practical, theoretical or combined practical and theoretical.

A project to design and institute a national qualifications framework in Israel is being implemented with support from the European Union. The ultimate goal of the project is to design, institute and support a national qualifications framework throughout the country. The project began in July 2018 and will end in July 2020 (running a total of 24 months). At this stage, the project is focusing on four main institutions that award qualification certificates: the Council for Higher Education, the Ministry of Education, the Ministry of Labour and the Israel Defence Forces.

Quality assurance and VET provision/provider institutions

The MoE and the MoLSS set quality standards in relation to an acceptable learning environment in TVET provider institutions and their acceptable learning results. These standards are set in consultation with stakeholders.

Inspectors and technology team coordinators inspect MoE's VET provision. There is some degree of linkage with the Manufacturers Association of Israel through the steering committees of the programmes on which MAI representatives sit and there are inspectors to check on this cooperation. MoLSS schools are assessed based on feedback, pedagogical evaluation and monitoring against different measures of success according to districts, industries, tracks, schools and education networks.

Quality assurance and VET teacher/trainer qualifications standards and continuing professional development

To teach in TVET schools under the MoE or the MoLSS, teachers must have at least a Bachelor of Science degree in the technology domain of their teaching (such as mechanical or electrical engineering), a teaching certificate and a licence to teach from the respective ministry. Due to the shortage of teachers for technology subjects, holders of engineering diplomas are also accepted as teachers.

A teaching certificate is obtained through a course in a college or university, and teachers and trainers are also required to take an active part in in-career development. The MoE and MoLSS offer separate training options, including a long-term plan for continuing professional development. The provider networks for technology education also offer training and continuing professional development courses to their teachers. TVET teachers have opportunities for advancement within schools. The school principal and the chief inspectors of technology subjects evaluate MoE teachers and instructors and their evaluations are used to identify specific continuing professional development needs.

The transition to project-based learning is redefining teachers' professionalisation process and a 2016 MoE Directive requires TVET teachers to attend 210 hours of training on project-based learning over a three-year period.

Israel suffers from a serious shortage of technology teachers, expert lecturers, and tutors in technology and vocational subjects. Potential salaries in the labour market are much more attractive than what the MoE can offer its teachers. The state offers no special monetary incentives to engineers and experts to teach. In the absence of incentives, all teachers in the State of Israel earn a uniform salary, regardless of the subject(s) they teach, based only on their degree and years of experience. Some schools are unable to offer technology tracks because of the shortage of teachers. The Teachers Union in Israel cooperates with the MoE and the networks to improve teaching quality and teachers' salaries in technology-related subjects, but at this stage there is no real solution.

3. STRENGTHS, DEVELOPMENTS, NEEDS

New developments – in progress/in the pipeline

- The work of the Inter-Ministerial Accreditation System Team (Government Resolution No 147 2015) to improve the accreditation system across TVET sub-systems.
- Policy discussions on systematic and quality-assured labour market information.

Needs

- Examination of the effectiveness of impressive quality assurance approaches that are already in place to ensure that they cover the necessary range of issues while also leaving the education networks, local authorities and schools a sufficiently clear set of decentralised but accountable decision-making powers.
- A regulatory framework to embed quality assurance in TVET.

4. GOOD PRACTICE EXAMPLES

A **TVET Committee** supported by employers, unions and technology education networks plays a significant role in ensuring systematic exchanges and defining policy and strategy priorities.

An **Inter-Ministerial Accreditation System Team** has a mandate to improve synergy across the different forms of VET provision and related mechanisms. The MoE's Accreditation Department is finalising a comprehensive accreditation system for technology studies. The new flexible system will transform technology studies into a three-year model beginning with formal accreditation in Grade 10. The system will ensure that all successful graduates have a certification that enables them to enter the labour market or go on to further studies to obtain a higher-level certification. The Accreditation Department aims to set up a pool of private accreditation providers.

LIST OF ACRONYMS

ETF	European Training Foundation
EU	European Union
GDP	Gross domestic product
ISCED	International Standard Classification of Education
MAI	Manufacturers Association of Israel
MoE	Ministry of Education
MoLSS	Ministry of Labour, Social Affairs and Social Services
OECD	Organisation for Economic Cooperation and Development
RAMA	National Authority for Measurement and Evaluation in Education
TVET	Technical and vocational education and training
VET	Vocational education and training

Where to find out more

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