ETF Working together Learning for life

European Training Foundation

ETF TORINO PROCESS 2018-20

ISRAEL – A SUMMARY

INTRODUCTION

This is a summary based on the self-assessment national report of vocational education and training (VET) in Israel, the fifth since 2010 as part of the ETF's Torino Process initiative. Due in part to successive election campaigns, there has been little recent change in VET policies in Israel.

Future labour markets will present many challenges, but also **opportunities for growth and innovation**. New professions will emerge. Others will vanish. Current knowledge and skills might become irrelevant. Highly qualified human capital is and will continue to be essential. Industry already suffers from a severe shortage of employees at all levels. Thousands are required. The problem will be exacerbated as skilled immigrants from the former Soviet Union reach retirement age. **Adapting education systems, technological education and higher education for the labour market is becoming a complex and challenging, yet vital, task**.

To reverse this trend and maximise the use of individual talent, **a strategic programme with a broad approach to technological education must be adopted**. The current mechanisms and systems for examining the gaps between market requirements and the supply of personnel are not fixed. In some cases, these systems are overlapping and not synchronised. Training and qualifications are not continuous, and there is no significant mobility or accreditation for continued studies in academic institutions. This situation only exacerbates the poor public image of the technology industry and technological education, with a risk to discourage students from choosing technological subjects.

GENERAL RECOMMENDATIONS

- Formulate and implement a multi-year governmental strategic programme to promote VET. Reform technological education and training systems, and strengthen cooperation between the higher education system and employers.

THE EU AGENCY SUPPORTING COUNTRIES TO DEVELOP THROUGH LEARNING

- Guarantee vocational training as a social right for all citizens at all stages of their professional lives.
- Make sure that the quality of training and curriculum content derive from the current and future needs of industry and the job market.
- Encourage close cooperation between employers and the entire education system.

Guidelines for the entire education system

- Ensure continuity, mobility and coordination of accreditation from technological education in secondary schools to the Israeli Defence Force (IDF) service, advanced vocational training, and qualifications for technicians and practical engineers and academic degrees.
- Implement systems adapted to the needs of Israel's economy and industry.
- Emphasize skills and abilities required in the professional world, including self-learning skills, complex problem solving, critical thinking, creative thinking, entrepreneurship, innovation and teamwork.
- Emphasise practical experience and encourage experiential learning, project-based learning, and orientation on how to solve real-world problems.

Recommendations for actions in the short-term: technical and vocational education

- Promote professional training courses adapted to the needs of employers.
- Increase significantly the budget and scope of professional training courses for industry.
- Conduct training courses in cooperation with employers and adapt them to the needs of Israel's economy, particularly industry.
- Expand the scope of professional training and combine it with internships and apprenticeships. Involve employers at all stages.
- Create flexible training tools and encourage module-based training.

Recommendations for actions in the medium-term: Technical education (training of technicians and practical engineers) and higher education

- Increase the number and improve the quality of students in engineering and practical engineering, with a focus on the needs of the Israeli economy and industry.
- Integrate specialisation and on-the-job experience as a structured part of the curriculum.
- Address the lack of hi-tech professionals in industry, and respond to the unique obstacles and challenges of the innovation industry.
- Implement comprehensive reforms in technological education for technicians and practical engineers in concert with employers but guided by the public sector.
- Increase the number of students in engineering and computer subjects at institutions of higher education.

Recommendations for actions in the long-term: Technical and vocational education

- Expand activities to increase the number and improve the quality of students in technical and vocational education.
- Expose students to technology and innovation from a young age.
- Increase the number of students in technology programmes in secondary schools from 150 000 to 180 000.
- Provide opportunities for students to gain experience in the labour market.

A. COUNTRY AND VET OVERVIEW

Israeli industry is complex, advanced and highly technological. There is no clear-cut distinction between hi-tech and low-tech, but companies manufacture advanced systems that affect all aspects of life – from consumer products to satellite and cyber technologies.

Most technical education is provided in secondary schools in accordance with the Compulsory Education Law of 1949. In 2018, approximately 165 500 students were enrolled in technical and vocational institutions run by the Ministry of Labour's Department of Vocational Training: 155 000 attended conventional secondary schools and 10 500 were enrolled in vocational and technical secondary schools.

Over the last three decades, in response to early criticism, the government implemented important reforms in technological and vocational education in secondary schools. Education tracking has been eliminated and students have been given greater flexibility to choose what to study and which matriculation exams to sit for. Nevertheless, a debate rages on regarding the status of technological and vocational education and its level of success.

The goal is to continue strengthening technological education and gradually increase the numbers of students in technological programmes until they include at least 48% of secondary school students.

The European Union (EU) allocated EUR 1.8 million to support the implementation of a twinning project between the Italian and Israeli ministries of education. The goal is to design, establish and support a national qualification framework in Israel. It has focused on four main providers that award qualification certificates. Projected to run for 24 months starting in July 2018, the project has entered a second stage. This involves describing the characteristics at each level of the framework based on the parameters of knowledge, skills, abilities, responsibility and autonomy. It will also study the outputs expected for each level.

B. ECONOMIC AND LABOUR MARKET ENVIRONMENT

The scarcity of human capital poses a major challenge to industry. To ensure that education and training adapt to the dynamic nature of our world and provide people with necessary skills and abilities, mechanisms must be created to identify the needs, professions and skills of the future.

Israel also faces a series of special challenges. One is to encourage more inclusion in the labour market of unique populations as ultra-Orthodox men, Arab women and Bedouin people. Another is the combination of near-full employment with productivity and GDP per capita well below average for members of the OECD. Government spending on employment programmes also trails the OECD average.

Based on a strategic, economic and social assessment submitted to the government, and following an official resolution in June 2015, an inter-ministerial team was established to streamline and align accreditation for various training systems. This comprehensive national qualification framework is expected to facilitate transitions among vocational, technical and academic studies in a lifelong learning perspective. All national certificates and accreditations awarded by Israel's TVET systems will be ranked and made accessible to the public. The team has drafted its final recommendations, which include the reform of training for technicians and practical engineers.

Regarding technological and vocational education in secondary schools, the inter-ministerial team recommended that the Ministry of Education and the Ministry of Labour combine forces to maximise the professional recognition of education and training in secondary schools. The two ministries are expected to work together on a plan to recognise the Ministry of Education's study tracks for professional certificates. System-wide adjustments are expected to help vocational and technical school students take advantage of opportunities to complete their matriculation certificate requirements and move onto higher education in technology or engineering.

To enhance coordination and cooperation between the two ministries, a permanent steering committee should be established. It should include relevant department heads at the ministries and the National TVET Committee, representing all significant stakeholders. The committee would work to create mutual recognition of education and training programmes in secondary schools and workplaces and connect relevant information systems of the ministries.

C. SOCIAL ENVIRONMENT AND INDIVIDUAL DEMAND FOR VET

Students in technology-related programmes may pursue some 20 vocational fields. These are generally divided into three main types: engineering, technological and vocational. Participants are divided somewhat equally among the three. Since 2011, the number of students in engineering programmes has risen by more than a third, to 35%.

There are several challenges to lifelong learning. They include a lack of apprenticeships and on-the-job training and a severe shortage of practical engineers. There is also tension between the preference of disadvantaged people to study advanced technology vs. the tendency of the system to channel them into traditional vocational training, such as programmes for automobile mechanics and electricians. Education and training systems must not separate people according to socio-economic factors but should instead rely on personal ability, talent, and professional skills.

Given Israel's high level of integration into the international economy, the country requires a skilled and professional workforce that is adapted to the needs of industry. Israel must build systems that provide updated estimates and tools to plan public investment in vocational education and training. All stakeholders must be involved in the design and implementation of policies, the creation and dissemination of knowledge, and the forging partnerships to upgrade and update vocational education.

On leaving secondary school, most Israeli students are drafted into military service. The standard period of service is two and a half years for women and three years for men. Technological education helps them integrate into technical corps and roles in the Israel Defence Forces (IDF). Following military service, students may study at institutions of higher education, or attend the public Israel Government Institute for Technological Education (MAHAT) to obtain technological or practical engineering degrees.

The National TVET Committee was established in 2010 to help create better mechanisms to forecast and regularly monitor skills. Supported by business associations and trade unions and technological education networks, it aims to establish closer and more structured relations between the education and business sectors, including all actors involved in human capital development, including the army. It plays a significant role in defining strategy and policy and developing plans for advancing TVET, promoting research and ensuring active involvement at both national and local levels. The EU's regional project Governance for Employability in the Mediterranean managed by the ETF provided inspiration for Israel's National TVET Committee.

D. INTERNAL EFFICIENCY AND OPERATION OF VET

VET in Israel involves a variety of educational methods that are adapted to specific subjects. They combine frontal teaching, project-based learning, computerised learning and the integration of students into industry. Students are often divided into smaller groups for practical activities in laboratories, workshops and entrepreneurial centres. The goal is to create a diverse learning experience with updated content that is adapted to the needs of 21st century. The purpose of all educational organisations in Israel is to create relevant study options and interesting, diverse content that is connected to ‘real life’.

Israel has joined the OECD’s Future of Education and Skills 2030 programme, which aims to ensure high-quality, comprehensive and equal education and promote opportunities for lifelong learning by 2030. It will most likely affect procedures such as curricula and international exams. The initiative is rooted in the need for sustainable development.

One major problem is the lack of teachers in primary, junior secondary and secondary schools, mainly in subjects such as science, mathematics and English. This means that schools cannot always offer certain courses or that they must rely on teachers who are not suitably qualified.

Israel suffers from a serious shortage of teachers, expert lecturers and tutors in technological and vocational subjects. Generally, teachers in these areas must have an engineering degree and experience in industry. However, businesses can offer more money to such people than the Ministry of Education. The state does not allow for extra monetary incentives for engineers and experts who want to teach. All teachers earn a uniform salary based on the degrees they have and seniority - regardless of the subject(s) they teach. Some schools cannot offer technology tracks because of the teacher shortage.

Teachers in technological and vocational education have been exposed to three new areas: engineering; comprehensive training in updating teaching methodologies, with a focus on project-based learning; and the integration of computerised teaching and learning into all stages of the process

The Ministry of Labour requires that colleges for technicians and practical engineers meet certain standards in terms of lecturer profiles, laboratories and professional and physical infrastructure. If they

do not meet these requirements, they do not receive permits to operate. Each college conducts training courses and professional seminars on teaching methods for its own lecturers.

The Ministry of Education requires all teachers to have at least a BA degree and a teaching certificate. Some exceptions are permitted in vocational education, mainly when extensive professional experience is much more relevant than an academic degree. Nevertheless, there remains a shortage of high-quality teachers with professional experience and teaching skills. In some fields, recruitment is difficult.

E. GOVERNANCE AND FINANCING OF VET

There have been no significant changes in the division of government responsibility for VET since the last Torino Process report. The Ministry of Education oversees most technological and vocational education programmes. It is the country`s second-largest ministry (after the Ministry of Defence). It is responsible for making sure that programmes run well and are adapted to the needs of the market.

That puts about 90% of TVET students under the wings of that ministry. The other 10% participate in programmes run by the Ministry of Labour. The division of labour between the two ministries is not always clear cut. This is partly due to the lack of clear VET legislation. Internal power struggles have helped shape the relationship, and it has varied over time, partly depending on the personalities involved.

The state's multi-year budgets for technological education are set in agreement with the Ministry of Finance. The budget has been continuously growing, reflecting an understanding that more resources are needed, particularly to integrate various groups into the labour force and to address the shortage of technicians and practical engineers.

Israel has come to the realisation that it needs to invest more in VET. Allocations to institutions are evenly distributed, but also based partly on results and performance. To address regional inequalities, Israel is giving special attention to peripheral areas. It is also addressing the needs of special populations such as Bedouin and ultra-Orthodox citizens.