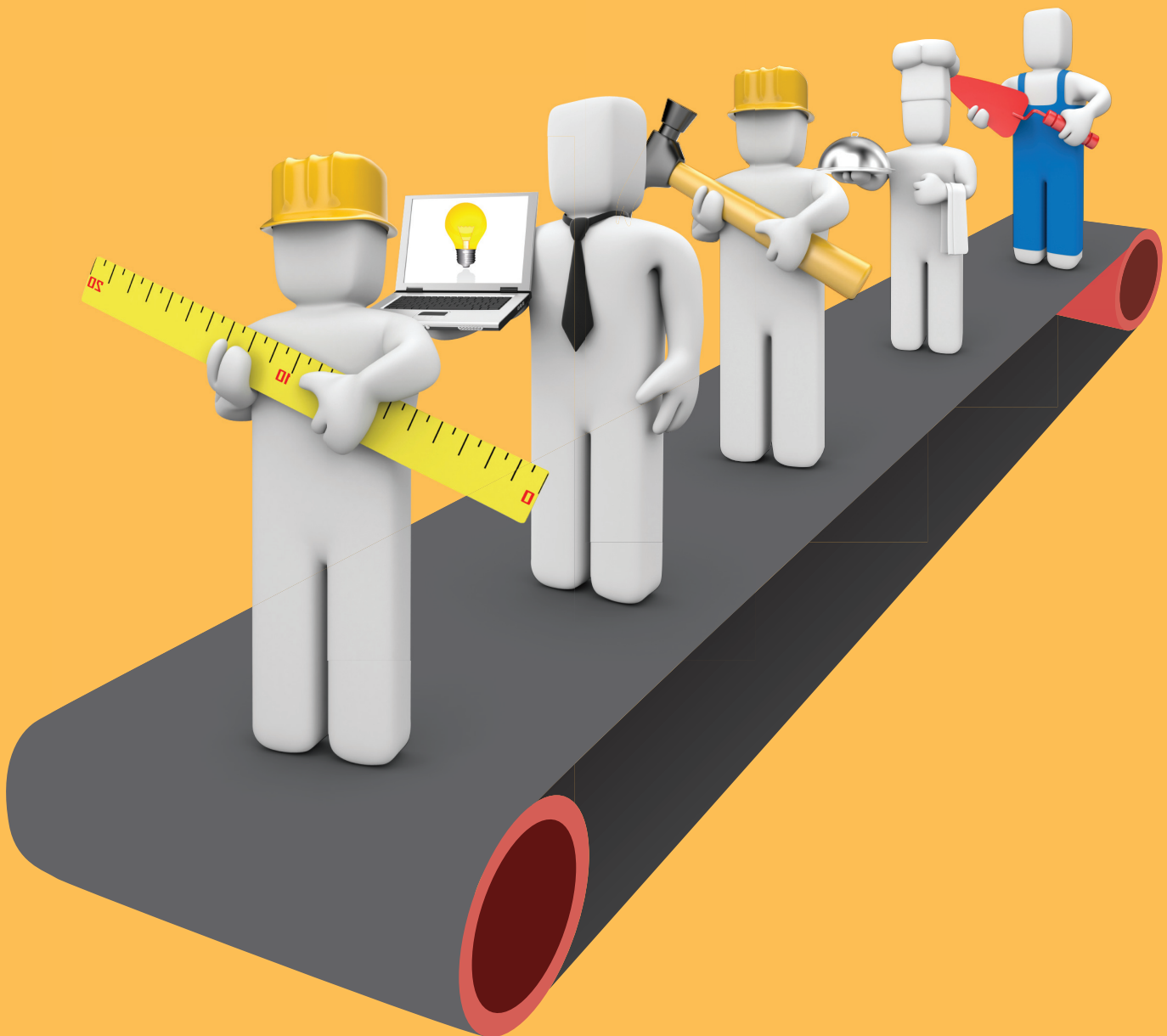


Proposal for a Vocational Training Model for Israel

Executive Summary

Dr. Roby Nathanson, Natalia Simanovsky & Ro'ee Levy



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- **Mr. Michael Axmann** - Skills and Employability Department, International Labor Organization
- **Eli Ben-Gera** - Vice President, Trade Union Division, New Histadrut
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- **Dr. Roni Bernstein** – Head of Youth and Apprenticeship, Youth and Education Department, Ministry of Industry, Trade and Labor
- **Lilach Bloch** - Analyst, Israel Social Movement
- **Gilad Brand** - Economist, Macro Center for Political Economics
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- **Micky Drill** - Project Manager, Friedrich Ebert Foundation
- **Dr. Gisela Dybowski** - Head of the International Department, Federal Institute for Vocational Education and Training in Germany
- **Dr. Eli Eisenberg** - Executive Vice President, head of R&D, ORT Network
- **Yael Elnathan** - Working and Studying Youth Group
- **Dana Federman** - Benor Consulting
- **Gadi Golan** - North District Deputy Inspector, Ministry of Industry, Trade and Labor
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- **Yusuf Kara** - Representative, New Histadrut in the International Labor Organization
- **Dr. Thomas Klischan** - CEO, Nordmetal and the Association of Metal and Electronics Industries in Northern Germany
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- **Dr. Dan Sharon** –Director, Educational Activities on behalf of Stef Wertheimer
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- **Professor Adrian Ziderman** - Professor Emeritus Hebrew University

Executive Summary

Vocational education and training (VET) is integral to the expansion of participation in the labor market and reduction in unemployment and poverty. It provides people with knowledge-based education and training for various occupations and integrates them into the labor market. Successful VET models implemented by many states are those that involve participation from various institutions both in the private and public sector; yet in Israel such a system does not exist. Indeed, international comparison shows that the technological/vocational course in Israel has the lowest percentage in the world of students who combine training with work experience (3.6%). Furthermore, in Israel VET suffers from a number of domestic issues – small government budget, expensive vocational education and a negative public image are a few examples.

It is clear that the development of a successful VET model in Israel is in great demand. Examined in this booklet are a number of VET models employed by OECD states. Two of the most successful however, are examined in greater detail – the German dual system and the Singapore Institute of Technical Education system. Both systems have attained considerable success in reducing poverty and unemployment and integrating the youth into the labor market. The German dual system connects vocational school training with collective vocational training programs according to the specific needs of the labor market, while the latter focuses on vocational technical education. The examination of these two models can provide decision makers with solid reference points that color the discussion with regard to the creation of an Israeli VET model.

Having reviewed the existing vocational training in Israel and the other models from various countries, the Macro Center for Political Economics designed an Israeli model. The model is divided into the micro-level (the new vocational school) and the macro-level (a system planned and operated by the various institutions from the public and private sector). The objective of the new vocational school is to build a professional future for students who have completed their studies. The results of which will address the needs of 50% of the population who are currently not eligible for a matriculation certificate. The Macro model for vocational training involves the inculcation of formal and informal practical work skills in order to improve individual chances of finding work.

In essence, the real tests of the success of VET are the employability of the graduate, personal development, opportunities for further education, career development, and greater societal

acceptance of vocational training. The development of a successful Israeli VET system will narrow the socio-economic gaps and help increase Israel's standard of living.

We wish to thank Micky Drill, Project Manager, Friedrich Ebert Foundation and Raja J. Nejedlo, Counselor, Labor & Social Affairs of the German Embassy in Tel Aviv for their outstanding contribution to our project. Also, we would like to thank the Fritz Naftali Foundation for its generous support and all of the members of the steering committee who contributed many insights toward improving vocational training in Israel. Lastly, special thanks are owed to Michal Weiss and Karni Tugendhaft for their tremendous organizational work on the project all year long.

Project Review

2009

In 2009, the project focused on vocational training for young people in Israel who have not yet joined the labor market. A steering committee was organized, whose composition included: representatives from the New Histadrut – Israel Federation of Labor; the Israel Manufacturers Association; the Ministry of Industry, Trade and Employment; the Ministry of Education; vocational schools such as Amal Network, ORT Israel, Dror Network, Mandell Institute for Leadership in Education, and the Steff Wertheimer Center for Educational Operations; the Working and Studying Youth Movement; LAHAV – the Organization of Self-Employed Persons and Small Businesses in Israel; representatives from companies which run vocational training programs such as Elbit, Bet Shemesh Motors, etc.; Ms. Raja J. Nejedlo, Counselor, Labor & Social Affairs of the German Embassy in Tel Aviv; and finally, Micky Drill, Project Manager, Friedrich Ebert Foundation. The steering committee met a number of times throughout the year and proposed policies for this project. In addition, two two-day professional seminars were conducted. The first seminar involved all of the aforementioned representatives in addition to Dr. Gisela Dybowski, Head of the International Department, Federal Institute for Vocational Education and Training in Germany. The discussion that ensued centered on the existing situation in Israel and Germany and the vocational training models adopted in Germany. A number of suggestions were made in view of the current situation and the needs for the future. The second seminar, which included participatory remarks by Dr. Thomas Klischan, CEO, Nordmetal and the Association of Metal and Electronics Industries in Northern Germany, dealt with the existing vocational schools in Israel, the overall system in the field of vocational training, and lastly, a new model for vocational training, including a vocational school was presented.

2010

The youth vocational training project made significant progress this year and advanced from studying the issue thoroughly to drafting practical recommendations. The project members met several times this year to hear the opinions of Israeli and international experts, tour vocational schools, discuss policy proposals, and analyze the Israeli workforce. Toward the end of the year, a model for youth vocational training was suggested which was based on all the discussions.

Several principles were agreed upon by most of the steering committee members. First of all, there is a wide agreement that youth vocational training projects should be aggressively promoted in Israel. These programs should be adapted according to the market's needs and studies should be conducted to analyze future employers' skills requirements. In addition, there is a need to increase cooperation between the different parties involved in vocational training projects and to establish a new organization that will concentrate the efforts on the issue. The image of vocational training schools should also be improved and it should be ensured that these programs will be able to supply development opportunities for excellent students and a good standard of living for mediocre graduates.

Michael Axmann, an ILO expert in skills development systems in the Skill and Employability Department, explained in his presentation that vocational training projects should cooperate with the private industry. He recommended promoting public-private partnerships and adopting successful pilot programs at the national level. Axmann explained that vocational training projects should be demand driven; therefore, enterprises should be involved in the early stages of the projects. According to Axmann, the teachers should also be familiar with the industry (for example by interning) in order for them to know which skills to teach and how. This will enable the teachers to include “minds-on” and “hands-on” activities in class. Axmann noted that vocational training projects are especially important in the past few years due to a worldwide steep increase in youth unemployment.

Gershon Cohen, Director, Technology Field in the Ministry of Education, explained that cooperation with the private industry already exists in several pilot projects run by the Ministry of Education. The projects include partnerships with the Manufactures Association of Israel, the National Insurance Institute and other organizations. This cooperation enables students to obtain experience in a real work environment during their studies. In addition, cooperation with IDF was demonstrated in the steering committee's visit to the Amal school in Ramat David, where most of the graduates are drafted to one of the air force technical units.

Focusing on the industries current requirement is only the first step. Vocational training programs should also use forecasts of future employers' requirements. These forecasts usually do not exist in Israel and that is why this year the Macro center, with the Friedrich Ebert Foundation's support, decided to study labor market predictions. Ro'ee Levy's article presents two main prediction models: manpower planning according to macroeconomic data and

analyzing the labor market according to signals. The article demonstrates how to predict future supply and demand for Israeli workers by using various methodologies. The macroeconomic methods include: predicting the number of workers according to expected changes in the population and workforce participation rates, predicting labor demands according to expected GDP changes and changes in the markets share of various sectors. In addition, two methods based on signal are also demonstrated – an analysis of classified ads and of changes in the use of search engine, which are found to be correlated with the number of people looking for jobs. The paper presents initial conclusions which include the need to take into account the rise in the workforce participation rate of women and workers over 45 and the need to focus the program also on non-Jewish workers, for they are expected to account for a significant share of the new workers. Furthermore, vocational training programs should also concentrate on service-oriented sectors and not only on the manufacturing industry. It is important to remember that predictions can never be exact but they can be useful to indicate general trends in the labor market.

Decision makers do not have to consider the market requirements in all cases. If a country, for example, decides to promote a diverse workforce, as recommended by Dr. Dan Sharon, it can decide to promote vocational training projects for occupations which currently do not exist and are not required. It is often assumed that once these workers graduate, private firms will hire them (instead of outsourcing work) and the supply of workers will create the demand for them. Even in these cases it is important that vocational training projects analyze the workforce so that they will be able to build a high quality relevant curriculum.

In the steering committee meetings it was repeatedly mentioned that the image of vocational training projects should be improved. Due to mistakes of the past vocational training schools are often perceived negatively and many parents avoid sending their children to these schools. The Ministry of Education is aware of the problem and Cohen explained that they are working toward improving the schools' image. The problem can be addressed by a public campaign, yet this method will only be effective if the school's program is worthwhile for the students. Each vocational training program therefore, should include various measures to enable the graduates to make a living and provide an opportunity for their social mobility. The methods to ensure this could include: accreditation of occupations, provision of diplomas of different levels, improvement of the quality of the teaching, addition of extra courses to the curricula for further development of excellent graduates, and continuation of education programs for graduates.

All the while, it should be remembered that vocational training programs are especially important for underprivileged students. Therefore, the programs should focus not only on high technology or on the best graduates but it should also ensure that a good amount of attention is applied to mediocre graduates so that they will be able to make a decent living at the end of the program. Osnat Hachmon, Director of the Technician and Matriculation Program in the Ort School Network, explained that reducing poverty is one of the main goals in the vocational training programs run by the Ministry of Industry. In the future, reducing poverty, unemployment and income inequality should remain central goals of vocational training programs.

Even though most parties involved agreed on the major principles required for a vocational training program, there is no central organization coordinating the efforts. It is crucial to institutionalize cooperation between the Ministry of Education, Ministry of Industry, Trade and Labor, the Histadrut, and the Manufactures Association of Israel to ensure the success of vocational training programs. Dr. Tal Lotan, Director of the Vocational Training and Technological Education Department in the Manufactures Association of Israel, suggested creating a public authority for technological education that will set strategies and operational plans, promote research, suggest education methods and increase the image of public technological education. Such an organization will help decision makers understand the industries' needs, will enable each participating body to share its setbacks and successes, and may even fund joint initiatives such as advance technology workshops, as suggested by Lotan. Drafting recommendations is only the first step. Going forward, we will have to advance the recommended vocational training model into actual policy.

Next year, with the Friedrich Ebert Foundation's support, we plan to focus the project on adult vocational training which has become more important than ever in a modern workforce where employees switch their workplace often.

Vocational Training and Technological Education for Young People in Israel – the Current Situation

Vocational training for new entrants into Israel's labor market is provided by means of vocational/technological education. Vocational training for young people is under the auspices of the Ministry of Industry, Trade and Employment, which is operated by the Training and Personnel Development Division of the Ministry of Industry, Trade and Employment. It aims to reduce social gaps and to set professional standards in Israel by developing human resources trained in trades. The framework includes industrial schools, vocational colleges, training centers, in-plant training and more. The technological trend is part of Israel's matriculation-oriented educational system, which is composed of an academic course, a vocational course and an agricultural course.

Of all the students in the matriculation-oriented system, approximately 52.5% are eligible for a matriculation certificate. An additional 28% complete 12 years of study but are not entitled to a matriculation certificate. In addition, 4.2% of the students complete a course of vocational training, which is not included in the matriculation-oriented system, and 15.3% drop out of the system and do not complete the full 12 years of study. The percentage of students who are eligible for a matriculation certificate in the technological course is lower than the other courses: approximately 50.6%, as opposed to 57% and 56.7% in the academic and agricultural courses respectively.

International comparison shows that the percentage of graduates of secondary and vocational schools in Israel is high (84.6%); at the same time, however, the percentage of those students who study in the technological/vocational track is very low (37%). In addition, the technological/vocational track in Israel has the lowest percentage in the world of students who combine training with work experience (3.6%). In Europe, the scope of technological/vocational education is as follows: 72% in Britain, 70% in Holland, 69% in Switzerland, 60% in Germany, 55.5% in Norway, and 40% in Finland. These figures are in line with a resolution adopted by the European Union in 2004 that states, "Technological vocational education constitutes the most significant engine for attaining the central objective of the European Union – [to become] the leading knowledge economy in the world by the year 2020." The fact that participation in vocational schools and training is high in Europe reflects the EU desire to play a salient role in the 21st century knowledge-based economy.

At present, the percentage of Israeli senior high school students enrolled in technological/vocational courses is 37%, compared to 52% in the late 1970s. In addition, the number of classrooms for Israeli students in technological education has continuously declined throughout the last decade, whereas the number of academic classrooms has consistently increased. One reason for the drop is the steady cutback in Israel's education budget, specifically in technological/vocational education between 2003 and 2007. The 2007 budget was approximately 35% lower than the budget for 2003. At the same time, the cost of study in the technological/vocational course is higher than that of an ordinary academic education due to smaller classrooms, laboratory use and apprenticeship hours. Moreover, to accommodate the demands of a VET system i.e., the construction of new schools, the national budget would have to be increased. At the present moment, funds are lacking to proceed with such requests and the overall result has been the decrease in numbers of students in vocational training.

Moreover, vocational education in Israel greatly suffers from a negative public image. Students and their parents tend to view vocational training as not only more costly than an academic education, but more importantly, as an inferior alternative to a traditional academic degree.

Another problem (which is found exclusively in Israel) is the participation of its youth who serve in the Israeli Defence Force (IDF). No other country has its youth serve in the army for a longer and more intensive period of time. Therefore, with any discussion of the development of a VET system in Israel there will need to be cooperation among all of the necessary actors so that the rigorous demands of the IDF will be taken into account.

In Israel, there are a number of tracks in which students can acquire a vocational education including:

- A matriculation-oriented technological course which is divided into the Sciences track (Chemistry, Physics or Biology) and the Technological Thought track. The latter enables specialization in one of three principal clusters: the Engineering Trends cluster (Electronic, Mechanical, Software, Biotechnological and Scientific), the Technological Trends cluster (Communications, Industrial Design, Construction Engineering, etc.), and the VET Trends Cluster (Teleprocessing, Business Management, Education, Health, Tourism, etc.). These trends are purely technological

in nature and do not offer practical vocational training or specialization within a plant or company.

- Advanced secondary studies in Grades 13 and 14 toward the degree of Technician or Practical Engineer.
- A Technician and Matriculation (TM) Project. The TM Project is a joint activity carried out by the Ministry of Education, the Israel Manufacturers Association and the IDF. It allows young people to complete a matriculation certificate and become certified technicians at the end of Grade 12, before their compulsory military service. The program is intended for both the weaker and stronger segments of the population and is focused on the electrical and mechanical trades. The unique nature of the program lies in the cooperation with industry and the consideration of the needs of the market and the military in the division into study subjects. The program is implemented in the ORT and Amal vocational networks, further details of which appear below.

In the course of the project we referred to a number of existing vocational schools and networks in Israel in order to learn from their vast experience in constructing the new model for vocational training. The seminar, which took place on December 4-5, 2009, presented the Amal and ORT vocational networks and will be briefly described below.

The Amal Network was founded in 1928 and currently includes approximately 108 educational institutions. The network offers a number of study and training tracks, including the multidisciplinary schools (under the supervision of the Ministry of Education), the technological/industrial schools (under joint supervision by the Ministry of Industry, Trade and Employment and the Ministry of Education), and adult education colleges. In the industrial schools, the trends are established according to two criteria – the entities with which the schools work (vocational training) and the organizations where the employees are sent to at the end of their training, such as the vocational school at the Ramat David Air Force Base, which trains 100% of its students in flight-related trades in preparation for their military service in the Israel Air Force. Additional trends in the network provide a response to more specific needs such as the youth track, a two-year module where most of the students are females preparing for their military service. The profile of students in the network is varied: 52% from the Jewish sector and 48% from the Arab sector. At the same time, 87% of students

are males and only 13% are females. In addition, the girls tend to study subjects such as Administration, Computers, Hair Design and Photography.

The ORT Network was founded in 1949 and currently includes some 163 educational institutions. The unique nature of this network lies in its Research and Development Department, which performs research and development on curricula, new subjects, educational technologies and so forth. The network offers a number of study and vocational training tracks, including technological trends, science-based trends, the TM Project and employment-related trends. The network operates industrial schools which carry out their study programs with industry and the IDF. These programs combine practical training on IDF bases and in industrial plants, use of sophisticated laboratories, and the possibility of continuing education toward the degree of Technician or Practical Engineer.

Vocational Training in Germany - The Dual Model

There are three approaches regarding the subject of vocational training and technological education for young people throughout the world. The first approach is the apprenticeship system, which exists in Germany, Austria, Holland and Switzerland. The second approach, which includes “optional” courses for vocational training, exists in the United States, Canada and England. The third approach that of compulsory and complete vocational training parallel to ordinary education exists in Sweden, Finland and France.

The vocational education system in Germany is an apprenticeship system, which has been operating for many years and has accumulated considerable success. The system is a dual system that connects vocational school training with collective vocational training programs according to the specific needs of the labor market. Training under the dual system combines training in companies and instruction in part-time vocational schools to provide the basis for entering professional life for the majority of young people. In general, there are two types of vocational training: the so-called dual VET system contains on-the-job training in a company combined with part-time vocational school training and full-time vocational school training. It is decided upon which training the student attends after they complete either lower secondary school or intermediate school, usually at the age of 16. In addition, students with an upper secondary grammar school diploma are usually part of the dual VET system. Today, there are 340 recognized trades, where the private sector provides the education and the public sector provides the training contracts.

The Vocational Training Act

The Vocational Training Act regulates, *inter alia*, the training of young persons after their compulsory school has ended. The Vocational Training Act provides the overall framework but does not regulate vocational training schools for which the constituent states of Germany are responsible. There is a general freedom of contract insofar as the employer decides whether he would like to take on apprentices and the same applies to the apprentices. There is no obligation for young people to become apprentices and there is not obligation for employees to provide apprenticeships. Young people are not directed into specific occupations, and the local state-run employment offices as well as the chambers of industry and commerce (CIC) provide vocational advice. Each apprentice, however, must taken an interim examination in the course of their training. The primary role of the examination is to

ascertain the level the apprentice has reached, which is under the direct supervision of the CIC. In addition, each apprentice has to take a final examination at the end of their training to prove that he/she has acquired the necessary professional qualifications. The examination board, organized by the CIC, consists of at least 3 members, a representative from both the employer and the employee and at least one vocational teacher.

The practical training takes place in 340 different trades, which cover all of the needs of the national economy from technological areas to such organizational areas as health and welfare. Each student chooses his or her trade on the basis of personal aptitude in accordance to the needs of the labor market during that period of time. There are currently 1.6 million apprentices in Germany and approximately 41% are women. The training is carried out in 484,000 workplaces, approximately 30% of all businesses in Germany.

The unique nature of Germany's vocational/technological system lies in the total integration of all of the entities involved (industry, business owners, the Ministry of Education, academia, etc.) in the training process. A student who takes part in practical vocational training does so in industry, under a binding contract with the employer. The student is paid an amount that increases according to the year of his/her apprenticeship, between € 300 in the first year up to € 1100 in the third year. A student who has completed the track is certified in the profession on a uniform basis agreed upon by all of the entities within the economy. Thus, students can find work anywhere in Germany irrespective of the schools at which they studied, a factor which gives rise to great flexibility in the German labor market.

The five principal characteristics of the German system are as follows:

1. Full partnership between the public sector (the educational system, the Ministry of Industry, Trade and Employment, etc.) and the private sector and industry.
2. A system based on standards of supply and demand; the Government does not set the standards alone; rather it is a joint process that involves academic experts, business owners, industry and trade unions.
3. Studies based on practical work and continuation into the future. The students study within the framework of a company or private business and thus learn all of the processes including entry into the civilian labor market in addition to the basic trade.
4. High-quality teachers; the training of teachers is at the highest possible level and is in cooperation with industry and the private sector. There are trained professional tutors

and coaches within the companies and businesses; the teachers in the schools must have an academic degree and practical work experience.

5. Performance of research studies on the labor market. Encouraging innovation and experience in predicting the future requirements of the business and private sectors. Germany invests in research to prepare the students for future labor market needs and conditions. This feature is important, as many countries have a tendency to train students in trades which will not be useful in the future.

From the employer's perspective the principal strength of the German model is the complete cooperation of industry and business owners with the vocational education system. This cooperation makes the system flexible and maximizes compatibility with the labor market. The employers in Germany have internalized the importance of vocational training at both the economic level (training future employees) and the level of social responsibility, as business owners consider themselves responsible for educating young people in the environment of the business, and lastly, of providing equal opportunities for their integration into the labor market.

Moreover, the high percentage of participation by businesses in the training programs attests to the importance with which business owners view vocational training. In northern Germany, for instance, 90% of large businesses (over 50 employees), 69% of middle-sized businesses (10-50 employees) and 41% of small businesses participate in the practical training program. While the cost of vocational training is higher than the cost of ordinary education, it is shared by business owners and the Government: 84% of the cost of vocational training (€ 14.7 billion) is taken on by the business owners and the private sector, and only 16% of the cost (€ 2.8 billion) is taken on by the Government and the Ministry of Education.

Vocational training in Germany is covered by state law, which defines the recognition of each specific trade by the state, the description of the trades, the duration of the training, the minimum requirements for acceptance into each trade, and the level of the final examinations. Business owners in Germany believe that it is necessary to transfer all of the laws and regulations regarding vocational training to federal legislation and supervision.

To summarize, the dual model in Germany has accumulated considerable success, which we wish to implement in the new model in Israel. This model has many advantages including: cooperation with the private sector and with industry, the vast scope of trades learned, the

percentage of students who participate in vocational training throughout the state, the number of businesses which administer practical training, and the distribution of costs. Obviously, it will not be possible to copy the entire model; nonetheless, it may be viewed as a guideline in constructing the Israeli model.

Vocational Education and Training: Examples of Several European Models and an Examination of the Singapore Model⁴

Vocational education and training (VET) helps to prepare people for work by providing them with knowledge-based education and training for various occupations and then integrating them into the labor market. In Germany and other European states, VET consists of a dual system where apprenticeships in a company are combined with vocational education in vocational schools. In Israel, however, this simply does not exist. Indeed, it is not possible to describe VET in Israel as a "system". While there are Israeli institutions that provide vocational training such as the Amal Network, Ort Israel, Dror Network, Mandell Institute for Leadership in Education, and the Steff Wertheimer Center for Educational Operations they lack a shared vision regarding human capital development and a shared agenda for skills learning.

This paper will refrain from providing either a historical description of VET or a solution to the present problems associated with Israeli institutions and VET. Rather, the aim of this paper is to compare a number of countries that have adopted the VET system or have long-standing experience with vocational training in order to color the debate regarding the development of an Israeli VET system. This report will briefly measure the German dual system against the Swiss and Danish systems, followed by a detailed examination of the Singapore model in order to provide a number of salient references for the development of the Israeli vocational model.

Challenges to the German Model

The German model, while extremely effective in providing apprenticeships and vocational education, is not immune to certain weaknesses. For example, Germany has far too many students who are not eligible to attend either apprenticeships or vocational education courses. With approximately half a million people in a federal promotional measure, Germany has nearly as many students in the measure as those who are starting a vocational education. The federal promotion measure is supposed to help students with poor grades or other groups that the industry did not or could not offer jobs to improve their knowledge and skills. The main problem in this case is that a lot of students get stuck in this system without earning any

⁴ This article is written by Lior Zwecker. We wish to thank him for his contribution to our booklet.

degree to further their education. This is a concrete example of how the numbers of unemployed youth are glossed over.

Integration of students into vocational education is not the only problem with the German model. There is also the issue regarding integration into the labor market. Since the beginning of the 1990s, the number of people who have completed vocational education and have not found a job has greatly increased. Those with an academic degree, however, are barely affected. In addition, the German dual system is closed to students that lack a degree to enter specific occupations. Furthermore, the training in vocational schools is under the sovereignty of the various counties. This leads to training content that is not always standardized throughout the state. However, the federal system does recognize degrees received in the various counties.

To facilitate a more broad-based education it is important to merge related vocational training trades. For example, there are 350 trades in Germany, in Switzerland there are 260, and in Denmark there are 120. The job profiles and requirements profile at work are increasing in variety. Today the economy demands problem-solving skills, ability of abstraction, communication skills and the capability to work without supervision. Through less specialized general education, people with a vocational training degree would become more flexible at work. Specialization and accommodation through further education could be integrated into their entire working life. Attention now turns to the measures implemented by Switzerland, Denmark and Singapore.

Switzerland

In Switzerland students with poor grades are able to attend a national, controlled and standardized vocational education. The apprenticeship lasts for two years and ends with a formal lower degree, although since 1993 one can attain a higher academic degree if desired. The formal lower degree can be used in the labor market as well as in the usual three-to-four-year vocational training with a normal degree. Unlike in Germany, the federal government regulates the operative and vocational education.

Denmark

To improve the involvement of companies in supporting vocational education every private and public company, whether they offer a vocational program or not, has to pay into a

national education fund.⁵ One of the results from such a measure is that people in certain positions, such as a foreman or a technician return to school to pursue more education. Denmark is the only country where a broad-based basic training exists before entering vocational training. Training lasts for six months and students can choose between twelve occupational fields. The federal government regulates the operative and vocational education and its vocational schools have a higher degree of autonomy than German-speaking countries.

In essence, more than ever the OECD countries are dependent on the production, distribution and use of knowledge and one of the most pressing issues is the need to ensure current and future employees are equipped with the best practical tools to deal with a rapidly changing global market and the demands driven by such a change. It is at this juncture that the discussion turns to the Singapore model.

The Singapore Institute of Technical Education (ITE) System

The Singapore Institute of Technical Education (ITE) system is a government-funded, post-secondary institution focusing on vocational technical education.⁶ Focusing on career-based vocational technical education, ITE's goal is to train technicians and skilled personnel for jobs and careers in the major sectors of the economy. Its mission is to create opportunities for those who did not complete school to acquire skills, knowledge and values for lifelong learning.

ITE's mandate and consistent use of five-year strategic plans has created a unique brand of an ITE College Education for a quarter of the school cohort in Singapore. The first "ITE 2000 Plan" (1995-1999), successfully positioned ITE as an established post-secondary education institution. The second "ITE Breakthrough" plan (2000-2004), built ITE into a world-class technical education institution and under the third five-year plan, the "ITE Advantage" (2005-2009), the aim was to become a global leader in technical education. With a range of 40 courses, full-time student enrolment is 23,000. Another 30,000 working adults do part-time Continuing Education and Training courses every year.

There are two basic levels of qualifications under the National ITE Certificate (Nitec) system of certification. Depending on their academic achievements in schools, students may enroll

⁵ The amount is dependent on the number of employees in the company.

⁶ ITE is also the first educational institution in Singapore to win the prestigious Singapore Quality Award in 2005.

under the Nitec or higher Nitec, mainly two-year courses, in Engineering, Business & Services, Info Communication Technology and Applied & Health Sciences. The program's uniqueness stems from the fact that it has successfully created a responsive world-class system that addresses the challenges of a rapidly changing environment and economy in the following six ways.

First, it created three college systems of governance under the 'One ITE – Three Colleges' by regrouping existing smaller campuses into three mega regional campuses and renamed them ITE Colleges. Under this system, the ITE Headquarters continues to oversee the policy formulation and common functional areas of interest, such as curriculum development, student intake, examinations, quality assurance and consistency of standards throughout the Colleges. The economy of scale has helped to achieve synergy and resource savings through greater collaborations while promoting competition among the colleges. At the same time, each college, which has been built for full-time student enrolment consisting of 7000 students and headed by a principal, has more autonomy to grow and specialize in niche areas, thus adding choices and diversity into the programs.

Second, is ITE's College brand – 'Hands-on, Minds-on and Hearts-on'. "Hands-on" training ensures that the students acquire a strong foundation in technical skills. "Minds-on" learning develops independent thinking and flexible practitioners who are able to cope with changes. "Hearts-on" learning develops the necessary passion and confidence in relation to the students becoming productive members of society. These attributes underpin a comprehensive education where students integrate theory with practice through coursework, projects, industry partnerships, community service and global education. The intent is to produce graduates who are market-relevant, enterprising and adaptable as lifelong learners in the global economy.

Third, the curriculum is composed of 70% practical and 30% theory. To ensure a strong foundation in technical skills and high employability, 80% of the curriculum time is taken up by core modules, which define the occupational areas where the graduates will seek employment. In view of its importance, the "life skills" module is compulsory for all students. Taking up 15% of the total curriculum time, it ensures that students also acquire the skills of communications, teamwork, thinking and problem-solving, sports and wellness, career development and planning and customer service. In this way, students will be better equipped as lifelong learners and remain adaptable in the global job market.

Fourth, is pedagogy, the “how” part of teaching and learning. The underlying objective in ITE's pedagogic model is to develop “thinking doers”. In other words, graduates who can apply what they have learned into practice. Under the guidance of a teacher, the students plan the work to be done, explore the information required, practice what they have learned and finally perform with competence, knowledge, skills and values they have mastered. Through this approach, the students acquire three key competencies namely, technical, methodological and social.

Fifth, is the creative and innovative teaching and learning environment. The *eTutor* and *eStudent* provides flexibility, convenience and easy access to e-learning for students and staff in a personalized, interactive, multimedia and collaborative learning environment. As ITE's courses are heavily practice-oriented, e-learning is presently focused on the knowledge and theoretical component of the curriculum. Even then, the e-learning system has enabled ITE to deliver 20% of its total curriculum time on a web-based platform. The *eStudent*, on the other hand, is a web-based fully integrated student services administration system. This system has changed the way ITE students manage their academic and student-related services, from enrolment to financial transactions, choice of elective modules and academic advising. In the process, they take responsibility for planning their studies and initiatives in doing things independently. This seamless one-stop centre on the web replaces the many otherwise manual and unproductive systems of student enrolment and administration. In essence, the *eTutor* and *eStudent* systems have created a new way of teaching, learning and living in ITE campuses, for they provide an important bridge in preparing graduates to better face the challenges in the 21st century.

Sixth, are the continuous efforts devoted toward building a positive image of ITE. Over the years, a comprehensive marketing program, which include open houses, road shows and media publicity and focuses on reaching out to students, teachers, parents and the community has been organized. Every year promotional talks are conducted for potential ITE students in secondary schools. Those in secondary 2 and 3 also spend two days in an innovative “*Experience ITE Program*” in ITE campuses to experience the relevance of an ITE College Education. The highlight of this experience is the exposure to a range of hands-on manufacturing, office and service skills required in the real world, through an integrated simulated learning system. In essence, ITE has been extremely successful in creating a brand where the underlying messages have helped the public to associate the success of ITE. The

result of such exposure can be found in the brand-equity tracking model which show that the image and public perception of ITE has significantly improved by 76% over a nine-year period from 1997 to 2006.

Conclusion

The real tests of the success of VET are the employability of the graduates, personal development, opportunities for further education and career development, public acceptance and image. The Singapore ITE system provides us with an enormous amount of information and ideas. It considers some aspects we know from the German system, mainly the dual system, but also introduces a lot of innovative and fresh ideas that could be of great benefit to the Israeli VET model. In Israel, the Ministry of Education does not play a role in reforming the education system and the central body for tertiary education, the Council for Higher Education, has, at least in the past, represented mostly the interests of institution providers. By learning from the Singapore model and the other European states mentioned in this report many problems caused by short-sightedness can be avoided in the development of an Israeli VET system. In times of crises, including the economic crisis, it is a well known fact that people invest in human capital, thus it is essential to begin developing a model to ensure the best possible education to advance both the Israeli economy and society.

References

- Bosch, Gerhard. Vocational Training in Germany, June 2005
- Ebner, Chrisitan. “Neue Wege für die duale Berufsausbildung – ein Blick auf Österreich, die Schweiz und Dänemark”, November 2009
http://bibliothek.wzb.eu/wzbrieferarbeit/WZBriefArbeit042009_ebner.pdf
- Nathanson, Dr. Roby, Hagar Tzameret-Kertcher & Adam Lahav. “Ways of Generating a Model for Vocational Training in Israel”, Executive Summary, Macro Center for Political Economics, December 2009.
- OECD. “Economic Survey of Israel: How to move ahead in education reform”, 2009
http://www.oecd.org/document/14/0,3343,en_2649_34605_44393678_1_1_1_37455_00.html
- Song-Seng, Dr Law. “Vocational Technical Education and Economic Development – The Singapore Experience”, September 2007
http://www.ite.edu.sg/about_ite/ITE_Conference_Papers/Vocational%20Technical%20Education%20and%20Economic%20Development%20-%20The%20Singapore%20Experience.pdf
- Swedish Presidency of the European Union. “The role of vocational education and training (VET) in meeting the challenges of today and tomorrow”, November 2009.
http://www.se2009.eu/en/meetings_news/2009/11/12/the_role_of_vocational_education_and_training_vet_in_meeting_the_challenges_of_today_and_tomorrow
- Zander, Ingo. ”Berufsbildung im internationalen Vergleich”, Neue Studie des Instituts für Arbeit und Qualifikation, November 2009
http://www.wdr5.de/fileadmin/user_upload/Sendungen/Leonardo/2009/11/Manuskripte/ms091111InternationaleBerufsausbildung.pdf

A New Model for Vocational Training in Israel

Reviewing vocational training models from various countries is extremely beneficial. At the same time, it must be noted that the dual system, while successful in countries such as Germany, will not achieve the same level of success unless it is molded to fit the unique features of the Israeli labor market. Specifically, Israel suffers greater inequality than Germany and we must keep that in mind when we create the Israeli model of vocational training. Attention now turns to the discussion of a new model for vocation training in Israel. The model is divided into the micro-level (the new vocational school) and the macro-level (the overall system planned and implemented by the various institutions from the private and public sector).

The New Vocational School in Israel

The objective of the new vocational school is to build a professional future for students who have completed their studies. This is the first and only school of its type in Israel in which academic studies are not the students' principal objective. A student who does not succeed in his/her studies will not drop out of the system; rather the school will have to find a framework and curriculum which is suitable for his/her needs. The objective is to develop a generation of professionals in their fields, who can find their place in the labor market and in civilian life without an academic education and a complete matriculation certificate. The results of which will address the needs of 50% of the population who are currently not eligible for a matriculation certificate. To achieve this, it will be necessary to develop an alternative course to the matriculation-oriented academic course which will enable development and advancement on various levels of qualification and various tracks. The matriculation certificate will not be entirely eliminated, for interested and suitable students will take all of the matriculation examinations within the vocational training framework.

One of the basic elements for the success of a vocational school is the relationship between the student and the school. Today, vocational education students are not viewed favorably by, and do not favor, the schools and the educational system. Thus, a system which includes practical training must be characterized by a positive relationship that is based on trust, investment and the desire to achieve, both in school and in the business where the practical training takes place. As part of this process, the school must maintain a close relationship with the students' parents, who sign the employment contract, so that reinforcement and support from home are used to help keep the students in the system.

Preparing students for employment includes formal studies which prepare young men and women to find their place within the organization. A school whose purpose is to serve and train employees for industry must operate in this industrial spirit. The characteristics of the school, the standards of the teachers, the attitude toward the students and the study methods will be adapted to the standards and work methods prevailing in industry. In addition, a school of this type will have clear and extremely rigid standards of discipline. Smoking, alcohol, drugs and violence will be prohibited and any student caught breaking these rules will be expelled immediately. This way the school will be able to acquire prestige and to position itself as an educational institution which prepares students for civilian life after their military service.

The practical training in industry and private business will be governed by a contractual engagement and protected by law. The contract will be between the employer, the student and his/her parents, in similar fashion to the contract which characterizes the German system. The very existence of the contract will raise students' level of commitment and will enable the school and the business to demand more from the students and vice versa. This will prevent students from "cutting classes" and will optimize the students' training time for the performance of tasks within the business, such as cleaning, tidying and office work.

In addition, an essential principle of the school will be complete cooperation between the school, industries and businesses. The school will be required to involve the employers in building the list of school subjects, designing the curricula, practical training for the students and participation in the cost of practical training, as in the German model.

A problem vocational school students must cope with is the shortage of high quality personnel in the system. The salary conditions in the schools are identical to those which prevail throughout the educational system; teachers must compete with the far higher salaries offered by industry and high-tech. Another problem involves the fact that many vocational training teachers do not meet the requirements defined by law for teachers. Today, teachers are required to have a bachelor's degree and a teaching certificate. These requirements are, however, largely ineffective for professional training.

The position of the school principal is complex and will require maximum flexibility and considerable freedom of action. The principal will be the one to decide which subjects are to

be taught, according to the requirements of business owners in the area and businesses which are willing to participate in the practical training process. In addition, both the principal and the school will remain committed to the students even after they graduate. For instance, they will help the students gain acceptance into elite units of the IDF, in positions corresponding to their areas of study. Following the discharge from the IDF, they will give support to students entering the labor market and will help them find work in their fields of study.

The Macro Model for Vocational Training in Israel

The Macro model for vocational training involves the inculcation of formal and informal practical work skills in order to improve individual chances of finding work. The work skills are acquired in many ways and include: formal education, practical vocational training and apprenticeship in the workplace, on-the-job training and independent study. These skills are required in various stages of one's life; the principal stage is in line with the division of the project by training young people before they enter the labor market and training adults within or outside the position and the labor market.

Today, vocational training in Israel is performed in a number of ways; the most important of these are vocational training schools, training courses in various professions in public and private institutions, on-the-job study and private training programs by the various businesses.

In order to combine all of these factors and set up a central model, it will be necessary to establish a central authority which will be responsible for professional training in Israel. The role of the authority will include coordination among all of the elements in the system, determine the course of action, pass laws and regulations, employ long-term strategic planning, and supervision of training levels. Authorities of this type exist in various forms in many countries in the world including: Australia, Brazil, Canada, Hungary, Jordan, Singapore, Sweden and the United Kingdom. These authorities differ from each other in a number of ways such as the way in which they are governed, the scope of their responsibilities, and how they are funded. Should it be decided to establish such an authority in Israel, it will be necessary to examine the various types and to adapt their characteristics to the complete model to be implemented in Israel.

Below are the main recommendations for the creation of a new Israeli vocational training system.

- A principal factor in designing the vocational training system is to offer a diverse variety of trades taught and curricula. It can be learned from the German system that flexibility in the number of trades taught, the definition of the trades and the curricula enables the provision of a response to changes in the labor market, as well as to the requirements of a broader range of students with differing abilities and needs.
- In Israel, the responsibility for vocational training for young people is divided between the Ministry of Education and the Ministry of Industry, Trade and Employment. Further in the project, it will be necessary to examine the unification of this field under a single entity, and/or the creation of an authority responsible for vocational training in Israel, such as those that exist in many countries throughout the world.
- The vocational training system will need high quality teachers and trainers with appropriate experience and training. Today, it is difficult to retain high quality personnel in the vocational education system, due to the severe competition by industry and high-tech, where salaries are much higher than in the school system. Yet, rather than employ teachers who lack relevant experience, special effort must be made to attract technicians, practical engineers and field personnel with significant experience to the vocational school and train them how to teach in a classroom setting. Teacher training is two-fold. In the short term, experts and professionals must be trained to become teachers. In the long term, a sound methodology must be created that will dramatically enhance vocational education and this must be done with the cooperation of industry.
- We need multiple models to be taught, a “one size fits all” approach does not work. The multiple models to be created must ensure that students do not get stuck in careers that have no room for advancement. Also, the teaching industry must be enhanced by increasing the “hands-on” approach to more classes and making the programs as diverse as possible to ensure youth are trained in a variety of occupations. Pilot programs need to be created in order to ensure the success of the schools. It should be mentioned that the Ministry of Education is running these types of programs and considerable progress has already been made.

- It will be necessary to perform comprehensive research on the long-term effectiveness of vocational training for young people. Similar research studies that were carried out in the past by the Ministry of Industry, Trade and Employment and the ORT Network showed that a higher-than-average percentage of graduates of vocational tracks were employed, and that their salaries were also above average. At the same time, given the performance of the existing system in Israel, it will be necessary to show the need and the effectiveness of the existing system before issuing recommendations for establishing a new system and new schools.
- As part of the vocational training model, it will be necessary to establish an alternative qualification track for students who are not suitable for the academic, matriculation-oriented system. The new qualification system must enable advancement in the area studied according to students' knowledge and professionalization in the field. It must also be possible for students to transfer between the various educational systems (vocational training system, matriculation system, academic system). At the same time, the intention is not to eliminate the matriculation-oriented academic track and any student who wishes to take the matriculation examinations parallel to his/her vocational training will be able to do so.
- It will be necessary to emphasize the involvement of the private sector, industry, formal education sector, and the IDF in the process. Joint cooperation among these sectors should be included in the planning of the system, setting up the schools, selecting the study subjects, and building the curricula. This measure will increase their commitment to the training system and the students. This is one of the strong points of the German training system and must be adopted in Israel.
- A large effort will be needed to make accreditation of occupations more prestigious. The Ministry of Industry, Trade and Labor adopted a professional accreditation program but it must be improved and widened so that the program covers as many professions and trades as possible.
- The Ministry of Industry, Trade and Labor will concentrate the efforts and VET framework will be budgeted appropriately. Moreover, rather than physically build new schools, the Ministry should use existing structures or rent buildings, for physical construction is too lengthy and costly.

- One of the main problems in Israel's present vocational training system is the image of the system in the public eye. Young people are more interested in academic studies; vocational training simply fails to appeal to them. Parents "push" their children to be doctors, lawyers, accountants and so forth, even when there is a small demand in Israel's economy for those professions. To combat the negative public image we must build a high quality vocational training system that offers youth genuine and sustainable employment opportunities that will not block their social mobility. Thus, reforming the system in its entirety will make the vocational training system more attractive and create demand for vocational education and training among the Israeli population.

Tackling Youth Employment through Enterprise-Based Schemes in VET Programmes (ES-VET): An ILO Perspective⁷

Strategic Objectives of the ILO

- › Promote and realize standards and fundamental principles and rights at work
- › Create greater opportunities for women and men to secure productive employment and decent work
- › Strengthen the coverage and effectiveness of social protection for all
- › Strengthen tripartism and social dialogue

⁷ The slides are part of a presentation given by Michael Axmann, an ILO Expert in Skills Development Systems at the ILO Skills and Employability Department.

Strategic Policy Framework 2010 –2015 (ILO Outcome 2)

- ▶ « Skills development increases the employability of workers, the competitiveness of enterprises and the inclusiveness of growth »

ILO Approach in Skills Development and Employability (e.g. Recommendation No. 195, 2004) is based on some key elements, such as:

- ▶ Portability and employability of skills,
- ▶ Development of higher level skills,
- ▶ Linking employers to training providers and increasing workplace learning,
- ▶ Entrepreneurship development,
- ▶ Establishing labour market information systems and working with employment services,
- ▶ Skills contribution to “Decent Work”,
- ▶ Development of core skills (such as problem solving and team work),
- ▶ Development of regional recognition schemes, and
- ▶ Integrating skills development into national and sectoral development strategies.

Youth Unemployment Rates

UN and OECD statistics show that the youth unemployment rate in most countries is often

2 times higher than the general unemployment rate

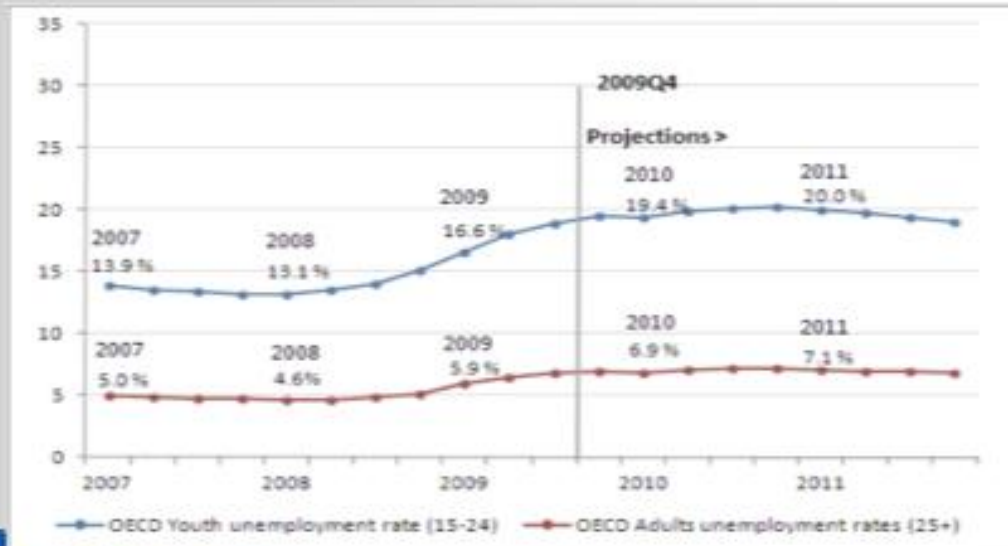
- with notable exceptions in some European countries:

Youth Unemployment Rates in selected OECD countries

(measured as unemployed people from 15-24 years in relation to overall labour force in %)

Countries	1999	2000	2001	2003	2007	2008
Austria	4.8	4.9	5.4	7.0	8.7	8.1
Denmark	10.0	6.7	8.3	9.8	7.2	7.2
Germany	8.2	7.7	8.3	10.6	11.7	10.4
Iceland	4.4	4.7	4.8	8.2	7.7	8.2
Ireland	8.5	6.4	6.2	7.8	8.7	10.5
Luxemburg	6.8	6.4	6.7	6.2	6.7	7.0
Netherlands	7.0	6.6	5.8	6.7	6.3	5.6
Switzerland	5.6	4.8	5.6	8.5	7.1	7.0

OECD Youth Unemployment Predictions (20 April 2010)



8 Components of EBS-VET

- ▶ Linking employers to training providers
- ▶ Developing core skills
- ▶ Using different learning places
- ▶ Teacher training and training of trainers
- ▶ Cooperation with key labour market actors ("social consensus")
- ▶ Integrating skills development with national strategies
- ▶ Employability of skills
- ▶ Entrepreneurship education (KAB)

Successful Practices in EBS-VET

- ▶ Pre-employment
- ▶ Apprenticeship
- ▶ Post-secondary

Pre-employment EBS-VET

The Netherlands (ATB)

- ▶ New concepts of teaching
- ▶ Variations in learning places
- ▶ Collaborative training schemes with enterprises and Regional Training Centres (RTCs)
- ▶ Active relationships with SMEs

Thailand (ILO)

- ▶ Make pre-employment training flexible and relevant (up to 6 months)
- ▶ Work with enterprises in carpentry and motorcycle repair
- ▶ Alternating work and learning places
- ▶ Evaluation with tracer studies

Apprenticeship EBS–VET

Germany (“Dual Systems”) Malaysia

- ▶ “Reflection learning” practices in schools
 - ▶ Cooperation between enterprises and schools
 - ▶ Strong demand-orientation
 - ▶ Promote employability in a changing workplace
- ▶ Apprenticeships are “bridges to further and life-long learning”
 - ▶ Direct involvement of industry and SMEs at all VET levels
 - ▶ Pre-service and in-service teacher training
 - ▶ Involvement of key VET actors
 - ▶ Demand-driven and economically affordable training solutions

Post-secondary EBS–VET

Denmark (AMU)

Cameroon and Benin (ILO)

- ▶ Training for low-skilled adults
 - ▶ Training is work-related and organized in workshops, not in schools
 - ▶ Tripartite trade committees in charge of updating courses
 - ▶ Project-organized training with trainees as active learners and main focus on core skills
- ▶ Training interventions for master craftspeople
 - ▶ Market-driven approach
 - ▶ Training is used as an entry point to improve market positions
 - ▶ Training in technical skill upgrading and introduction of new technologies

Skills Development Yesterday and Today



5 Recommendations

on how to integrate EBS-VET more
widely into a portfolio of interventions
in VET
and Skills Development!

1. Support of any kind of Public-Private-Partnerships (PPP) by:

- ✓ Looking at successful best practices
- ✓ Documenting results
- ✓ Adapting cases to national and regional situations
- ✓ Pilot running good examples
- ✓ Multiplying on a larger scale

2. Design more demand-driven programmes by:

- ✓ Involving enterprises at very early stages of programme development
- ✓ Using quantitative ways of research to identify skill needs
- ✓ Comparing desired enterprise skills levels with what public institutions can deliver
- ✓ Identifying deficiencies and making up for shortcomings in curriculum and programme development

3. Design new learning environments by:

- ✓ Trying to make programme development and designing a joint process between ministries, vocational schools, enterprises, trade unions and national VET Centres
- ✓ Designing flexible and short cycles of EBS, which directly respond to training needs
- ✓ Qualifying students to organize their own learning-on-the job
- ✓ Upgrading the roles of teachers to coaches

4. Prepare teachers/trainers by:

- ✓ Setting up pre-and in-service teacher training
- ✓ Combining theoretical and practical aspects of teaching in learning situations that have real-life and real-work importance
- ✓ Emphasizing a legal and didactical framework in teacher training and the joint role of vocational schools, institutes and enterprises
- ✓ Making frequent internships and/or initial apprenticeships in enterprises mandatory for vocational school teachers

5. Establish tripartite bodies by:

- ✓ Involving the social partners nationally, regionally and locally in working level committees
- ✓ Dividing responsibilities along the lines of comparative advantages of each stakeholder
- ✓ Marking ownership through individual contributions

The Israeli Economy

- › Exports more than 40% of its GDP, but unemployment went up by 2% from 2008-09
- › Strategic assets are science and technology, high-tech sector in Israel was hit hard by the crises
- › Large number of part-time jobs, higher than the usual rate in developed industrialized countries
- › "No real coordination between education frameworks in Israel" (Summary Report 2009, p. 23),
- › Entrepreneurship rates in the business sector are lower than in the Western countries

VET in Israel

- ▶ Only 30% of the students are enrolled in VET (as opposed to 50% in the 80s),
- ▶ 13,000 technicians and engineers required for industry and research each year seem to point at skills shortages,
- ▶ No more new « skilled immigration » from the former Soviet Union,
- ▶ TOV – Technician and Matriculation Programme,
- ▶ Recruitment of teachers and trainers, formally employed in industry and the military – for the VET system .

Some Considerations for Implementation in Israel

“Institutionalizing” the involvement of the private sector on all levels, including the active involvement of Histadrut plus introducing external certification for apprenticeship programmes

Providing “demand-driven” skills development and taking a sectoral perspective, for example in IT, using LMI and initially working in clusters using Skills Needs Analysis (SNAs) and Training Needs Analysis (TNAs)

Turning institutions into true “service providers” with non-bureaucratic management, and with regional autonomy for working with the private sector and including entrepreneurship education in all vocational schools

Setting up an “Israeli VET Institute” for better adapting the VET system to the needs of the labour market and working closely with employment institutions

Appendix: Vocational Training Tour

Background: A meeting with the steering committee was held in the first week of May in 2010. Dan Sharon, the director of the school at the Stef Wertheimer Industrial Park introduced their model of vocational training. This was followed by a guided tour of the school. The tour continued to the Amal school which was held in cooperation with the Israeli Air Force at Ramat David. The meeting led to a number of insightful comments and remarks with regard to the development of a new vocational training system in Israel.

Stef Wertheimer Industrial Park

In May 2010, the steering committee members were given a tour of several vocational institutions including Stef Wertheimer Industrial Park, Amal school and the Israeli Air Force at Ramat David. At the Stef Wertheimer Industrial Park, Dan Sharon recalled a quote from Stef Wertheimer, who once said, "There will be no industry without training people". The school system at the Stef Wertheimer industrial park for adults is divided into a basic part which consists of approximately 1,280 hours of teaching and an advanced part which is similar to the German *Meister* and includes approximately 1800 hours. The tour of the Stef Wertheimer Industrial Park gave the steering committee members an impression of how the training is connected to the industry.

In addition to the industrial park for adults, there is also a youth school, which was built in 2006. It is a "Miktzoi" course; it is not purely technological, which means that of the weekly 40 hours, 20 hours are spent covering the specific profession and 20 hours are spent on general education. Students learn from 8:00 to 17:00 and each morning the teacher spends approximately 15 minutes with each pupil to discuss any personal problems or anything that might be bothering them (this is the so-called "Boker-Tov"). Toward the end of the day, the students conclude with what they have learned and they check to see if they have understood the lessons for the day. The majority of the students who attend the "Miktzoi" course are from the weaker segments of Israeli society. The students are, however, able to finish with a "Bagrut" (matriculation certification). Teachers emphasize creating a friendship relationship with the students. In the case that a child gets tired of learning about a specific job there will be an attempt to find him a new one and of the responsibilities of the teacher is to spot this in advance.

The school is connected to the workplace and this is of great benefit to the student. As for the "Chanichut" program, this was not successful because the workers did not find the time to teach the students. The machines used in this program required the students to possess certain knowledge that they simply did not have. A small factory next to the school will be built in the near future and there students will have the possibility to learn the processes from the outset. As for the budget, two-thirds comes from the Government, and one-third is covered by private sector donations and funds.

Amal Network

Similar to the students who attend the youth school at the Students who attend the Stef Wertheimer Industrial Park, Amal Network attracts students from the weaker segments of the Israeli population. Students get a degree after 12 years of study and they have nearly a one-year advantage in relation to other soldiers when entering the army.

The structure of the training is divided in three parts. The first section is called "Mechonot Tefa", the second section is called the "Mechonot Tefa" and the third section is called Energy. While many of the students have some personal problems to one degree or another, nevertheless they are all intelligent and improve their skills with time. One of the things the Amal network does is it cooperates with the police to get students who have a violent streak into an organized "reconciliation". The success of their efforts are highlighted by the fact that 99% join the army after school

Program "Shocharim"

In this program, students work for a wage of 400 NIS, they receive a warm lunch that unfortunately is the only warm meal they receive all day. The classes have approximately 15 to 25 students and the teachers help the students with their English, mathematics and offer guidance. In extraordinary cases, money for a trip to Poland, for example, will be collected and donated to the student if the student cannot fund the trip him/herself.

The military base that the soldiers stay at belongs to the Air Force and Amal provides all the necessary equipment, while the Air Force pays for a psychologist, who comes to visit the students at the base one hour per week to help strengthen the relationships between the students and the teachers. The steering committee members visited the rooms that the students learn in. The classrooms are renovated and are well equipped.

Proposal for a Vocational Training Model for Israel

One of the most important mechanisms for expanding participation in the Israeli labor market and reducing unemployment and poverty in the long term is vocational training. Government-initiated models found in many OECD countries that involve the participation of the business sector, trade unions, the self-employed and employees themselves have proved to be highly efficient in the attainment of the aforementioned goals. With this in mind, we would like to propose a structured model for Israel.

For more information, please visit:
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