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PALESTINE VET-NGO LEAGUE

GAP ANALYSIS REPORT



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Gap Analysis Report
for the
League of Vocational Education and Training
Association, Palestine (VET-NGO League)
April 2011

This survey, analysis and report has been prepared by MTC International Development Holding Company, LLC (MTC) and General Consulting and Training (GCT). The report was prepared for USAID and Save the Children to document the results of the Gap Survey and Analysis of TVET Centers in the central and southern regions of Palestine. These TVET Centers are members of the League of Vocational Education and Training Association, Palestine, also known as the VET-NGO League. All information is factual and represents data and input collected from multiple sources. The report does not necessarily represent the opinions or approaches of MTC or GCT.

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development and the Government of the United States of America.

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Executive Summary

This report was prepared for the United States Agency for International Development (USAID), Save the Children and the League of Vocational Education and Training Association, Palestine (the VET-NGO League) by MTC International Development Holding Company, LLC (MTC) and General Consulting and Training (GCT). The report captures the findings and analysis of the Gaps between what the Palestinian labor market demands, and how well the seven targeted TVET Institutions are training new workers and addressing the demands of the industries.. The three centers managed by the VET-NGO League in Jerusalem, one center in Gaza, one center in Jericho, and three centers in the north are not included in the study at this point, but may be considered at a later stage. The Evangelical Lutheran School of Hope, which is being built in Ramallah was included in the survey, but as the new facility has not been completed it was not possible to add data from the school to the survey results. The additional 8 schools in the VET-NGO League were included in some of the general data collection and recommendations for the League as a whole..

Through the results of the *Regional Economic Status Report* prepared by MTC/GCT, the study team identified seven major growth industry sectors for Palestine in the near future. The sectors include:

- **banking and financial services;**
- **property development;**
- **construction;**
- **hospitality;**
- **service technician repair and maintenance;**
- **automotive; and**
- **agriculture.**

The regional economic study provided a macro-level gap analysis between actual provisions for Technical and Vocations Education and Training (TVET) in Palestine and those in the ideal context of vocational skills development leading to employment in areas of proven labor demand. The Gap Analysis here takes that review closer to the ground level with an appraisal at the TVET Center level, including student and employer perceptions of the efficiency and effectiveness of current provisions for vocational education and training. Our team has also reviewed the programs currently offered by the VET-NGO League member institutions, compared to the growth sectors listed above.

As an outcome of our research, the MTC/GCT team identified seven gaps between what industry wants and TVET Centers are offering. The gaps include:

- **Gap #1: Fragmented national system and framework-** Currently there are two major ministries overseeing TVET programs in Palestine, the Ministry of Education and Higher Education. While there is a new National Strategic Plan to formalize the TVET system in

Palestine, currently TVET Centers are operating under limited and fragmented certification and oversight from several ministries and there is very limited guidance and direction.

- **Gap #2: Poor internal and external collaboration-** The VET-NGO League Centers have poor collaboration within the League and with the private sector. However, recently the League hired an Executive Director who is focused on developing great communication and collaboration among League members and further developing relationships with the private sector.
- **Gap #3: Outdated training programs-** Most TVET Centers in the League have outdated equipment, curricula and teaching methods. The training programs do not meet the expectations of employers and are not up-to-date with technology and skill sets that will be globally, or at a minimum, regionally competitive.
- **Gap #4: Limited employability skill training-** Employers in our study identified that students lacked lifeskills such as language skills, customer service, attendance at work, basic skills such as math and English and personal skills to be successful on the job and more employable.
- **Gap #5: Limited staff preparation and qualifications-** For several reasons, including limited funding, staff in the VET-NGO League are not always qualified or certified to teach. While having knowledge in the specific trades, many lack skills for preparing and teaching in a classroom. Staff are also limited in the use of technology in the classroom and different modalities and approaches to teaching.
- **Gap #6: Lack of resources-** Most support to VET-NGO League Centers comes from private or church funding. Employer commercial relationships and community support for Centers is very limited. More formal and comprehensive relationships with employers and industry is absent. Most centers reported that they are under-funded and don't generate enough funding or in-kind support to even operate. There aren't enough resources to expand or improve.
- **Gap #7: Lack of financial resources-** The VET-NGO League Centers rely mostly on tuition and support from their sponsoring bodies. There is not enough funds to operate in the current mode, and certainly not enough to improve the gaps listed above.

Our team has included general recommendations for each Gap identified. Very specific action items and steps for the TVET Centers to develop a road map for alleviating gaps, and becoming a truly demand-driven system will be provided in the Regional Economic Action Plan, which accompanies this report. The action plan addresses the national gaps and the requirements to develop a more quality system with certifications and accreditations, as well as the gaps and improvements needed for each of the seven League centers that we evaluated. Whole center plans will be developed with the VET-NGO League centers, in concert with the administrative unit, immediately following the submission and approval of these reports. The action plans will be revised and updated after all whole center plans are completed.

The goal of the USAID supported TVET Program is to assist the VET-NGO TVET League, Palestine and donors, to upgrade and modernize vocational education and training programs to enable improved employment and employability options for Palestinian youth. This involves, as a baseline,

strengthening provisions for effective school to work transition, consisting of a well-organized bridge between TVET Center courses and demand for skilled labor in the strengthening industry sectors of Palestine.

TVET Program outcomes should include increased:

- availability and access to non-governmental technical and vocational education and training;
- quality and relevance of services delivered by non-governmental technical and vocational education and training institutions;
- demand for technical and vocational education and training by youth, families and the Palestinian society; and
- an improved enabling and supportive environment for TVET services.

Most descriptions of the TVET system in Palestine identify two major players in the system, the Ministry of Education and Higher Education, and the Ministry of Labor. TVET Centers, under either of the governing bodies, face a similar range of issues and constraints. Although challenged in the areas of governance; finance; qualified staff; essential resources, including equipment and tools; and appropriate learning environments, the VET-NGO League is a potentially rich resource for assisting in the development of a more responsive Palestinian TVET subsector within the national education system.

As private training providers and/or NGOs engaged in a business-like provision of skills training, the VET-NGO League Institutions play a larger role than publicly-owned TVET training organizations in skills development for both the formal and informal sectors of employment. Their courses tend to be better focused, of a higher quality and more sustainable. There is also evidence of good employment prospects for graduates, though employers often find such graduates short of work readiness status. Potentially, the VET-NGO League members have a number of important advantages in the area of vocational skills development for employment. For example, the fees they charge represent a low cost for participants. When the VET-NGO League TVET Centers focus on a few trades or occupations, the training tends to be of a high quality and, in principle, there are good prospects for employment for trainees upon graduation. After addressing the major gaps and upgrading programs, the League could be a model for the new National TVET Strategy.

Our methodology included literature review and interviews with key ministry and Palestinian National Authority (PNA) leaders. Surveys were also taken with employers, and focus groups were also held with employers, TVET Center Administrators, staff, students and graduates. The MTC/GCT team also made observations and reviews of center operations. Since our initial version of this Gap Analysis,

prepared in November of 2010, we have also met with Industry Union members, Chambers of Commerce, additional private employers and TVET center graduates.

Our team initially interviewed and completed surveys with over 550 business people in multiple sectors, with 25 of them being key government officials. Questions in the surveys were strategically developed to gather perceptions and information about employer and government relationships with the VET-NGO League centers. In addition, MTC/GCT held focus group sessions with 54 students from various VET-NGO centers. Some were current students, some had graduated and were not working, and some were working. Where students were working we were also able to interview 13 of their employers.

Accordingly, assessments by the study team during this, and subsequent assignments, included:

- the development of research instruments and administering individual assessments of the VET-NGO League TVET Centers;
- travel to TVET Centers/institutions in neighboring Jordan, to assess the administrative climate for innovation, the condition and value of existing equipment, the quality of instructional staff, local and regional employment trends and prospects, and other relevant dimensions that will maximize potential investments. Since some of the curricula and program design used in Palestine came from Jordan, our team wanted to determine if any of the good practices used in Jordan are being used in Palestine today, or if they are relevant to the League Institutions;
- evaluating the capacity and needs of centers, including the identification of possible technical assistance needed to bring a center closer to a level where the center can offer innovative approaches to education and training (this involved defining the context of the current TVET system and centers);
- assessing the institutional capacity of VET-NGO League members to oversee vocational education and training course programming, and identifying the required activities and technical assistance to strengthen the capacities of the centers to change, implement and sustain up-to-date programs required by the larger, Save the Children TVET Program and employers;
- evaluating the training related to viable industry clusters particularly in the West Bank and employer needs, including essential skill sets required by workers and employers, including a well developed plan to establish employer relationships and apprenticeships in the new industrial zones;
- comparing current employer perceptions of public and private TVET Centers/institutions and students and the expectations they hold about an improved workforce to meet industry needs; and

- assembling data and narrative to include in a Gap Analysis report to inform the VET-NGO TVET Centers leading to an Action Plan, which will provide a platform for developing an integrated whole center plan for each TVET Center's education development priorities and a road map for the steps necessary to alleviating the gaps.

The provision of technical assessment and assistance to the Palestine VET-NGO League member institutions is based on our knowledge of the elements and processes that are necessary for a sustainable and competitive employment and training system. Before assessing the gaps, and to guide our analysis, our team made some assumptions about what a good TVET system should include, and then tried to put those into a contextual framework of the major employment environment in the West Bank, which as demonstrated in the MTC/GCT parallel regional economic study, consists largely of the informal sector, micro-enterprises and small business operations.

Our assumptions included:

- In relation to demand-led vocational skills development, there is a specific role for government. Its key role is oversight principally in the areas of (i) the registration of TVET Centers and the certification and licensing of staff (instructors, teachers and directors); (ii) improving the quality and focus of education and of training through the certification and accreditation of courses of studies and Training Packages; (iii) research into relevant market niches; (iv) development and funding for professional training programs for instructors; (v) vocational skills and trade testing arrangements; and (vi) dissemination of information on the integrity of TVET Centers and their courses.
- The provision of vocational skills development and technical skills acquisition training must be demand-led, business-like and market-based. This means that there is a clearly defined and recognized need for specific skill sets in a context of entrenched skills shortages in the key areas of industrial growth and expansion.
- In relation to the informal employment sector, including micro-enterprises and small business operations, vocational skills development should be based on both the need for skills and the interests of informal and private sector operators.
- The provision of vocational skills development and technical training should be flexible combining (i) tailor-made content, (ii) blended, online, flexible and simulated delivery methods; (iii) instructional programs of a short duration (maximum of several months) or in a tiered approach; (iv) convenient venues (close to small industry workshops and shop floors); and (v) appropriate time schedules with adjustments for off-hours training and activities.

- Among private training providers more attention should be given to the potential of private training centers/institutions running a one-trade training center or trade cluster center (general construction for instance). Business-based training by private sector trainers/training centers for the benefit of informal sector operators and micro-enterprises tends to result in high rates of employment.
- In relation to the informal sector and micro-enterprise employment there is (i) considerable scope for improved industry-cluster training by employers, supplemented by private training center providers to provide general skills upgrading for master crafts; (ii) training for traditional apprenticeships; (iii) the introduction of new equipment, products and production techniques; and (iv) specialized training (including pre-vocational training, pre-apprenticeship training and training pathways taking trainees from the Certificate to Diploma levels).
- As labor mobility, trade and commerce are seriously dislocated throughout Palestine and into industrial zones, securing a functional link between formal and institution-based provisions for TVET, workplace training and subsequent employment will be a challenge. The situational analysis in relation to this gap is examined in the *Regional Economic Status Report*.
- Both formal and traditional apprenticeship training will require the infusion of new technical, technological and pedagogical skills. VET-NGO League Directors recognize this and have shared their concerns with the Project Team about (i) inadequate equipment and tools for vocational education and training; (ii) outdated curriculum programs and the absence of training packages prepared by industry itself; (iii) the poor preparation of their instructors and teachers and the absence of training for staff in service; and (iv) weak provisions for workplace training including work attachments and practicum based on skill set attainment.
- Vocational skills development and technical training should be combined with generic soft skills development. The importance of improved literacy, leading to better workplace communication, reporting and workplace safety, including the use and disposal of hazardous materials and liquids, and general workplace skills and etiquette are lacking.

1. Introduction

1.1 League of Vocational Education and Training Association

The VET-NGO League is a networking body representing Palestinian, non-governmental, vocational education and training organizations. Members of the League held their first networking meetings in May 2000. The meetings led to the formal inauguration of the League in May 2003, constituting the key non-governmental body contributing to the implementation of national plans for developing the Palestinian Vocational Education and Training sector. The USAID, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) and other donors support the league.

The League's central office is located in Ramallah and is engaged with developing more refined operating policies and procedures. To this end it works closely with major donors including USAID and GTZ in the areas of (i) curriculum reform and the development of new courses of study; (ii) improving the capacity of TVET Centers through professional training for staff; and (iii) upgrading selected TVET facilities including workshops and dormitories.

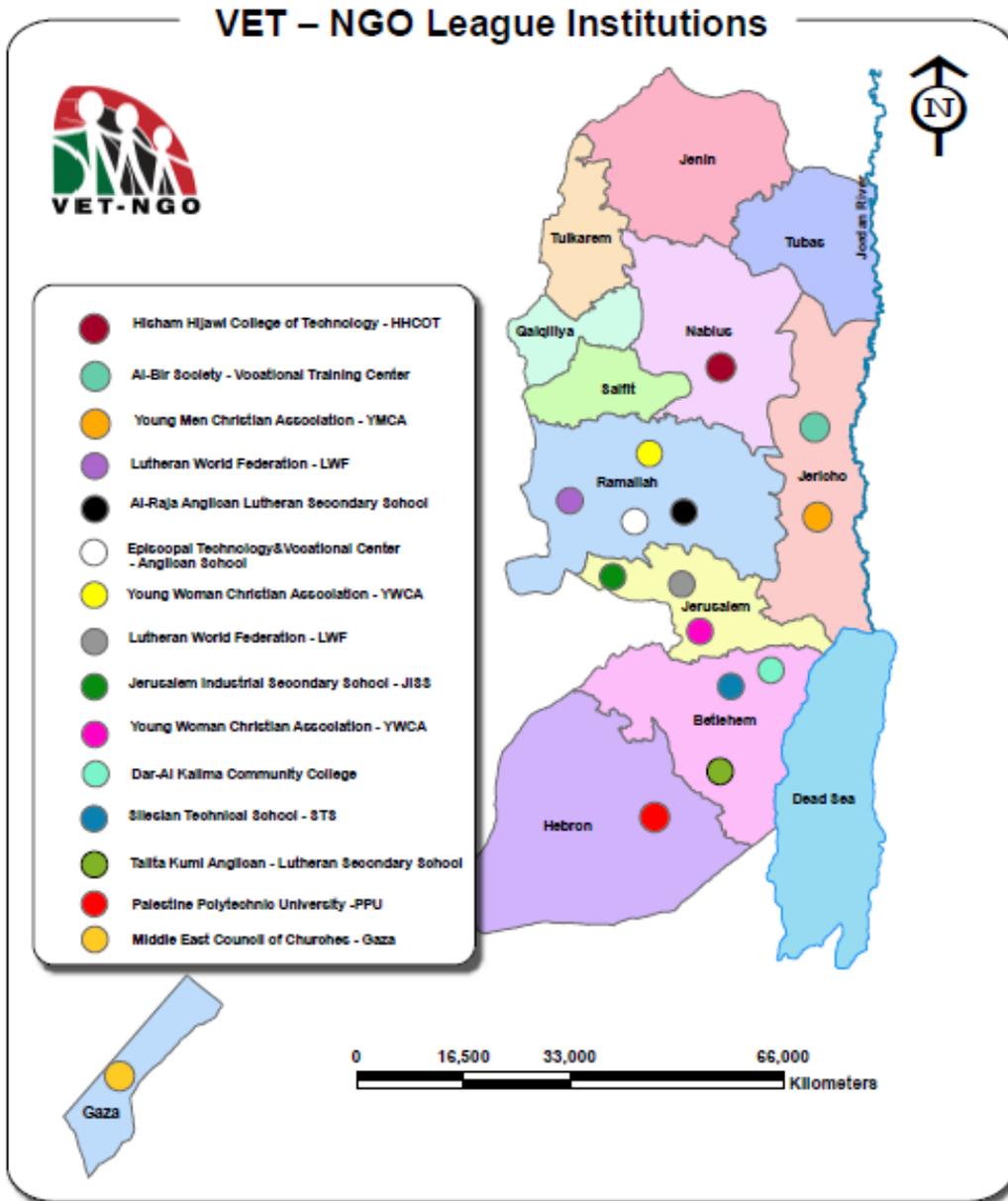
The main goal of the League is to support member organizations through building institutional capacity (see **Box 1**). The League also supports the training and professional development of instructors and teachers. This support entails the provision of targeted, technical assistance and equipment to help League members reach education and training goals specific to each TVET Center.¹

Box 1: The major functions of the League

1. Participate in implementing the national plan for vocational education and training;
2. Exchange experience and expertise within the League;
3. Undertake joint projects that improve the vocational education and training sector and the participating member organizations;
4. Use the accumulated experience of member organizations in developing the vocational education and training sector, and
5. Lobby for the development of the vocational education and training sector.

¹ Found in <http://www.itlaq.com/TVET/League.aspx>.

League members are identified on the following map:



(Reference: (VET –NGO League, 2010). Designed by: Eng. Abeer Abu-Sada.)

1.2 Scope of Work

The MTC/GCT team was expected to achieve the following objectives:

- design and conduct a gap analysis in geographic and economic clusters served by the benefiting TVET institutions to ensure that current and future trends of employment and economic growth are identified; and

- prepare a Gap Analysis report with clear recommendations about current TVET services, and the current and future vocations and skills, based on outcomes of the study.

1.3 Purpose of the Report

This report was funded by USAID and prepared at the request of Save the Children and the VET-NGO League by MTC/GCT. The purpose of the report is to make correlations and identify gaps between what employers in the West Bank labor market are demanding, and how well the VET-NGO schools are, and will be able to, ‘train-to’ those needs.

This report focuses on the current view of TVET programs in Palestine by training providers, employers, students and other stakeholders, based on an examination of current literature, surveys, focus groups and field interviews conducted by the MTC/GCT team. It is expected that the results will inform the VET-NGO League to upgrade and modernize vocational education and training programs to enable improved employment and employability options for Palestinian youth. This involves, as a baseline, strengthening provisions for effective school to work transition consisting of a well organized bridge between VET-NGO League TVET Center courses and demand for skilled labor in the strengthening industry sectors of Palestine.

It is important to note the data for this report was gathered from direct and indirect sources. In the time allotted it was not possible to verify the information provided by all sources.

1.4 Methodology

The VET-NGO League TVET Center Gap Analysis was based on a combined approach of collecting and analyzing qualitative and quantitative data. While it was difficult to collect adequate data for a truly scientific approach, as Center Directors were reluctant to share data or had not collected data, the MTC/GCT team was still able to report quantitative numbers in some cases.

As mentioned previously our research included surveys, focus groups and interviews with 550 business people and government leaders, 54 students and 13 employers willing to participate in focus groups. Some surveys were also conducted with groups, such as at meetings with chambers of commerce members, and in meetings with new industrial zone companies and industry unions.

Our methodology was designed to assess both external and internal entities and factors that determine the gaps between what the labor market demands, and the VET-NGO League TVET Centers provide. Our research employed a five part analysis, consisting of the following elements:

- An overall qualitative assessment of the system needs of the ministries, other government entities, business associations, key stakeholders and public institutions which may either, administer, compete or collaborate with the VET-NGO League TVET Centers. This includes a literature review and interviews with key people. Included also, is an overview of the central

players in the organizational structure of the current TVET system and discussion of the New National TVET Strategy; **(External)**

- An overall assessment of the operational framework and administration of the VET-NGO League TVET Centers, including quantitative data such as numbers of teachers, number of computers, number of trades taught, policies and procedures in place, etc. through interviews with center leadership; **(Internal)**
- An overall qualitative and quantitative assessment of the facilities at the VET-NGO League TVET Centers, including conditions of the buildings, upgrade needs, access for students, safety issues, using surveys and observation; **(Internal)**
- A market analysis, both qualitative and quantitative to determine if the trades being taught are relevant to the employer needs and growth within the viable regional, economic and industry clusters, through questionnaires, discussions with center staff and employers and through comparisons of the courses offered with viable sectors identified in the *Regional Economic Status Report*; **(External and Internal)**
- Qualitative focus groups and stakeholder forums to determine the private and community demands and the perceptions and needs of students, teachers, community members and employers. We utilized focus groups with current students, employers hiring graduates, graduates, and donors and TVET program implementers. **(External and Internal)**

From the surveys completed with Palestinian business people and key government officials for the Regional Economic Status Report, we were also able to glean data that could be included in the Gap Analysis, such as the perceptions of employers of the graduates from the VET-NGO League TVET Centers and public TVET Centers, the work readiness of the students and employer availability and interest in apprenticeships or on-the-job training, as well as the key growth sectors and the training and curricula needed to prepare workers for the viable sectors.

The qualitative analysis as noted is based on interviews and discussions with a wide range of stakeholders. Interviews and focus group questions drew upon structured, semi-structured and informal discussions with NGOs participating in workforce development and TVET training; key officials from the PNA; government officers from various ministries involved with education, training and workforce development; and administrators, teachers and students.

A list of Key People Interviewed is in Appendix 1. Sample Surveys and results are located in Appendix 2. Key Literature Reviewed is in Appendix 3. Questions for the PNA are in Appendix 4. Focus Group Questions and results are found in Appendix 5. Information and statistics on courses offered by Public TVET Centers, used for comparison to VET-NGO League Schools, is found in Appendix 6.

2. Overview of TVET in Palestine

There are approximately 300 institutions in the West Bank and Gaza, providing short, medium and long-term vocational education and training programs. They include: (a) vocational secondary schools, (b) vocational training centers, (c) community and cultural centers for training, (d) societies and charitable organizations concerned with education and training, (e) agricultural and economic development centers, and (f) Community Colleges providing post-secondary education.² Some universities offer TVET courses at the diploma level as well. For the purposes of this study, the range of vocational centers, colleges and universities providing instructional programs in vocational skills development that are largely private and not-for-profit are grouped together as TVET Centers of which the core group is constituted by the VET-NGO League.

The current system of TVET in Palestine is unorganized and not demand-driven. A number of factors hindering equitable development and delivery among operators exist. The system as it stands cannot develop rapidly to keep abreast of new requirements in education and training and the needs of employers. The fragmented national framework, lack of demand-driven training, poor internal and external collaboration, and limited resources of the TVET Centers, all contribute to a workforce development system that does not support economic growth, the reduction of poverty and the development of a viable workforce.

In separate discussions with the MTC/GCT team, the Director General of TVET (Ministry of Education and Higher Education) suggested that strengthening the relationship between TVET Centers and industry, employers and the private sector in general, requires the proposed revamped Higher Council of TVET. This Council has been inactive since 2006 as a result of Hamas securing the majority of the seats in Parliament and efforts towards an active Council have not gone forward. The *Revised TVET Strategy*, released in November 2010, is predicated on this Council being reactivated and strengthened through key instruments, including a National Accreditation and Quality Assurance Unit and Accreditation and Quality Assurance Committee.

It is anticipated that the Council will re-establish a presence and play a major role in a redeveloped and refined TVET subsector which, although clearly described in the *Revised TVET Strategy*, still awaits plans for a financial structure in which the redeveloped system will operate. In the absence of a regular active ministerial council for TVET, to oversee and regulate vocational education and training, the expected return to full operational status of this Council will be of significance for revitalizing the TVET system. The function of the Council as indicated in the *Revised TVET Strategy* is described as follows:

² Hashweh, M, *Towards a national vocational training system in Palestine*, Jerusalem 1995, pp. 7-10.

“The Higher Council as the political and strategic working body shall be revitalized to facilitate the existing decision of the cabinet upon the recommendation of both Ministers of Labor and Education and Higher Education. The chairmanship of this Council will be on a rotating basis, between the Minister of Education and Higher Education and the Minister of Labor. The mandate, internal working procedures and regulations will be reviewed by the Higher Council after reactivation ... a training fund will be established to provide the necessary funding for the system under the supervision of the Higher Council for TVET”.³

It is not possible to describe current provisions for TVET as regulated, uniform and benchmarked. This situation is worse with separate government departments having their own piece of TVET, which they are unwilling to hand over to a single overarching TVET agency. There currently exists an absence of coordination between the Ministry of Labor and the Ministry of Education and Higher Education and other ministries who inform or participate in TVET regulation.

The absence of a uniform system does not enable strong articulation in courses supporting a smooth progression for students from certificate to diplomas and degrees. Also, articulation and pathways between separate training organizations, enabling smooth student transfer as they progress through the system from one training center to another, are absent, even within the League. It also prevents articulation between separate TVET courses/qualifications. Student mobility is also limited and further constrained by the division between school-based secondary vocational education/training and formal secondary school education (academic oriented). Students do not have transferability of their skills between sectors and regions, thus making them not able to respond to industry needs in specific locations or venues.

Weak linkages between the TVET system and the private sector are another factor behind poor progress in TVET development. This is particularly pressing in Palestine where most businesses are small family business operations of which some have very limited income. The core of a strong TVET system is industry engagement, whereby employers, industry associations and the TVET Centers themselves are involved in joint planning to improve the relevance of TVET courses to the world of work. In the case of small businesses this includes a wide range of small-scale issues and constraints reducing the business profitability and productivity and their ability to engage with the training entities. In this context, people in the private sector who met with the study team advised that they were as much to blame as TVET Center Directors for the lack of a strong and robust relationship between industry, private sector employers and the TVET Centers. The Director General of the Federation of Palestine Chambers of Commerce, Industry and Agriculture, advised:

³ *Revised TVET Strategy. Winning for a future. Chances for our youth, Ramallah, November 2010, pp.25-26.*

“The relationship between the Federation and TVET Centers is weak in general and mostly based on personal relationships. This is mainly because there is a general lack of awareness for the importance of such strong ties with TVET Centers.”

Similarly, the Secretary General of the Palestinian Federation of Industries advised:

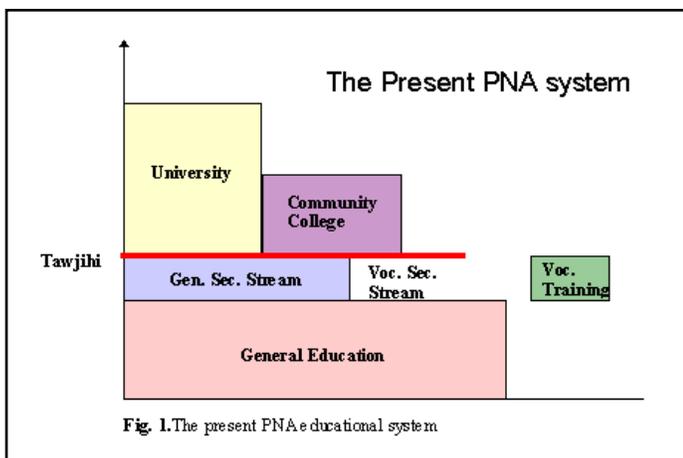
“The private sector should play a major role in the development of TVET Centers. The private sector should design the curricula, set strategies and engage in job creation. The role of the private sector should not be only as a consultancy.”

The current TVET organizational structure gives employers the impression that the most sensible place to look for new employees is the formal school education system, as this is where employers demanding skills can most readily find the most suitable graduates. If the existing structure suggests that the skills that TVET graduates bring to the market place are primarily job specific and entry level, and that the graduate will require a wide range of additional training in soft skills, chances are that employers will seek secondary school graduates with good grades and the perceived ability to be more advanced in their work skills. Employers will choose a high school or college graduate rather than a TVET graduate who lacks preparation for such areas as workplace communication, motivation and customer service, and literacy and numeracy skills.

The current organizational structure for the TVET system unfortunately places the TVET subsector alongside school education and higher education, giving once again the impression that TVET is on the deficit side of the national education system. This can contribute to employers not fully understanding the structure and function of vocational education and training, while the subsector is placed outside mainstream schooling. The current structure illustrated in **Figure 1** suggests a culture where TVET training is not valued by society and not connected to a continuum of education or a career pathway.

Figure 1: The current TVET subsector in Palestine

(Source: http://www.tvet-pal.org/Tvet_palestin_introduction.aspx)



A common road block for helping a TVET system to realize its full potential is the social image of TVET as a national education system sub-sector. In many national education systems worldwide, TVET suffers from a poor social image. It is viewed as a substandard approach to education and training and more suited to those students who have performed poorly in an academic school education. In this context, vocational education and training is considered as a deficit form of preparation for the world of work and indeed, is often regarded as education for dropouts. There are numerous studies on Palestine advising of the poor social image of vocational education and training. Families want to see their children successfully complete 12 years of school education and then enter a community college or university.

This view is mainly historical and can be traced to an era when a successful school education led to direct entry to a university, whereas a vocational secondary school education was seen as the pathway for unskilled employment. Within Palestine this view prevails with often the poorest families sending their children to colleges. However, in some centers in Palestine, provision is made by management to subsidize fees for poor families in order to secure sufficient students and to keep them there once enrolled.

In discussions with the Director General of the Palestine Investment Promotion Agency, the study team was advised:

“The main problem of TVET in Palestine is the culture... people only believe in academic studies and university levels... Jordan has overcome this obstacle in Hospitality by providing those [TVET] programs in Community Colleges and universities.”

The Team Leader of the GTZ-funded *Vocational Education and Labour Market Program* advised that GTZ is convinced that to improve the TVET system in Palestine, TVET Centers will need to attract quality candidates. This is a reflection of the deficit model of education that prevails throughout the region. The GTZ programs recognize that in the automotive industry for instance, there is less need for mechanics and more for technicians.

Public awareness campaigns are often drawn upon to enhance the social image and awareness of TVET. Quality campuses and learning environments serve as best practice models. There is a precedent for this in recent Palestinian history. For instance, during the Intifada, Palestinians overcame financial constraints and economic instability through investing in education and training.

When TVET was most active in Palestine it was employment and occupation oriented. TVET Centers provided instructional programs preparing workers to fill unskilled and skilled labor shortages in Israel in addition to Palestine. Over the last 10 years there has been a shift in orientation due to political conflict and instability in the region, globalization, and rapid technological changes in information and communications. GTZ advised:

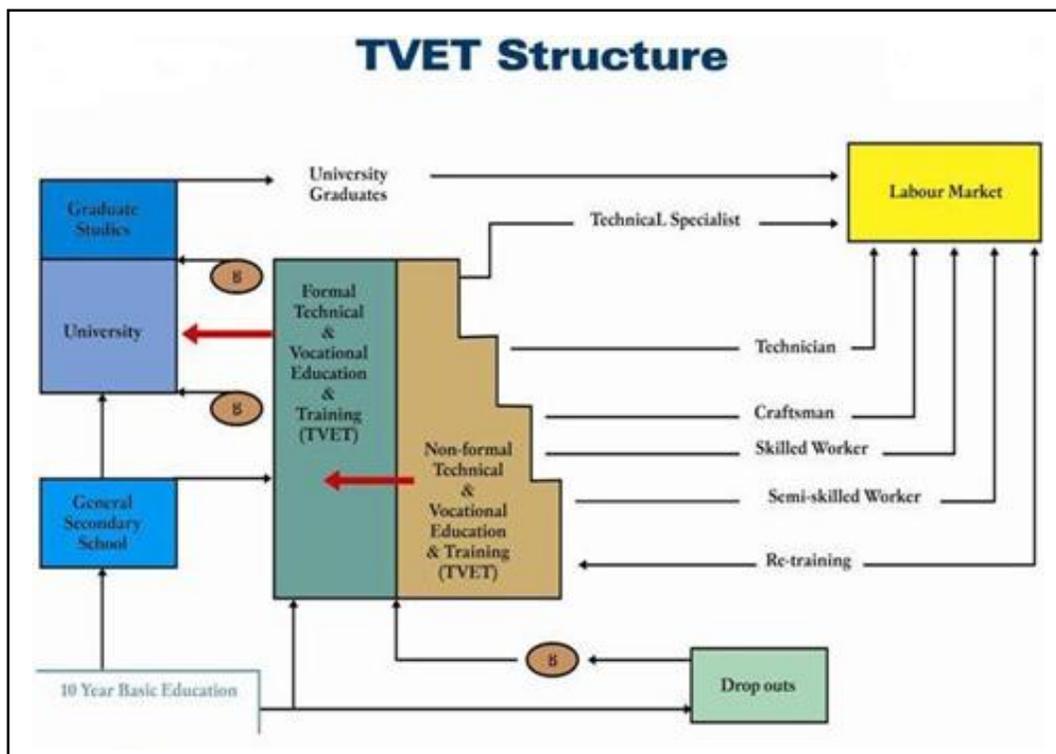
“Even for young people, who leave the country, they need good certification to be able to work in other countries and they need to be skilled and qualified. We no longer live in isolation. We are part of a big world due to globalization.”

Under the proposed TVET structure in the government’s *Revised TVET Strategy*, there is a clear pathway for all levels of skilled workers from re-training to technical specialists. There is also a clear way for students to move up the ladder from non-formal TVET in a natural progression, to formal TVET, university and even graduate studies. The paths all lead, from and to, the labor market.

Figure 2 is a model of the new proposed structure where TVET is very much a part of the education continuum.

Figure 2: The TVET system within a revised organizational structure

(Source: *Revised TVET Strategy*, Ramallah, November, 2010).



Despite being a relatively small subsector to the basic education system, TVET systems management is currently highly centralized. The various TVET schools and colleges do not have much autonomy, are subject to system rigidity and cannot exercise programming decisions requiring localized educational leadership.

Learning environments are sometimes not suited for the equipment needed and activities that must take place. There are few instances where training and assessment, leading to recognition of skills, is undertaken by students in real or very closely simulated workplace environments. The poor quality and

function of learning environments (classrooms, workshops, shop floors, laboratories) of many TVET Centers is a significant impediment to the introduction of new and up-to-date courses of study backed by the required tools, equipment and machinery.

New technologies, modern equipment, including hand tools, power tools and portable equipment, and technology based training, are all lacking. Many TVET Centers have poor infrastructure and limited financial resources to finance, install and maintain modern equipment, machinery, tools and computers. In fact much of the equipment and tools used for skills development in VET-NGO League TVET Centers has long since been superseded and is no longer appropriate or suitable for training in the modern industries. There are few opportunities for both private and public TVET Centers to purchase, service, and maintain new equipment and power tools.

Compounding the issue of small campuses and inadequate student access to the required equipment and tools needed for skills development, is Israeli government measures restricting and/or delaying new equipment shipments for TVET Centers. Often donated by donors active in TVET programs, the equipment and tools are central to the student experience and student learning outcomes. It is difficult for donors to justify ongoing support in this area if the TVET Centers are denied access to equipment owing to security concerns. It also has the unfortunate spin-off of putting graduates in danger once they are employed and when they are exposed to this equipment for the first time in the workplace. It can lead to costly repairs and profit loss for employers when equipment is used incorrectly and results in breakdowns.

For example, this is particularly relevant to the strong construction industry and the promising automotive and transportation industry in Palestine (both growth industries). Modern equipment in these industries is expensive, especially in the case of automotive, characterized by high technology requiring strict supervision in operations. Basic errors in operation caused by poor skill development causes major problems for assembly line work and can result in work sites being closed down until the vital equipment becomes operational once again. It is not unusual in Palestine to see a construction site, including its workforce, vacant, because of a key equipment failure that requires servicing not readily available within Palestine itself. As construction is one of the key growth industries in Palestine, TVET Centers must have the appropriate and up-to-date equipment for this industry and graduates who possess the knowledge and skills to operate and repair the equipment.

Courses of study and vocational education and training standards are outdated with the length of some courses well in excess of international norms. Often, in the TVET Centers, students graduate without the required range of skills for a single occupation, and a diverse range of skills across several related occupations. Often these skills are not cross-industry in focus and do not provide a launching pad for trainees to make a career decision about which particular trade within an industry cluster appeals to them (For instance, certificate level training in Construction Pathways, which provides a platform for young men and women to select a specific trade within the many that make up the workforce of the

construction industry).⁴ Vocational skills development in new career paths, central to employment in a number of expanding Palestinian industry clusters, is not being carried out in many TVET Centers.⁵ Provisions for work attachments or apprenticeships (formal and informal) are not regulated and there is no evidence of certification awarded to students on the completion of training. There is little evidence of the recognition of prior learning and existing skills when adults seek additional vocational education and training. The training is not competency based. In addition, there exists very little professional training or in-service training once teachers and instructors are recruited and are in the system, so teachers are not motivated to upgrade their methods of teaching or curricula or tie the skills learned to certification or achievement.

The curriculum reform process and a new strategy for strengthening the TVET system will provide a platform for more far-reaching quality improvements to the TVET system. Still, separate investments in funding support for the TVET strategy and the ongoing process of curriculum reform and teacher training will need to take place within an approved investment framework to ensure the re-development of the TVET system is integrated and not subject to ongoing fragmentation. The reform measures are necessary as the performance of the TVET subsector is overshadowed by basic school education and higher education. The TVET Centers will need to be equipped with essential curricula and competency sets for industries requiring well trained and skilled workers across a large number of disciplines leading to specific job outcomes.

Demand for vocational education and training is weak with high applicant-place ratio (e.g., no waiting lists), but small numbers of students enrolled. Some key comparisons include:

- low levels of student enrollment in vocational education and training (less than 5% of total enrollment in the national education system);
- low levels of unemployment among graduates of vocational education and training compared to graduates from academic/school education, but still not reducing unemployment significantly;

⁴ Construction Pathways is an example of a course of study suitable for a small TVET campus with low student numbers. The introductory course exposes students/trainees to a range of occupations in construction trades which once having completed the course they can make an informed career decision about which occupation they would like to pursue in the construction industry. In a typical course (Post Grade 9 entry) a student would undertake core units in: Work effectively and sustainably in the construction industry; (ii) Plan and organize work; (iii) Conduct workplace communication; (iv) Carry out measurements and calculations; (v) Read and interpret plans and specifications; and (vi) Apply occupational health and safety requirements, policies and procedures in the construction industry. They would also select units of competency from: *Brick and block laying field of work*; *Carpentry field of work*; *Solid plastering field of work*; *Wall and floor tiling field of work*; *Waterproofing field of work*; *Joinery and shop fitting field of work*; and *Stonemasonry field of work*. As graduates from this instructional program move onto the next step of training in industry itself, this reduces the burden on the TVET Center to fully fund, equip and maintain simulated working environments.

⁵ This is discussed more comprehensively in the Regional Economic Status Report where it was found that there are weak links between demand for TVET graduates and new activity in strengthening the industry clusters. Presently, current education and business cooperation project activity focuses on the ICT, stone and marble, food processing and pharmaceutical industry clusters. As will be seen, the private TVET Centers are addressing ICT training need but are not involved with the other sectors. European Training Foundation, *Education and Business. Occupied Palestinian Territory*, 2010, pp.7-8. Located at <http://www.meda-ete.net/pubmgmt.nst>.

- TVET students gain skills while in training, however students leave TVET Centers not work ready. This is also true of university students in Palestine who may learn theory while in college, but enter the workforce without the technical or soft skills necessary to start a job.
- low levels of average daily wages of TVET graduates compared to those of university graduates; and
- the service sector absorbs the largest number of TVET graduates.⁶

At another level, the active public TVET institutions, as well as those in the VET-NGO League, that make up the bulk of training organizations providing TVET courses of study in Palestine, are largely unsystematic in their approach to TVET system development. Many are small campuses offering instructional programs to several hundred students and in some cases have a student load of around 50 trainees. But even these small campuses seek to offer a large number of courses leading to multiple job outcomes.

For comparative purposes **Table 1** provides an overview of Level 1 and 2 vocational education and training provided by publically-owned TVET Centers and colleges. It can be seen that most areas of training are traditional in focus and do not reflect modern training categories leading to modern job classifications. The low enrollment and graduation in each category reflects very low efficiency in public provisions for TVET. Of interest is the low number of graduates by course. This reflects low enrollment, small class sizes and a small number of students stretched across many courses. While small class enrollment can have the advantage of a lower teacher to student ratio and thus more attention to each student, it does not begin to address the large number of marginalized youth and drop out students who could benefit from TVET and are not enrolled at this time. In addition, larger classes will increase tuition and funding to TVET institutions and allow for upgrade in courses and opportunities to offer more programs. This in turn will attract more students and ultimately produce more qualified and work ready graduates.

An example of the low enrollment and ultimately the graduates from public TVET institutions is shown below. Each governorate has one public TVET institution that offers a variety of courses and training in occupations. Table 1 shows the actual **graduates** in 2009 from six of the public TVET institutions. The numbers of total graduates in each occupation from all classes is very low compared to the total population of potential TVET students in Palestine. The public TVET institutions are not enrolling more students than the VET-NGO League institutions. Overall, the total TVET system in Palestine is under-serving its youth.

⁶ European Training Foundation, *Education and Business. Occupied Palestinian Territory*, 2010, p.5-6. Located at <http://www.meda-ete.net/pubmgmt.nst>.

Table 1: Examples of **total Graduates** from 6 different **public TVET Centers** in 2009

Occupational Courses	Jenin	Toulkarem	Beit Jala	Qalkilya	Nablus	Hebron	Total
Executive secretary	19	26	40	11	29	25	150
Cosmetology/ beautician	39	22	45	0	51	56	213
Sewing, textiles and tailoring	7	10	12	15	8	14	66
Electrical (repair and installation)	9	16	16	19	0	14	74
Auto- mechanical	18	18	0	9	0	0	45
Metal forming	9	0	0	0	0	0	9
Carpentry	14	29	0	0	0	20	63
Metalwork	21	28	16	13	0	18	96
Heating and air-conditioning	17	25	0	19	0	0	61
Automotive (repair and servicing)	19	0	24	17	0	22	82
Architecture/graphic design	8	0	20	0	13	12	53
WS&S and drainage	12	14	0	0	0	0	26
Radio and television	0	0	13	0	0	0	13
Paving	20	0	0	0	0	0	20
Office equipment servicing and repair	0	0	13	0	0	27	40
Total number of graduates from each TVET Institution in 2009 in each occupational category	212	188	199	103	101	208	1011

The total number of graduates by employment sector in aggregate is low. In some areas, there is no record of graduates in many centers suggesting that the course or courses in viable sectors are not being offered. For instance, courses for training service technicians are few in number supporting the MTC/GCT *Regional Economic Status Report* found that this is a major area where demand is not being met and a skills shortage has emerged. Paving, a key construction trade is also scarce. There is an abundance of beauticians, but traditionally this is a supply-driven field of training. Additional information of public TVET training courses is in Appendix 6.

In general, the efficiency of the public TVET subsector based on graduation rates is very poor and the question is, should certain courses be offered at all, if the required student load cannot justify the ongoing viability of the course. This is also the case in the VET-NGO League centers.

The current TVET system in Palestine lacks a strong national framework with certification and qualifications at all levels, demand-driven training, well developed and equipped training facilities and programs, highly skilled and trained teachers and robust internal and external collaboration. While some programs shine as examples of TVET Centers who succeed despite the limited resources, there is a vast amount of work to do to secure informed and relevant vocational training programs in Palestine.

2.1 Central Players in the Organizational Structure of the TVET System

There are a number of institutions and organizations and agencies involved with TVET in Palestine. They are central to the operation and success of the *Revised TVET Strategy*. They include:

- **The Ministry of Education and Higher Education** – The Ministry of Education and Higher Education provides accreditation for two year and four year programs offered by TVET Centers. The Ministry is the main source of the courses of study that make up the curriculum framework of TVET courses of study. The Ministry must register and accredit courses of study and it plays a major role in the development of new courses. This mandated responsibility covers the senior secondary schools, vocational education and training and community college programs.
- **The Ministry of Labor** – The Ministry of Labor provides accreditation to the one year programs and other short courses offered by TVET Centers. The Ministry is the main source of approved courses of study that form the bulk of curriculum programs delivered in public TVET centers. The Ministry provides free training in TVET Centers it runs in the West Bank (eight centers) and Gaza (four centers). The duration of programs vary from a few months to a year.

The Director General of TVET in the Ministry of Labor advised that some centers have been equipped with modern tools and equipment. However those centers have not been operating efficiently. He said that the Ministry of Labor has not been operating efficiently in this area for the last 13 years. He advised that this is the main reason that the Ministry of Labor has been calling for establishing an independent authority for national training. Such an authority would have an independent budget and more autonomy. He also said that the budget in support of TVET that falls within the Ministry of Labor is limited, as the total budget of the Ministry of Labor is small.

The Director General observed that the Ministry of Education and Higher Education had some concerns about a proposed Higher Council for TVET and other new instruments in support of a strengthened TVET system. Still, the Ministry of Labor has primary approval for establishing this TVET authority or agency which he expects will be in place by 2011. He felt that the TVET system in Palestine will experience a significant improvement within the next two to three years, owing to the platform that the proposed TVET authority will provide for more uniform planning.

- **The Ministry of Social Affairs** – The Ministry of Social Affairs provides training programs for the marginalized and low income young people of Palestine. The Ministry runs 26 rehabilitation vocational centers in the West Bank and Gaza.

Donor support has been central to TVET reform in Palestine. Indeed, most initiatives regarding education and business cooperation in TVET are based on donor interventions.⁷ Donors have been central to the development of the *Revised TVET Strategy*, labor market information system development, support for career guidance and counseling and improving the quality of instructors and TVET campuses. USAID has directed some of its support directly to the VET-NGO League, but has a broader investment program underpinning the quality improvement of the subsector in general.

- **Deutsche Gesellschaft für Technische Zusammenarbeit – GTZ** has been closely involved in TVET development in Palestine since 1996. It has promoted integrated approaches to improve vocational education and training to secure better links with the labor market. GTZ follows a comprehensive vocational training strategy addressing responsiveness to the labor market and employment. Currently a GTZ TVET project is cooperating with public and private vocational training institutions, as well as labor organizations to test effective TVET strategies at four locations. GTZ carries out activity across the Palestinian territories using a multi-stakeholder approach. A joint platform for all the players encourages the exchange of experiences.

Sustainable development is a major goal for GTZ owing to the uncertainty, conflict and political instability, which is a feature of the geo-political terrain. This theme is reflected in the *Revised TVET Strategy*. That strategy advises that sustainability in a TVET system means that it has the ability to last through legislation, which secures financial stability, social acceptance, functioning and efficient organization, and market relevancy. Any training system that is relevant, flexible, efficient and effective will be sustainable as long as sufficient financial resources are available.⁸

The program to support vocational training in the Palestinian territories has achieved the following results:

- Program implementation institutions have benefited from personnel and institutional capacity development. This has raised the competency of personnel working in vocational training at the Ministries of Labor and Education.
- The overall capacity of Ministries to undertake mandated tasks has been strengthened with the joint drafting of planning documents and through the planning of interventions within the *Revised TVET Strategy*.

⁷ European Training Foundation, *Education and Business. Occupied Palestinian Territory*, 2010, p.7. Located at <http://www.meda-ete.net/pubmgmt.nst>.

⁸ *Revised TVET Strategy. Winning for a future. Chances for our youth*, Ramallah, November 2010, pp.12.

- Local employment and TVET Councils have been set up in Nablus, Ramallah, Bethlehem and Hebron. These convene on a regular basis.
 - The ministries have developed and approved structured training concepts for teachers, trainers, vocational counselors and employment agency staff. Career guidance and placement is being explored.
 - GTZ cooperates with the Belgian Development Agency and the Ministries of Labor and Education and Higher Education and other donors in support of a pooling system for technical assistance to the TVET subsector. The aim of this support is to strengthen the Palestinian National Authority, which will ultimately take over the responsibility for TVET.⁹
 - GTZ has been central to the preparation of the *Revised TVET Strategy*.
- **United Nations Relief and Works Agency (UNRWA)** – The UNRWA technical vocational education and training program provides practical training to Palestinian refugees. It equips them with skills and expertise for Middle Eastern labor markets. The UN Agency runs 10 vocational and technical training centers, with a capacity for 6,600 trainees. The performance of the UNRWA institutions is impressive with graduates experiencing high-levels of employment. Three types of courses are offered: trade (vocational) courses lasting one or two years, technical/semi-professional courses lasting two years and certificate programs courses lasting one or two years.

This approach reflects the categories of training outcomes operating throughout Palestine. These categories are used by most public and private TVET centers and include semi-skilled worker, skilled worker, craftsman, technician and technical specialist.

UNRWA offers short to medium-term training of eight to 40 weeks, focusing on (i) advanced training to improve existing technical skills development and (ii) a basic level of technical knowledge and skills for people who have not undertaken any form of formal vocational skills development.¹⁰

Among other donors active in the sector are the **Belgium Technical Cooperation (BTC)**, which has supported *The Improvement of Technical and Vocational Education and Training* project covering both the West Bank and Gaza Strip. This project supports the Palestinian

⁹ Found in <http://www.gtz.de/en/weltweit/maghreb-naher-osten/palaestinensische-gebiete/9772.htm>.

¹⁰ Found in <http://www.unrwa.org/etemplate.php?id=91>.

Authority in reorienting TVET curriculum programs towards labor market demand in close collaboration with companies and various chambers of commerce and industry including Jerusalem, Hebron, Ramallah and Nablus. BTC continues to be active in vocational education and training.¹¹ The **Swiss Development Agency** has also been engaged in TVET initiatives. It is expected that the European Union will contribute €4 million to TVET development in 2011.

- **Non-governmental Organizations (NGO)** – NGOs have played an important role in providing TVET programs. These training programs include generic, basic and advanced skills. The programs target different populations including marginalized women, poor, and the disabled. A number of NGOs and other religious philanthropic organizations provide specialized vocational training programs for young people.

- **USAID** – USAID’s interventions in the education sector of Palestine include:
 - increasing access to education of school-aged children and students and improving the ability of the education system to retain them (Access);
 - improving the quality of teaching and learning (Quality);
 - developing the capacity for planning and management and improving financial systems (Management); and
 - realizing a gradual conversion of the Higher Education sector and Technical and Vocational Education and Training sector from a supply-oriented to a demand-oriented employment sector (Relevance).

USAID has five programs addressing these thematic areas: *The Model Schools Network (MSN)*, *The Technical and Vocational Education and Training Program*, *the Ruwwad Program*, *The Palestinian Faculty Development Program (PFDP)* and *The Sesame Street Program*.¹² The TVET program implements innovative activities in support of school to work transition, improving the capacity of VET-NGO League TVET institutions including enhanced business operations and upgrading TVET campuses. USAID has been active in the construction of new classrooms in both school education and vocational education and training and renovating other learning environments. When investments in education and training are linked to other major investments in the health sector and civil construction, the overall quantum of USAID assistance is considerable.

¹¹ Found in <http://www.btcjerusalem.org/etemplate.php?id=88>.

¹² Found in <http://www.usaid.gov/wbg/edo.html>.

Save the Children and Mercy Corps are implementing the four year VET-NGO League TVET Program, funded by USAID. One component of the TVET program focuses on the development of a more demand-driven training system for the League of Vocational Education and Training Association- Palestine.

3. Gap Analysis

This Gap Analysis is based on the use of a range of tools and surveys including interviews and focus groups. Interviews and focus group questions drew upon structured, semi-structured and informal discussions with NGOs participating in workforce development and TVET training; key officials from the PNA; government officers from various ministries involved with education, training and workforce development, administrators, teachers and students. The VET-NGO League TVET Center members surveyed include:

- **Central area:**
 - Governorate of Ramallah and Al-Bireh
 - ✓ Young Women Christian Association (YWCA), Ramallah
 - ✓ The Lutheran World Federation Vocational Training Center, Ramallah (LWF-VTCR)
 - ✓ Evangelical Lutheran School of Hope, Ramallah¹³
 - Governorate of Jericho and Al Aghwar
 - ✓ Al-Bir Society- Vocational Training Center, Jericho
- **Southern area:**
 - Governorate of Bethlehem
 - ✓ Dar Al-Kalimah College, Continuing Education Department, Bethlehem
 - ✓ The Salesian Industrial Secondary School and Vocational Training Center, Bethlehem
 - ✓ Talitha Kumi Community College, Beit Jala
 - Governorate of Hebron
 - ✓ Palestine Polytechnic University (Department of Continuing Education)

Following is aggregated data and analysis from the seven available schools surveyed, focus groups, interviews and discussions. For the purpose of the general analysis of the VET-NGO League as a whole, the aggregated data will inform the overall center plans for the development of the VET-NGO League and its member institutions. Additional quantitative data is included in the Appendices.

The implementation of the Gap Analysis led to the identification of seven core gaps that are not only relevant to the VET-NGO League TVET Centers, but could be applied to the TVET system in Palestine in general.

¹³ This school is going to establish a new ICT center and a range of new classrooms and workshops soon. Therefore, surveys will not be undertaken with this school until the new building is finished.

Gap #1: Fragmented National System and Framework

A major gap is fragmentation of the national TVET System, which was mentioned earlier in this report. This fragmentation reduces the effectiveness of the national TVET system and is reflected in the sector in the following ways:

- The system is not supported by a consistent national policy framework, and there is not an industry developed regulatory framework for the registration of centers, the certification and registration of teachers and instructors and the accreditation of courses of study.
- A uniform national curriculum framework is not in place and provisions for quality assurance are weak.
- VET-NGO League TVET Centers, as well as other TVET Centers, do not have much autonomy, are subject to system rigidity and cannot exercise programming decisions requiring localized educational leadership. The League is not allowed under the current national system to have a local governance structure in place that gives them local authority over their programs.
- The system is disconnected from the job market. Vocational skills development in new career paths, central to employment in a number of expanding Palestinian industry clusters, is not being carried out in many centers.¹⁴
- It is not possible to describe the current TVET system as regulated, uniform and benchmarked.

Provisions for addressing these gaps are included in the *Revised TVET Strategy* for Palestine, released by the government in November, 2010.

The *Revised TVET Strategy* for Palestine is cognizant of the many weaknesses that undermine the performance and responsiveness of the TVET subsector. It argues that for the TVET subsector of the national education system to be more responsive for the preparation of an effective workforce the:

“TVET system has to have a clear structure stipulated by a TVET law, interventions and regulations ... characterized by the following attributes, it is unified, independent and participative with all partners and involves all stakeholders ...

¹⁴ This is discussed more comprehensively in the Regional Economic Status Report where it was found that there are weak links between demand for TVET graduates and new activity in strengthening the industry clusters. Presently, current education and business cooperation project activity focuses on the ICT, stone and marble, food processing and pharmaceutical industry clusters. As will be seen, the private TVET Centers are addressing ICT training need but are not involved with the other sectors. European Training Foundation, *Education and Business. Occupied Palestinian Territory*, 2010, pp.7-8. Located at <http://www.meda-ete.net/pubmgmt.nst>.

The TVET system will ensure options for the articulation of students within the entire educational system on the basis of comparable levels and accreditation of graduation certificates within the unique National Qualifications Framework.”¹⁵

Officers from the Ministry of Labor and the Ministry of Education and Higher Education are optimistic about the *Revised TVET Strategy* and they hope that it will solve most problems facing TVET in Palestine, which are related to fragmentation and lack of coordination between the TVET institutions and government agencies. GTZ took the initiative to coordinate and refine the strategy. Over 60 stakeholders from a range of government departments and other agencies involved with education and employment were involved with the revision process.

The strategy proposes a new system with a more active and strategically focused Higher Council for TVET including members of the Ministry of Education and Higher Education, Ministry of Labor, Ministry of Economy, Ministry of Social Affairs, Ministry of Planning, and Ministry of Finance.

It is proposed that as an overarching agency, the Higher Council for TVET will coordinate donor support for TVET as it will be responsible for identifying and prioritizing the needs of TVET institutions and other training organizations. The new strategy includes an executive board for the Higher Council to implement the proposed range of new strategies and policies. The executive board will have members from each relevant ministry contributing to the Higher Council, in addition to members from The Federation of Palestine Chambers of Commerce, Industry and Agriculture and UNRWA. The revised Higher Council and its role reflect new agreements made in Hebron in 2010 involving the Academic-Governmental-Industrial Partnership.

In commenting on this development, the Director General of TVET in the Ministry of Education and Higher Education advised that the refined strategy calls for unifying the TVET system in Palestine, based on equitable access, relevance, adaptability and flexibility to meet a demand-driven vocational education system. The main principles of the improved Palestinian system will be:

- unified in terms of accreditation, certification, qualifications, curricula, training programs and testing/assessment;
- relevant in terms of being responsive to labor market need, demand-driven and future economic trends;
- efficient and effective, i.e., based on the comprehensive and continuous development of human resources, courses of study and the curriculum, and the use of resources at TVET institutions;

¹⁵ *Revised TVET Strategy. Winning for a future. Chances for our youth*, Ramallah, November 2010, p.6.

- flexible and crisis resistant, i.e., multiple options for the delivery of instructional programs and responsive to demands for change; and
- equitable access to enable poor, marginalized and disadvantaged groups to participate in vocational education and training.

Ideally, industry skills councils working closely with the ministries in the accreditation process would be in place as a key authority for the preparation of new courses of study and training packages subject to Ministry of Education and Higher Education recognition and accreditation.

The VET-NGO League will need to work closely with the ministries to participate actively in the redesign and new governance structure so that their programs are compliant with government regulations, but responsive to industry needs. One recommendation from this analysis is that the League, with an upgrade and refinement of their system, could serve as a regulatory body over private TVET providers under the new national structure and could ensure the involvement of their employer contacts.

Gap #2: Poor Internal and External Collaboration

The VET-NGO League is suffering from poor internal and external collaboration with partners, employers and stakeholders who could support their system. Weak linkages between the TVET system with the private sector is a factor behind the poor progress in TVET program development. The core of a strong TVET system is industry engagement, whereby employers, industry associations and the TVET Centers themselves are involved in joint planning to improve the relevance of TVET courses to the world of work. People in the private sector who met with our study team advised that they were as much to blame as TVET Center Directors for the lack of a strong and robust relationship between industry, private sector employer and the TVET Centers.

In addition, the League centers do not collaborate with each other and take advantage of the benefits of working as a coordinated and organized entity that could serve as a leading example to other TVET organizations.

The Gap Analysis found that:

- Programs are supply-driven, graduating students who do not interest employers, rather than demand-driven and market-based.
- Employer relationships are not well developed, with employers engaged in the center training and activities and ready to hire graduates because they know they will receive work-ready employees.

- The linkage between the VET-NGO League TVET Centers and industry is weak resulting in an overall absence of training packages prepared with, and by industry.
- None of the centers currently have a job placement section in support of career guidance with a strong relationship with labor offices; however, progress is being made in this area with recent USAID support for school to work transition.
- League centers are not organized and not using creative training opportunities where they work together in a collaborative and tiered approach, allowing students to move within the centers for higher levels of training that is unified and validated at every level.

Articulation within the national and League education systems enables students to move both horizontally and vertically as they progress through each year of formal education and training. League centers need to collaborate and design programs allowing students to move from one level to another within the League system and from one center to another, if desirable. Programs based on career pathways enable a natural transition through levels of education and across sectors. The following table explains the sequence in a tiered approach.

Table 2: Pathways and equivalency in a uniform and unified national education system

Qualification	Description	Duration
Grade 9 or 10	Formal academic school education or adults already in the workforce	
Certificate I	Develop basic skills (literacy, numeracy, communication, hygiene and personal development) and conduct routine vocational tasks.	Commonly 6 months
Certificate II	Develop operational knowledge and skills and solve a range of predictable problems using practical approaches based on skill levels.	Commonly 6 months
Certificate III	Develop extra theoretical knowledge and skills to solve a range of problems. Use discretion and judgment.	Commonly 6 months
Certificate IV	Develop broad knowledge base. Able to analyze and evaluate information and apply knowledge and skills in a wide range of contexts.	Commonly 12 months
Diploma	Develop a broad theoretical knowledge and/or technical or creative skills of substantial depth. Able to apply analysis, judgment and planning in a broad range of technical and/or managerial situations.	Commonly 6 to 12 months after Certificate IV
Advanced Diploma	Able to apply fundamental principles and complex techniques in a wide range of contexts and settings.	Commonly 6 to 12 months

In this example of a unified national system, Certificate II to IV qualifications are equivalent to Grades 10-12 in formal school education. The Diploma and Advanced Diploma levels articulate with the equivalent of Year 1 undergraduate degree (university). All of the seven VET-NGO League Institutions that were included in this analysis match the Certificate II level, and the Level 2 instructional programs run for at least 12 months while in a unified national education system most

certificates are no longer than six months of instructional time. Pre-vocational training within a uniform and unified system run for between three to four months of instructional time.

One recommendation of this analysis is for the VET-NGO League centers to coordinate training, curricula and programs in a progressive career path through tiered levels.

Gap #3: Outdated Training Programs

Programs offered at VET-NGO League member institutions in general are viewed by employers and the public as out-dated and not comprehensive. There is no uniform certification system where students are assessed and certificates awarded for mastery of skill sets and vocational requirements. Equipment is very old and ill repaired. Teachers have not been trained in new and innovative teaching approaches, or for the use of technology, such as online courses or integrated life skills and basic skills into vocational training.

Gaps found in the programs and courses offered by the League TVET Centers included:

- A uniform curriculum framework is not in place and provisions for quality assurance are weak. Curricula at most centers are outdated and not consistent with the current labor market needs.
- The use of technology or social media is lacking. Modern techniques for teaching and equipment that is current with technology, is absent. Computer technology is not integrated into the curricula. Students spend limited time on computer applications. Interactive software is not used in most classrooms. Most of the equipment used in training centers was purchased in the 60's or 70's.
- Most centers lack employability enhancement activities such as counseling, grooming and hygiene instruction, language courses, peer groups, etc.
- Courses of study and vocational education and training standards are outdated with the duration of some courses well in excess of international norms. Students are held in training long after they have mastered the skills for their chosen vocation.
- There is little professional training or in-service training once teachers and instructors are recruited and in the system. Approaches and methodologies for training are very archaic.
- Provisions for apprenticeships (formal and informal) are not regulated and there is no evidence of certification awarded to apprentices on the completion of training.

- Four centers in our research advised that student enrollment and academic history documentation is in paper-form only, while three centers advised that the enrollment and student history documentation is held in both paper-form and electronic formats.
- In relation to data management and student information systems, two centers said that they maintain records only on paper and records are kept for a very long time. They do not have a backup system for records. Five centers advised that the records are maintained both on paper and electronically.
- Training is supply driven and has very few elements of demand-driven course development or training. Employers are not engaged much in program design or training.

A pre-vocational training program phase should be added to each TVET center. A pre-vocational period usually occurs at the front end of a TVET program and lasts 2-4 weeks. Pre-vocational training is designed to assist students in making a logical career choice based on their abilities, interests and opportunities in the labor market. Many centers refer to this period as career exploration. Students in pre-vocational training will receive assessments of their basic skills and ability to learn, as well as their best modalities for learning. Students are matched to jobs that match their test results. This alleviates students being dumped in training only because there is a slot or a need to fill a class. Students who have input into their choice of vocation usually stay engaged and work hard to graduate.

Pre-vocational training is an area where the MTC/GCT team can provide capacity building training to the VET-NGO League.

Of central interest to the Gap Analysis are the limited provisions for workplace learning in each TVET Center. Workplace learning is very important to the structure and function of TVET courses of study. Education and training is increasingly viewed in terms of employers and their companies, TVET institutions, community organizations, and government and donor agencies. Although TVET Center Directors are satisfied that their centers are well positioned and equipped for academic learning, practical learning and learning in simulated work environments, access to quality workplace learning venues varies widely. As workplace learning is not accredited, the idea of workplace learning is not well developed. Similarly, a learning culture involving TVET Centers, employers and workplace learning venues is still being developed.

Table 3 provides an overview of current provisions for workplace learning among the VET-NGO League TVET Centers. Of interest is the absence of activity in pre-vocational and traditional apprenticeship training. Pre-vocational training is the key link between TVET Center-based instructional programs and structured learning in the workplace. Traditional apprenticeships enable formal education and training in the employment sector and micro-enterprises. Provisions for both in the League, as well as all of the training centers are presently weak. Activity in apprenticeships is more

encouraging, but programs show wide variation with many agreements with employers being loose and reliant on personal contact between TVET staff and employers particularly those in urban industrial parks. This is an area where less formal provisions for entering contracts with employers for apprenticeships and on-the-job training can be further investigated, particularly where employers are small and have limited resources.

Table 3: Workplace learning profiles

TVET Center	Pre-vocational training offered	Informal apprenticeship offered	Formal apprenticeship offered	Internship offered
TVET Center 1	No	No	Yes	Yes
TVET Center 2	No	No	No	Yes
TVET Center 3	No	No	No	No
TVET Center 4	No	No	Yes	No
TVET Center 5	No	No	Yes	Yes
TVET Center 6	No	No	Yes	Yes
TVET Center 7	No	No	Yes	Yes
Sample public TVET Center (MoE&HE)	No	No	Yes	Yes
Sample public TVET Center (MoL)	No	No	Yes	Yes

TVET Centers, both public and private, offer a range of courses covering a number of key employment sectors, but the total spread of courses are similar and repeated from center to center. Likewise, many subjects are offered, but the subjects are often not modularized and are part of a quite loose course framework. In conjunction with current provisions for pre-vocational training and apprenticeships, it can be seen that a student's progression through a TVET course is not as tightly structured as necessary to ensure that all the skills central to a trade are actually mastered. Opportunities are rudimentary for blended learning involving classroom instruction, workshop experience, workplace learning and self-paced learning. Again, this area will require substantial new work and activity if TVET Center courses are going to secure a solid link to filling labor market gaps.

In our surveys, 46% of graduates advised that the education and training they received was not relevant to their employment. They spoke of skill gaps especially in dealing with new equipment and maintenance. Several interviewees advised that they received ongoing, on-the-job training from their employers, which helped them perform their work more efficiently. Only 31% of employers thought graduates had sufficient training, skills and competencies to undertake the required work. A more hands-on approach to training was seen as highly desirable, with theoretical dimensions to the instructional programs being greatly reduced.

Gap #4: Limited Employability Skill Training

The MTC/GCT team had the opportunity to meet with 13 employers who hired students recently graduated from both public and private TVET Centers in the two geographic areas. The employers being drawn upon for the Regional Economic Status Survey were willing to answer focus group questions. Only four of the employers thought that their new employees had sufficient training and skills to undertake the required work. Nine employers advised that the graduates simply did not have the required skill or competency sets for the areas of employment in which they had been trained. Moreover, three employers advised that the TVET graduates they employed lacked literacy skills. They also said that their employees lacked computer skills, including word processing and key boarding.

Other key skill areas, which employers found lacking included:

- personal development skills (interpersonal behavior);
- leadership and management skills;
- accounting skills, including bookkeeping;
- problem solving skills;
- customer service skills (front-line management); and
- technical servicing and/or maintenance.

Most employers felt obliged to provide ongoing training for their new recruits from TVET Centers. They advised that if TVET Centers want to upgrade their performance and the quality of the students who graduate, they should provide more in the area of leadership and management training. Also the TVET Centers should expand the range of courses of study in skill shortage areas including: accounting, communication skills, literacy, report writing and customer service. A general improvement to the quality of courses of study was also deemed desirable. Programs need to be holistic and include basic skill remediation if needed, vocational training and work attachments, with a full complement of soft skills, workplace skills and life skills, including problem solving skills that will ensure that the students are work ready and able to be productive in a work environment.

It was also noted in our research that public and private TVET Centers in Palestine are lacking programs for females and other targeted populations, such as disabled and other marginalized populations. Some of the League centers do offer programs for females. In fact, one center mostly serves females. But most centers have very limited programs in sewing or handicrafts for women and the programs are held only during a few hours each day. One exception is the YWCA TVET Center who trains females for administrative assistance positions. Training opportunities for women and other special populations are almost void in non-traditional occupations, such as carpentry and automotive. An equal and appropriate allocation of funds and resources is not apparent in most centers. Opportunities are not equally distributed among all populations. Recruitment efforts will need to be revamped to include all population groups who can benefit from a TVET program.

Gap #5: Limited Staff Preparation and Qualifications

A very significant gap is the absence of formal instructor qualifications in teaching and assessment, which is now imperative in modern TVET systems. All centers reported that it is difficult to find new instructors in areas requiring high levels of specialization. While most instructors in the League have bachelor degrees, there are no requirements for teachers and instructors to have formal qualifications in teaching and assessment. Some practitioners with years of experience in a given vocation are used as trainers in the centers. This is acceptable and actually desirable, but practitioners must also have training in teaching methodologies and approaches and understand the necessity for thoroughly testing and validating students for work readiness.

There are few opportunities for staff to upgrade their teaching profile to cover more than one area. Although some members of staff are considered technicians and technical specialists, there needs to be uniform improvement in the qualifications and training of instructors in all centers. Many trainers have worked in the TVET Centers for years with very little upgrading of their skills. As a result, there is obviously room for the provision of professional training and in-service training to increase staff skills and qualifications. The capacity for the VET-NGO League to provide this training will need further analysis as the required professional training for improving staff preparation and qualifications will be expensive and time consuming.

When trainers/teachers all receive training at the same time, using the same modules and curricula, it leads to uniformity of instruction and an assurance that they are teaching from the same, standardized lesson plans. Teachers learn to adapt their materials and modalities to student's needs and move from their old methods of training. Teachers who are not exposed to preferred methods of teaching, often are resistant to change. However, with uniform training, the centers, and the League as a whole, can ensure the skills passed on to students are correct and all skill sets in a given vocation are mastered and certified. This will actually help the reputation of the VET-NGO League TVET Centers and the teachers, as employers will recognize that students from the VET-NGO League system are certified to have all of the skills necessary for employment in their chosen field. Employers will expect nothing but the best from the centers.

Gap #6: Lack of Resources

Information from the surveys revealed most centers will require improvements to building and grounds. Much of the equipment and tools used for skill development in the VET-NGO League TVET Centers has been superseded and is no longer appropriate or suitable for training.

Conditions in support of student seating and comfort are important in classrooms while safety and ventilation is central to work areas. Opportunities for student learning in a variety of learning

environments presents challenges, as most workshops and computer laboratories require some degree of rehabilitation ranging from minor repairs to major renovations. Staff in two centers advised that buildings and classroom conditions prevent the effective delivery of instructional programs. In observing a number of classrooms and workshops, the study team noticed that conditions for students were sometimes hazardous with both portable and fixed equipment not suitably aligned to the architecture of workshops. Classrooms attached to these workshops were often poorly lit and there was no evidence of ventilation.

The centers also reported a need for improved equipment and tools across the full range of instructional programs. **Table 4** shows the combined needs of all seven centers:

Table 4: Equipment gaps reported by the Seven VET-NGO Institutions included in this analysis

Item	Total number of new items required
Computers	110
Computer laboratories	1
Computer servers	3
Chairs	100
Filing cabinets	10
Marker boards	12
Smart boards	7
Telephones and faxes	2
Drinking water dispensers	2
Medical cabinets	22
Projectors	3

Other needs linked to this combined needs list include: software for registration purposes, software for educational purposes (e-learning and virtual applications, for instance including an Internet library), a bar-code system for tracking equipment and tools, new furniture and storage for workshops, a range of vehicles central to campus business, and in several instances, cafeterias for students and staff.

Four centers advised that the methodology used for training is mainly “learning by doing”, but several maintained that theory still consumed a reasonable volume of instructional time. This was usually related to poor access to the necessary equipment and tools and limited opportunities for students to access hands-on, simulated or real working environments. Four centers advised that hand tools, power tools and static/fixed equipment used for training are outdated, often damaged or faulty, and unsuitable for work tasks in modern workshops. In one center students were using fixed, power equipment without guard rails or shields to protect hands and limbs. In another, metal grinding activity that requires goggles, ear-muffs and leather gloves was taking place without this protection. Taking this

into consideration, outdated tools and equipment are also issues concerning occupational health and safety. Core units of competency in work safety are absent from existing courses of study.¹⁶

Centers are also lacking updated reference books, CDs and other materials for instruction. White boards, video screens, videos of instruction, computer inter-active instructional materials, as well as instruction manuals for equipment are missing or outdated.

Gap #7: Lack of Financial Resources

The majority of VET-NGO League TVET Centers have low student-teacher ratios contributing to high unit costs. It also reflects a weak demand for vocational education and training. The great variation in student and staff numbers makes the issue of efficiency of each TVET Center central to the development of each campus. The main observation is that low enrollment cannot support a large number of courses and job outcomes. Owing to the historical precedent concerning the function of vocational schools, even small centers try to provide too many instructional programs covering textiles and sewing to plumbing to automotive. As each discipline requires its own workshop or classroom, a large volume of building space is required for small groups of students. Too many courses often results in a shortage of equipment and tools needed for each trade discipline, limiting a trainee's access to the necessary range of hand tools, power tools and fixed/static equipment. This can impact negatively upon attendance and participation. This situation reflects quite poor levels of internal efficiency further impacting limited financial resources.

All centers advised that student tuition fees only cover an average of 30% of the running costs associated with the delivery of each course of study. As can be seen in **Table 5** the fees widely vary from center to center. It is difficult to assess how a center funds core operations when considering that fees range from no cost to hundreds of dollars. This anomaly has resulted in one center relying on donor funds as the main source for income.

Some TVET Centers in different countries have used work attachments as a way to generate income while adding to the opportunities for student training. A work attachment is any form of skills training that occurs on-site with an employer at his/her business or worksite. The VET-NGO League institutions, as well as public TVET Institutions, have agreements with employers where students may spend 2-3 months, or longer at a worksite under the mentorship and guidance from a company supervisor. This training can occur concurrently with training at the TVET Center or after the student has mastered basic skills and wants to gain additional training at a worksite. Some countries refer to worksite learning as apprenticeships, pre-apprenticeships, on-the-job training, etc. In Table 5, work attachments refer to additional, worksite training that both public and VET-NGO League TVET centers coordinate with local employers. Currently there is no formal apprenticeship or work

¹⁶ In Level 1 and 2 courses of study this can include Units of Competency in Work Safely, Workplace Communication, Applying Safe Working Practices, and Work in Confined Spaces.

attachment program developed at the national level in Palestine and there is no uniform approach within the VET-NGO League institutions. Most work attachments in Palestine also do not generate additional income other than small stipends for student transportation to the worksite paid by employers. With paid work attachments employers contribute financially to the further development of the workforce.

Table 5: Fees and work attachments

TVET Center	Annual course fee	No. of work attachment agreements	No. of days per attachment	Workplace assessment (Y/N)
TVET Center 1	Free	34	9 months	Yes
TVET Center 2	Starting at 1000 NIS	None	None	None
TVET Center 3	900NIS	Various		Some
TVET Center 4	3000NIS	Various		Some
TVET Center 5	700NIS	Many	80% of credit hours	Yes
TVET Center 6	4200NIS	20	4 weeks	Yes
TVET Center 7	3000NIS	180	40% of credit hours	Yes
PPU TVET	25 JD per credit hour. The average credit hours are 30 per year.	Many	Level 1 & 2 60% of course. Level 3 & 4 45% of course. Secretarial 35% of the total course.	Yes
Public TVET Center (MoL)	Free	More than 200 (in principle)	3 weeks	Yes
Public TVET Center (MoE&HE)	Free	None	3 weeks	Yes

Four centers advised that employers do not approach them for specific training for their current workers and said that this is mainly because employers wanted their current employees trained at no cost to them and as support from donors or larger employers was not forthcoming in this area, these employers do not pursue opportunities to upskill employees. This important revenue stream for the TVET Centers is therefore lost.

Some of the TVET Centers advised that the hiring of well trained and qualified staff is difficult owing to financial and resource limitations, which keep salaries low. Poor salaries greatly restrict opportunities to recruit new staff. This is common to all TVET Centers.

Accordingly, TVET Center Directors need to attract other sources of funding to cover overhead, including salaries and limited facility and equipment upgrades. This includes donations, sponsorships and the sale of products produced by students such as furniture, handicrafts and textiles. This assists in keeping tuition fees down to a level that can be met by poor households, but it leaves little funds for

maintenance and repairs, replacement of damaged tools, or faulty equipment and upgraded learning environments.

While the annual income for each TVET Center is low and results in stretched annual budgets, TVET Center Directors will need to continue seeking support through donations and donor support, as well as through self-sustaining income generation schemes. As the development of industries throughout Palestine is still in its infancy, major employers cannot be expected to contribute significantly to TVET infrastructure developments until their own growth, commercial viability and continuity is assured and they are more fully integrated into the TVET system.

4. General Recommendations

Following are our recommendations to address each gap:

Gap #1: Fragmented National System and Framework

Recommendations:

- The VET-NGO League should position itself as a training authority with oversight of the private TVET Centers. To do this, the League centers will need to establish a well developed system with policies, procedures and program elements that set them apart from other TVET providers. All members will need to sign a memorandum of understanding indicating their commitment to cooperation and collaboration within the League.
- Participate fully in the current national reforms and inform the system on the activities necessary to improve the national education system.
- Secure approval from the Ministry of Labor and Ministry of Education and Higher Education to be a Palestinian authority responsible for the registration of current and future private TVET Centers and for quality training and assessment services.
- Become a training authority, focusing on reviewing the quality of outcomes being achieved by the TVET Centers (while enabling the TVET Centers to have the flexibility in demonstrating how their individual approaches to training provide quality outcomes for potential employers and industry.
- Design and put in place simplified and streamlined standards to assess the quality of training delivered by TVET Centers and the integrity of qualifications awarded to graduates.
- Define excellence criteria that TVET Centers may use voluntarily to improve their total programs.

- Ensure teachers and instructors at both TVET Centers and enterprise trainers on-site at industries, have and maintain the necessary training and assessment competencies and teacher training qualifications as determined by the League.
- Ensure trainers have the relevant vocational skills, teaching techniques and trade qualifications in the trade disciplines covered by the TVET Center.
- Ensure the strategies and methodologies for training and assessment meet the requirements of the training packages or courses of study delivered in each TVET Center.
- Offer training for the incumbent workforce as a way to further develop relationships with employers and enhance the Palestinian labor pool.
- Each center should develop a whole center plan and then identify areas where gaps are similar and resources can be combined to address issues as a whole.

Gap #2: Poor Internal and External Collaboration

Recommendations:

- Create healthy competition and collaboratio between the VET-NGO League institution members.
- Develop curricula addressing the seven identified growth industries, informed by industry advisory councils, eliminate all outdated programs and develop a tiered approach where students can move at different levels between the schools to achieve higher levels of training in a career path.
- Design and implement League sponsored activities that develop strong and collaborative relationships with industry, focusing on employers in the seven growth industries and with employers who offer opportunities for employment, such as new industrial zones, large employers or groups of employers in industry clusters.
- Develop better relationships with Labor Offices, which will lead to better placement of students in jobs.
- Develop forums with public TVET providers to keep abreast of current trends in TVET and opportunities within the new national system.
- Develop a League branding system where all centers in the league will ensure their curricula, brochures, materials, etc. all support one approach and one cause.

- Provide teacher exchanges between centers to develop a better understanding of what each center offers and to share ideas for training and development of programs.
- Continue public forums and center visitations, as well as develop a League newsletter to keep communities and government entities informed of League activities and courses.
- Start a parent/family support group to create a better support base for students while they are attending vocational training. Educate and inform parents and families about the importance of vocational training in the growth of the Palestinian economy and that their support to the students is very important to keep students in training and employed successfully.
- A rubric of skill sets at each level of mastery should be developed by industry cluster groups or Industry Advisory Councils to ensure that mastery levels are relevant to the Palestinian labor market.

Gap #3: Outdated Training Programs

Recommendations:

- At least one staff or director from each school should participate in an exchange visit to a country where TVET programs are well developed and operating successfully. Videos should be made of the visits and shared with other staff and centers upon return.
- A committee, with participation from each center, should review the relevance of all courses of study and subjects, and where possible, upgrade courses to a modularized curriculum program consisting of modern training packages, particularly in construction, hospitality, property development, automotive and maintenance.
- Enlist the technical assistance of an expert in agri-business and food processing expertise to develop curricula modules in that field.
- As a League, rationalize the number of courses of study and by implication, job outcomes, to a more manageable number, better reflecting the training and qualifications of the center trainers and only train for vocations in the identified growth sectors, with centers teaching at different levels in a tiered approach.
- Rationalize the courses of study of the three, smaller vocational training centers into smaller pieces with the possibility of each training center offering a different level of training in one trade discipline, enabling the movement of larger cohorts of students through the different levels, with well-defined exit point, based on qualifications. This involves the use of one certificate as a formal qualification with each center providing a different level.

- Develop the necessary range of documents in support of center operations, including all facets of student management, clear procedures and arrangements for student assessment and evaluation, annual business plans and staff manuals.
- Further develop relationships with micro and small business operations including arrangements for regional cluster training, involving both students (in training) and employees in firms where students are undertaking work attachments.
- Diversify work attachments for potential students, based on expected labor market demand, particularly in emerging industries in proposed industrial zones.
- Develop a system for organizing and monitoring all work-site learning, including apprenticeships. Ensure that work-site learning enhances the classroom learning and leads to certifiable skill sets.
- Develop a well defined Training Achievement Record and certification, with the assistance of employers in the seven identified growth industries.
- Develop a student tracking system to determine where students are finding employment, how long it took for them to find employment, what skills were they lacking upon graduation, if any, and what barriers to employment were present, etc.? Make revisions in programs as weaknesses are identified from student and employer surveys. Surveys should be reviewed and program adjustments made every six months.

Gap #4: Limited Employability Skill Training

Recommendations:

- Procure capacity building support in student counseling, guidance and welfare issues.
- Procure capacity building support for the development of employability skills and “soft” skills to be built into the curricula. Investigate and develop other curricula to address training for literacy, numeracy, languages, written and verbal skills, workplace etiquette, etc. Develop curricula that is age appropriate, interesting and engaging to students and that makes use of new technology.
- Develop a Pre-Vocational training module or course.
- Develop student peer groups for discussing “soft” skills and formulating solutions to workplace issues and concerns.
- Invite employers to speak to students about the need for the employability skills to be mastered before students start on the job.

- Create simulated work environments within the classroom where students arrive on time for work, dress appropriately, keep their workplace clean, etc. Include a motivational strategy or reward system for student success.
- Establish a mentoring program consisting of local individuals from business and industry as well as government leaders with special emphasis on assistance to females and students with disabilities.

Gap #5: Limited Staff Preparation and Qualifications

Recommendations:

- Develop a plan to hire specialized teachers in growth industries where courses are not being offered at this time.
- Identify areas where staff are lacking skills and procure Training of Trainer courses. Create incentives for teachers who complete the courses, such as paid time off, bonuses, etc. Online training would allow for teachers to complete individual modules on their own time.
- Develop teacher exchanges, either in Palestine or with other countries, where teachers can observe new and innovative approaches to training or methodologies for targeted populations.
- Work closely with the ministries to give input on the new teacher accreditations that will be required in the new National TVET Strategy. Develop a system to validate teacher certification.
- Develop a new staff orientation that includes processes, procedures and approaches for training vocational students.
- Include teachers in all League training and activities to ensure their “buy in” to the center mission and goals.
- Utilize Dar Al-Kalima College and Talitha Kumi College, as well as the Palestine Polytechnic University to develop a teacher training package that will allow TVET Center teachers to take college accredited courses at a reduced price to League members. Outsourcing of teaching programs to other institutions could be based on the careful definition of core, compulsory and elective subjects that make up each course of study.

Gap #6: Lack of Resources

Recommendations:

- As a League, take steps to better coordinate the development of centers to maximize the use of space and to plan for equipment and machinery upgrades that are central to the function of new learning environments.

- Develop strategies for generating income to purchase new equipment, either through donor investments, employer donations or sponsorships or create schemes to utilize equipment on-site at businesses.
- Develop “work parties” of staff, students and community members to upgrade facilities and enhance center grounds. Utilize the projects as learning opportunities for students and a way to introduce the community to the centers.
- Create regional training clusters and partnerships with industry to achieve efficiencies in accessing and utilizing essential equipment and instructional technology.
- Work with industrial zone committees to develop a plan for increasing resources through organized industry cluster training and uniform approaches to training for the incumbent and emerging workforce.
- Develop an Industry Advisory Council to advise centers on potential resource generation.

Gap #7: Lack of Financial Resources

Recommendations:

- Procure equipment and materials as a League to create a large volume of purchased items used by all centers, leading to discounts and other relationships with vendors.
- Create an improved social marketing and public relations campaign to increase enrollments and solicit private sector donations. Both will lead to increased revenues.
- Investigate training opportunities with industries that lead to additional funding to the schools, such as on-the-job training where employers pay half of the student’s salary during training or employers provide the equipment on-site for training, thus reducing the need for the centers to purchase the equipment.
- Offer upgrade training for the incumbent workforce under donor funding or partial funding from employers. If cost is an issue, offer free training to the incumbent workforce of any employer who hires a significant number of TVET graduates in any given period.
- Upgrade current programs and market the improvements to create relationships with employers that will encourage them to hire TVET graduates and possibly donate in-kind services or funding to the centers. This could result in employer sponsorships of certain centers.

- Upgrade workshops where students create products and sell them to the community or government agencies.
- Develop entrepreneurial opportunities for students where the center shares in the profits with the student.

5. Conclusion

Seven major gaps in the national TVET system and the training programs of the NGO-TVET League were identified in this Gap Analysis. The gaps indicate where training provided by the League institutions is not responsive, or directed towards the growth industries and employer expectations in Palestine. The gaps in training include outdated materials and curricula with very limited input from the private sector, under-qualified teachers, training in occupations that are not growth industries and very limited work attachments where students gain insight into the specific skills required by employers and the world of work. In our Gap Analysis we discussed the seven identified major gaps and provided insight and analysis on each. Appendices with information that will further clarify our approach and findings are attached.

Very specific Action Items and steps for developing a road map for alleviating gaps and becoming a truly demand-driven system will be provided in the Regional Economic Action Plan, which accompanies this report. The Action Plan addresses the national gaps and the requirements to develop a more quality system with certifications and accreditations, as well as the gaps and improvements needed for each center in the VET-NGO League. Whole center plans will be developed with the VET-NGO League centers, in concert with the administrative unit, immediately following the submission and approval of these reports. The Action Plans will be revised and updated after all whole center plans are completed.

It is our general recommendation that after the whole center plans are completed, that the MTC/GCT team meet with the VET-NGO League and its member institutions as a whole and prioritize the recommendations and action steps that can be taken immediately. In addition, an action plan should be developed that includes immediate actions, actions to be taken in the next six months, and actions that will require long term planning on behalf of all of the League centers. It is further suggested that we include all 15 of the League centers in the Overall Action Plan, even those that are not evaluated under this report.

As we are aware that the gaps identified are many, and the recommendations are vast, our team would recommend additional capacity building with the league institutions to develop self-sustainable approaches to funding and to address all of the gaps and opportunities open to the VET-NGO League. Our recommendations listed here in Section 4 provide the outline for the comprehensive Action Plan.

Appendix 1: List of Key People Interviewed

Appendix 1: List of the key people interviewed for the Regional Economic Status Report and the Gap Analysis Report

	People interviewed
1	Name: Mr. Abdel Rahman Ishtayyeh Title: General Director Organization: The Palestine Industrial Estate and Free Zone Authority (PIEFZA) Address: Ramallah
2	Name: Mr. Ahmad Aker Title: Assistant Investment Manager Organization: Bank of Palestine Address: Headquarters- Ramallah
3	Name: Mr. Ayman Sbeih Title: Secretary General Organization: The Palestinian Federation of Industries Address: Ramallah
4	Name: Mr. Chris Scott Title: Chief of Party/Palestinian Authority Capacity Enhancement Project Organization: Chemonics (phone interview)
5	Name: Mr. Eli Shehadeh Title: Director Organization: Bethlehem Multidisciplinary Industrial Park Address: Bethlehem
6	Name: Dr. Hassan Al Khatib Title: Deputy Minister Organization: Ministry of Labor Address: Ramallah
7	Name: Mr. Jafar Hdaid Title: Director General Organization: The Palestinian Investment Promotion Agency Address: Ramallah
8	Name: Mr. Jamal Jawabreh Title: Director General of the Federation of Palestine Chambers of Commerce, Industry and Agriculture, Chairman of Small Enterprises Center, and board member of the Palestine Industrial Estate and Free Zone Authority Organization: Federation of Palestine Chambers of Commerce, Industry and Agriculture Address: Headquarters- Ramallah
9	Name: Ms. Layla Abu Khalil Title: HR Director Organization: Palestine Real Estate and Investment Company (PRICO) Address: Ramallah

	People interviewed
10	Name: Mr. Mahmoud Njoun Title: Director General of TVET Organization: Ministry of Labor Address: Ramallah
11	Name: Ms. Julia Pitner Title: Chief of Party/Aswatuna Project- Inter New Network Address: Ramallah
12	Name: Mrs. Malak Masri/Hamouri Title: General Director Organization: Palestinian Education for Employment Foundation Address: Ramallah
13	Name: Mr. Maher Hshayesh Title: Executive Director Organization: Stone and Marble Union (phone interview)
14	Name: Mr. Mohamad Jawad Title: Head of the Investment and Microfinance Department Organization: Cairo Amman Bank Address: Headquarters- Ramallah
15	Name: Eng, Mohamad Salah Title: Manager of Kaser Al Thakafah Project Organization: PRICO Palestine Real Estate Investment Company Address: Ramallah
16	Name: Mr. Motasem Al Natsheh Title: Director General Organization: Hebron Chamber of Commerce Address: Hebron
17	Name: Dr. Mohammad Nasser Title: Economic Specialist, Dean of the Economic Department Organization: Bir Zeit University (phone interview)
18	Name: Mr. Mounir Kleibo Title: ILO representative in Jerusalem Address: Jerusalem
19	Name: Mr. Nidal Abu Lawi Title: General Manager Organization: PRICO Palestine Real Estate Investment Company Address: Ramallah
20	Name: Dr. Sabri Sedam Organization: Office of the President Address: Ramallah

	People interviewed
21	Name: Mr. Salah Odeh Title: Director General Organization: Ramallah Chamber of Commerce Address: Ramallah
22	Name: Dr. Stephan Salameh Title: Special Advisor to the Minister Organization: Ministry of Planning and Administrative Development Address: Ramallah
23	Name: Mr. Tayseer Saeed Title: Head of the Vocational Training Department Organization: Hebron Chamber of Commerce
24	Name: Mr. Volker Ihde Title: Team Leader of the Vocational Education and Labor Market Program Organization: German Technical Cooperation (GTZ) Address: Ramallah
25	Name: Dr. Zeyad Jweiles Title: Director General of TVET Organization: Ministry of Higher Education Address: Ramallah

Appendix 2: Sample Survey and Results

Appendix 2: Sample survey



USAID
من الشعب الأمريكي



VET - NGO League
League of Vocational Education & Training Association-Palestine
رابطة التعليم والتدريب المهني - فلسطين



Save the Children

MTC/ GCT Evaluator/s _____

Date of interview _____

Gap Analysis Tool

For Private League Vocational Training Institutes in Palestine

Save the Children

Technical and Vocational Education and Training (TVET) Program

#	FACILITY IDENTIFICATION		Notes
Q1.	Name of Facility		
Q2.	Address		
Q3.	Year institute was started		
Q4.	Interviewee		
Q5.	Facility manager		

	STAFFING		Notes
Q6.	Number of employees		
Q7.	Total number of teachers		
Q8.	Number of teachers who have completed	1. Masters degree..... 2. BA degree..... 3. Diploma..... 4. High school..... 5. Experience only.....	
Q9.	Number of students		

Q10.	Age of students				
Q11.	Number of drop outs				
Q12.	Number of handicapped (teachers/ students)	1. Teachers.....		2. Students.....	
Q13.	Are there job descriptions?	1.	Yes	2.	No
Q14.	Gender		1.men		2.Women
Q15.	What is the work day schedule?				

	OPERATING POLICIES & PROCEDURES					Notes
Q16.	Is the institute located in your own facility or is it part of another facility?	1. Own facility		2. Part of another one		
Q17.1	Does the institute have formal SOP?	1.	Yes	2.	No	
Q17.2	If yes, are the SOP's followed?	1.	Yes	2.	No	
Q18.	Do you have a mission statement?	1.	Yes	2.	No	
Q19.	Do you have goals and strategic plans?	1.	Yes	2.	No	
Q20.	Do you have admission procedures?	1.	Yes	2.	No	
Q21.	Do you assess your plan and review the curricula?	1.	Yes	2.	No	

	OPERATIONS		Notes
Q22.	How is the institute governed?		
Q23.	What is the institute's capacity?		
Q24.	What are the programs provided and their length?	Programs	Length

Q25.	What percent of graduates get jobs?					
Q26.	Do you have a placement department?	1.	Yes	2.	No	
Q27.	Is intake documentation on paper or electronic?					
Q28.	Do employers approach the institutes for potential employees?	1.	Yes	2.	No	
Q29.1	Are current teachers qualified?	1.	Yes	2.	No	
Q29.2	If so, in which specific vocations?	1.				
		2.				
		3.				
		4.				
Q30.	Is it hard to get specialized teachers when needed?	1.	Yes	2.	No	
Q31.	How do you evaluate the tools and equipments used in the training?	1. Old		2. Modern		
Q32.	What are the sources the vocational training curricula used by the institute?					
Q33.	What capacity improvement is needed?					
Q34.	Does the institute interface with the labor offices?	1.	Yes	2.	No	
Q35.	Does the institute engage in market needs analysis?	1.	Yes	2.	No	
Q36.	Does the institute form partnerships with local social, commercial, and humanitarian organizations?	1.	Yes	2.	No	

Q37.	How is the institute funded?	1.	Tuition fees	2.	Donors	3.	Money making schemes
Q38.1	What are the tools of marketing? (Samples if possible).	1. Word of mouth					
		2. Ads					
		3. Internet					
		4. Promotional campaigns					
		5. Others, specify.....					
Q38.2	Do you have a problem in recruitment or marketing?	1.	Yes	2.	No		
Q39.1	Has the institute been engaged in any capacity building programs or trainings?	1.	Yes	2.	No		
Q39.2	If yes, please specify						
Q39.3	Were those programs successful?	1.	Yes	2.	No		
Q39.4	If yes, in what way?						
Q39.5	If no, why did they fail?						

Q40.1	Has the institute been engaged in any program funded by donors?	1.	Yes	2.	No	
Q40.2	If yes, please specify					
Q40.3	How do you evaluate those programs?					
Q41.	What methodology do you use for training?					
Q42.	Have employers approached you for specific training?	1.	yes	2.	No	
Q43.	What are the other services and benefits students get from school other than training?					

	DATA MANAGEMENT						
Q44.1	Are institute records maintained?	1.	Electronically	2.	On paper	3.	Both
Q44.2	If records are kept on paper, for how long do you keep them?						
Q45.	Is there backup for the records?	1.	Yes	2.	No		
Q46.	Who is responsible for records maintenance?						

	PLANT AND FACILITIES		Notes
Q47.	How many buildings?		

Q48.1	Does the facility have electrical generator?	1.	Yes	2.	No	
Q48.2	If yes, does it work?	1.	Yes	2.	No	
Q49.1	How often do you have shortage of water?					
Q49.2	Do you buy tanks?					
Q50.	Is there handicap access?	1.	Yes	2.	No	
Q51.1	Do you think that your building is good enough to handle your operations?	1.	Yes	2.	No	
Q51.2	Condition of building?	1.Excellent				
		2.Good				
		3.Fair				
		4.Poor				

	ELECTRONIC EQUIPMENT	Management	Training	Enough	
				1.Yes	2.No
Q52.1	Number of computers				
Q52.2	Condition of computers	1. Number of computers working..... 2. Number of computers not working.....	1. Number of computers working..... 2. Number of computers not working.....		
Q53.	Number of laboratories				
Q54.1	Number of computers with Internet access				
Q54.2	Speed of the Internet?				
Q55.	Number of printers				
Q56.	Internal server?				

Q57.	Software developed or purchased?				
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	FURNITURE & FIXTURES	Management				Training		Enough	
		1.	Yes	2.	No	Yes	No	Yes	No
Q58.	Number of desks?								
Q59.	Number of chairs?								
Q60.	Number of file cabinets?								
Q61.	Number of marker boards?								
Q62.	Number of communication systems?								
Q63.	Waiting facilities?	1.	Yes	2.	No				

	HEALTH & COMFORT	Availability				Enough	
		1.	Yes	2.	No	Yes	No
Q64.	Drinking water dispensers?						
Q65.	Refrigerators?						
Q66.	Stoves?						
Q67.	Medical Cabinets?						
Q68.	Cafeteria?						
Q69.	Residential?						
Q70.	Medical staff?						

	SECURITY					Notes
Q71.1	Is the facility safe?	1.	Yes	2.	No	
Q71.2	Is the facility guarded 24 hours a day?	1.	Yes	2.	No	
Q71.3.	Security system or guards?					

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Q72.	Fire system?		
Q73.	Insurance?		

Results of the Gap Survey

What follows is aggregated data from the seven available centers that were surveyed. For the purpose of the general analysis of the VET-NGO League as a whole, the aggregated data will inform the overall plans for the development of the League and its centers.

Staffing and Management

Table 1 summarizes TVET Center data on staff, students and courses. In this Table and those that follow, the TVET Centers are numbered but not named. For comparative purposes data from the Palestine Polytechnic University (TVET courses) and a sample public TVET Center have been included to contrast the situation of the private centers with those publically owned. Not all centers were able to provide the study team with the required data so in some cases the information must be regarded as indicative until follow-up studies with individual centers can be conducted.

Table 1: Center audit data: staff and students

TVET Center	Number of staff (Male/Female)	Number of students (Male/Female)	Number of courses	Number of graduates per annum
TVET Center 1	22 (21/1)	150	6	Around 150
TVET Center 2	54 (37/17)	300 (297/3)	11	Around 295
TVET Center 3	43 (25/18)	130 (90/40)	6	Around 120
TVET Center 4	385 (320/65)	5,000	51	Not available
TVET Center 5	15 (15/0)	56 (56/0)	4	41
TVET Center 6	6 (6/0)	51 (51/0)	1	50
TVET Center 7	10 (7/3)	100 (100/0)	4	95
PPU TVET College	64 (39/25)	1,726 (949/777)	18	577 (2009)
Sample public TVET Center (MoE&HE)	35 (35/0)	220 (220/0)	10	100
Sample public TVET Center (MoL)	21 (13/8)	187 (93/94)	9	200

The main observation of the staff and student audit, concerns the wide variation in student enrollment, number of courses offered and the gender imbalance in staff and student load. The number of students in relation to the number of courses is reasonably balanced, but as the range of courses can be very wide, closer scrutiny is required for assessing student load in each subject. In most cases, the total student population per course is quite low. In many cases the number of staff employed is quite high when contrasted to student enrollment. When compared with **Table 2**, the staffing profile of a private TVET college and a public campus is quite similar. Of interest is the low number of courses offered and the number of staff qualified to teach in a specific subject area. Again, the staff qualified to deliver each course is very low.

The majority of TVET Centers have low student-teacher ratios and this contributes to high unit costs. It also reflects that demand for vocational education and training is weak. This situation reflects quite poor levels of internal efficiency. There are few opportunities for staff to upgrade their teaching profile to cover more than one area, as most staff have to cover a complete course on their own as **Table 2** reveals. The range of qualifications of teaching staff is encouraging but there is obviously room for the provision of professional training to increase skills and qualifications. The main gap is the absence of formal qualifications in Teaching and Assessment which is now mandatory in modern TVET systems.

Table 2: Staff profile for a typical TVET Center and a typical public TVET college

Sample VET-NGO League TVET Center	Number of staff (Male/Female) per course	Highest qualification of staff	Skill category of staff	Years of service as an instructor	Is staff a Workplace instructor (Yes/No)
Course 1 Aluminum	1 (M)	Diploma	Skilled	6 years	Yes
Course 2 Carpentry	1 (M)	Diploma	Skilled	6 years	Yes
Course 3 Auto-mechanics	1 (M)	BA	Technical Specialist	6 years	No
Course 4 Communication/IT	2 (M)	BA	Technical Specialist	2 years and 3 years	Yes No
Sample public TVET Center (MoL)	Number of staff (Male/Female)	Highest qualification	Skill category	Years of service	Workplace instructor
Course 1 Executive secretary	2 (F)	BA	Technical Specialist	2 years and 10 years	No
Course 2 Sewing/tailoring	1 (F)	Diploma	Technician	9 years	No
Course 3 Cosmetology	1 (F)	Diploma	Technician	25 years	No
Course 4 Carpentry	1 (M)	Diploma	Skilled	5 years	Yes
Course 5 Metal forming	2 (M)	Diploma	Skilled	1 year and 10 years	No
Sample public TVET Center (MoE&HE)	Number of staff (Male/Female)	Highest qualification	Skill category	Years of service	Workplace instructor
Course 6 Graphic design	1 (M)	BA	Technical Specialist	29 years	No
Course 7 Office equipment repair	1 (M)	Diploma	Technician	2 years	No
Course 8 Electricity	1 (M)	BA	Technical Specialist	5 years	No
Course 9 Automotive	1 (M)	Diploma	Technician	9 years	No

The number of teachers in TVET Centers varies widely with one center employing six staff and another over 50. Palestine Polytechnic University is the exception with the technical college and higher education programs requiring nearly 400 staff. The number of students enrolled in the centers range from 50 to 300 except for the Palestine Polytechnic University which has around 5,000 students enrolled across different vocational and academic programs. The youngest students enrolled at TVET Centers are 14 years old, and the oldest are in their mid-50s. Despite this age spread, the average age of students enrolled is between 14 and 18 years old. Many students come from poor households and find themselves at a TVET Center owing to either a poor academic history while in primary or secondary school, or their family finds secondary school costs too high or a combination of both.

The great variation in student and staff numbers makes the issue of efficiency and effectiveness of each TVET Center central to the development of each campus. The main observation is that a low enrollment cannot support a large number of courses and job outcomes. Owing to the historical precedent concerning the function of vocational schools, even small TVET Centers try to provide numerous instructional programs covering textiles and sewing to plumbing to automotive. As each discipline requires its own workshop or classroom a large volume of building space is required for small groups of students.

Too many courses often results in a shortage of equipment and tools generic to each trade discipline, which limits a trainee's access to the necessary range of hand tools, power tools and fixed/static equipment. This can impact negatively upon attendance and participation. Student attendance and participation is also affected by factors including travel and demands at home and/or small family businesses. The percentage of dropouts from the TVET Centers can be as high as 10%. Still, some reported negligible dropout rates.

With low student enrollment, teachers and instructors in many TVET Centers include a small staffing compliment. Teachers/instructors are qualified to teach in only one discipline or at one level, usually at only the "skilled" level. Instructors are skilled, but hold quite low academic qualifications. This results in poor salaries where a salary is based on levels of classification or Ministry of Education and Higher Education scales of pay, tied into formal qualifications. Center management faces severe financial constraints in recruiting more and highly qualified instructors.

Owing to the range of courses offered and the job outcomes they lead to, most teachers/instructors are male, reflecting in turn, the large numbers of male students. Three of the seven centers did not have job descriptions on file, or duty statements for staff. There are no requirements for teachers and instructors to have formal qualifications in teaching and assessment. This is an area of concern.

Operating Policies and Procedures and Structures

Table 3 summarizes the amount of space available in each TVET Center. It can be seen that most centers are small, where in some cases a building is the only classroom. Most of the TVET Centers

have their own grounds, buildings and facilities. Talitha Kumi Community College is part of Talitha Kumi School. The Continuing Education Departments of Dar Al-Kalima College and the Palestine Polytechnic University form part of larger higher education institutions sharing grounds and buildings. Beyond the Palestine Polytechnic University for TVET, the number of classrooms and workshops is small. As often a classroom is attached to a workshop, the figures can be misleading. Similarly, as workshops often take up the space of a small building, the summary of buildings in **Table 3** can also be misleading.

Table 3: Buildings and grounds audit

TVET Center	Number of buildings	Number of classrooms	Number of workshops	Number of computer laboratories
TVET Center 1	4	4	4	1
TVET Center 2	12	8	10	1
TVET Center 3	3			
TVET Center 5	1	1		3
TVET Center 6	2	5		1
TVET Center 7	1	9	9	1
PPU TVET College	4	28	10	10
Sample public TVET Center (MoL)	1	9	9	1
Sample public TVET Center (MoE&HE)	5	9	9	1

Our Gap Analysis did not thoroughly assess the quality of buildings and classrooms, and did not appraise in detail the actual use of learning environments (i.e., how often the classroom and workshop is being used during the teaching week and academic year.) Several campus visits did lead to a tentative conclusion that a lot of space is under-utilized. A more comprehensive audit of buildings and grounds is required before any future investment in equipment and tools is considered. This audit would need to appraise the quality of classrooms and workshops, identify the most appropriate use of space for upgrading learning environments and the likely range of new facility, equipment and tools that would be most suitable for re-fitting the learning environments. This in turn is coordinated with any plans for the introduction of new curriculum programs which will also involve the process of defining in-service teacher training for upskilling center staff.

A number of TVET Centers develop strategic plans, which are reviewed annually along with courses of study. Four of the seven centers have formal standard operational procedures, which are followed on a regular basis. Most centers have mission statements that help define the center's mandate and student selection and admission procedures. **Table 4** provides an overview of work in this area by TVET Centers. The results are mixed, and given that a number of centers are small with low levels of staffing, it is not surprising that directors are resource challenged when a need for this planning and review documentation is required. This is an area where most TVET Centers would benefit from technical assistance to strengthen the VET-NGO League's work and progress in business operations.

Table 4: Operational planning capacity

TVET Center	Annual business plan (Yes/No)	Annual financing plan (Yes/No)	School development plan (Yes/No)	Annual report (Yes/No)
TVET Center 1	No	No	No	No
TVET Center 2	No	No	No	No
TVET Center 3	Yes	Yes	Yes	Yes
TVET Center 4	Yes	Yes	Yes	Yes
TVET Center 5	No	No	No	No
TVET Center 6	Yes	Yes	Yes	Yes
TVET Center 7	Yes	Yes	Yes	Yes

Programs Provided

Of central interest to the Gap Analysis are provisions for workplace learning in each TVET Center. Education and training is increasingly viewed in terms of a broader venue, involving employers and their companies, TVET institutions, community organizations and government and donor agencies. Access to quality workplace learning venues varies widely. As workplace learning is not accredited, the idea of workplace learning is not well developed.

Table 5 provides an overview of current provisions for workplace learning. Of interest is the absence of activity in pre-vocational and traditional apprenticeship training. Pre-vocational training is the key link between TVET Center-based instructional programs and structured learning in the workplace. Traditional apprenticeships enable formal education and training in the informal employment sector and micro-enterprises. Provisions for both in the VET-NGO League, as well as all of the Palestine training centers are presently weak. Activity in apprenticeships is more encouraging, but as will be seen later, programs show wide variation with many agreements with employers being loose and reliant on personal contact between TVET staff and employers particularly those in urban industrial parks. This is an area where less formal provisions for entering contracts with employers for apprenticeships and on-the-job training can be further investigated, particularly where employers are not wealthy.

Table 5: Workplace learning profiles

TVET Center	Pre-vocational training offered (Yes/No)	Informal apprenticeship offered (Yes/No)	Formal apprenticeship offered (Yes/No)	Internship offered (Yes/No)
TVET Center 1	No	No	Yes	Yes
TVET Center 2	No	No	No	Yes
TVET Center 3	No	No	No	No
TVET Center 4	No	No	Yes	No
TVET Center 5	No	No	Yes	Yes
TVET Center 6	No	No	Yes	Yes
TVET Center 7	No	No	Yes	Yes
Sample public TVET Center (MoE&HE)	No	No	Yes	Yes
Sample public TVET Center (MoL)	No	No	Yes	Yes

In conjunction with current provisions for pre-vocational training and apprenticeships, it can be seen that a student's progression through a TVET course is not as tightly structured as required to ensure that all the skills central to a trade are actually mastered. Opportunities are rudimentary for blended learning involving classroom instruction, workshop experience, workplace learning and self-paced learning. Again, this area will require substantial new work and activity if TVET Center courses are going to secure a solid link with filling labor market gaps.

In terms of qualifications, only one of the League centers provides a full Bachelor of Arts degree accredited by the Ministry of Education and Higher Education. Five centers provide two year degrees accredited by the Ministry of Education and Higher Education. Two centers provide short-term courses accredited by the Ministry of Labor and one center provides an Industrial Tawhiji (High School) Certificate accredited by the Ministry of Education and Higher Education. Most courses lead to a Level 2 skill level (Skilled Worker). **Table 6** provides examples of courses by skill level within the TVET system.

Table 6: Examples of courses by Palestinian TVET system skill level

Sample League TVET Center/Training	Number of courses by level	Course duration	Qualification	% graduates employed within 6 months
Unskilled				
Skilled	4	1 year	Level 2	70% within 12 months
Craftsman				
Technician				
Technical Specialist				

Sample public TVET Center (MoL)	Number of courses by level	Course duration	Qualification	% graduates employed within 6 months
Unskilled				
Skilled	9	1 year	Level 2	85 % within 12 months
Craftsman				
Technician				
Technical Specialist				
Sample public TVET Center (MoE&HE)	Number of courses by level	Course duration	Qualification	% graduates employed within 6 months
Unskilled				
Skilled	10	2 years	Level 2	Statistics unavailable at the school
Craftsman				
Technician				
Technical specialist				

The status of each level of qualification requires further examination as this is one area the *Revised TVET Strategy* advises is untidy and fragmented. Well defined education standards expressed as student learning outcomes by level is recommended in the strategy owing to inequities in the type and range of certification by level and the poor integrity of the accreditation process for award bearing courses.

All centers advised that student tuition fees only cover an average of 30% of the running costs associated with the delivery of each course of study. As can be seen in **Table 7** the fees widely vary from center to center. It is difficult to assess how a center funds core operations when considering that fees range from no cost to hundreds of dollars. This anomaly has resulted in one center relying on donor funds as the main source for income.

Table 7: Fees and work attachments

TVET Center	Annual course fee	Number of work attachment agreements	Number of days per attachment	Workplace assessment (Yes/No)
TVET Center 1	Free	34	9 months	Yes
TVET Center 2	Starting at 1000 NIS	None	None	None
TVET Center 3	Lack of info.	Lack of info.		
TVET Center 4	Lack of info.	Lack of info.		
TVET Center 5	700NIS	Many	80% of credit hours	Yes
TVET Center 6	4200NIS	20	4 weeks	Yes
TVET Center 7	3000NIS	180	40% of credit hours	Yes
PPU TVET	25 JD per credit hour. The average credit hours are 30 per year.	Many	Level 1 & 2 60% of course Level 3 & 4 45% of course Secretarial 35% of the total course	Yes
Public TVET Center (MoL)	Free	More than 200 (in principle)	3 weeks	Yes
Public TVET Center (MoE&HE)	Free	None	3 weeks	Yes

Accordingly, TVET Center Directors need to attract other sources of funding to cover overhead including salaries and limited facility and equipment upgrades. This includes donations, sponsorships and the sale of products produced by students such as furniture, handicrafts and textiles. This assists in keeping tuition fees down to a level that can be met by poor households, but it leaves little funds for maintenance and repairs, replacement of damaged tools or faulty equipment, and upgraded learning environments.

While the annual income for each TVET Center is low and results in stretched annual budgets, TVET Center Directors will need to continue seeking support through donations and donor support. As the development of industries throughout Palestine is still in its infancy, major employers cannot be expected to contribute significantly to TVET infrastructure developments until their own growth, commercial viability and continuity is assured, and they are more fully integrated into the TVET system.

In addition to these observations, the Gap Analysis found that:

- One center advised that between 85% and 90% of their graduates find jobs. Three centers advised that 80% of the graduates find jobs. One center advised that 75% of the graduates find jobs and another that 70% of the graduates find employment. One advised that only 60% of the graduates secure employment. These percentages appear somewhat encouraging, but the duration of a job search for a graduate may be up to 12 months and it was not clear if the majority of graduates find employment in the areas in which they were trained.
- During informal discussions with centers it seemed that many graduates were absorbed into the Palestinian workforce through personal relationships and word-of-mouth recruitment.
- None of the centers currently have a job placement section in support of career guidance, though progress is being made in this area with recent USAID support for school to work transition.
- Four centers advised that student enrollment and academic history documentation is in paper-form only, while three centers advised that the enrollment and student history documentation is held in both paper-form and electronic formats.
- In relation to data management and student information systems, two centers said that they maintain records only on paper and records are kept for a very long time. They do not have a backup system for records. Five centers advised that the records are maintained both on paper and electronically.
- All seven centers observed that employers approach them for potential employees but currently there are clear systems of recruitment except by employers in the areas of financial services and in particular, office-related services.

- Three centers advised that they are approached by employers for skills training for current employees. Four centers advised that employers do not approach them for specific training and said that this is mainly because employers wanted their current employees trained at no cost to them and as support from donors or larger employers was not forthcoming in this area, these employers do not pursue opportunities to upskill employees. This important revenue stream for the TVET Centers is therefore lost.
- All centers advised that their current teachers and trainers are qualified, but it is difficult to find and recruit new teachers/instructors in areas requiring high-levels of specialization. Engineers, for example, who have graduated from universities, cannot teach students how to learn servicing, maintenance and repair, as the courses the engineers have taken and completed at the university level are largely theoretical and lack practical applications.
- Several centers observed that it was difficult to find and recruit teachers with a master's degree in shortfall areas of training including graphic design. Some of the centers advised that the hiring of well trained and qualified staff is difficult owing to financial and resource limitations, which keep salaries low. Poor salaries greatly restrict opportunities to recruit new staff. This is common to all TVET Centers.
- Four centers advised that the methodology used for training is mainly “learning by doing”, but several maintained that theory still consumed a reasonable volume of instructional time. This was usually related to poor access to the necessary equipment and tools and limited opportunities for students to access hands-on, simulated or real working environments.
- Four centers advised that hand tools, power tools and static/fixed equipment used for training are outdated, often damaged or faulty, and unsuitable for work tasks in modern workshops. In one center we visited, students were using fixed, power equipment without the required safety provisions, including guard rails or shields to protect hands and limbs. In another, metal grinding activity that requires goggles, ear-muffs and leather gloves was taking place without this protection.
- Outdated tools and equipment are also issues concerning occupational health and safety. Core units of competency in work safety are absent from existing courses of study.

Plant and Facilities

Our Gap Analysis does not include a comprehensive TVET Center audit. Our team suggests a more thorough audit to obtain baseline data on the centers as a whole. This should include an audit of buildings, grounds, classrooms and workshops, staff qualifications and in-service training and courses of study including assessment procedures. Information from the surveys revealed that most centers will require significant improvements to buildings and grounds. This more thorough audit will occur when our team develops whole center plans with each TVET Center in the VET-NGO League.

Table 8 advises that TVET Center management felt that their buildings and classrooms were in good shape. Our team advises that an independent audit by qualified structural engineers accompanied by trained instructors equipped with the necessary survey instruments to assess learning environments is necessary. For example, criteria for assessing a classroom and a workshop are quite different. Conditions in support of student seating and comfort are important in classrooms while safety and ventilation is central to work areas. Similarly, sanitation is a crucial issue for student health and welfare and goes beyond the matter of access. For instance, a number of classrooms and workshops observed by the study team did not reflect what is normally expected in a student friendly working environment. New classrooms and workshops in the new Evangelical Lutheran School of Hope will no doubt provide a benchmark in expected standards.

Table 8: Buildings and classrooms audit

TVET Center	Condition of buildings	Condition of classrooms	Condition of workshops	Water supply/ sanitation	Access to power/gas	Provisions for the disabled
TEVT Center 1	Fair	Fair	Fair	Excellent	Excellent	No
TEVT Center 2	Good	Fair	Fair	Excellent	Excellent	No
TEVT Center 3	Excellent	Excellent	Very good	Excellent	Excellent	Yes
TEVT Center 4	Excellent	Excellent	Excellent	Excellent	Excellent	Yes
TEVT Center 5	Fair	Good	Fair	Excellent	Excellent	No
TEVT Center 6	Good	Very good		Excellent	Excellent	Yes
TVET Center 7	Fair	Fair	Fair	Excellent	Excellent	No
Public TVET Center (MoL)	Fair	6 fair, 3 good	6 fair, 3 good	Very good	Very good	No
Public TVET Center (MoE&HE)	Fair	Good	Good	Water is good. No sewage.	Good	No

Opportunities for student learning in a variety of learning environments presents challenges, as most workshops and computer laboratories require some degree of rehabilitation ranging from minor repairs to major renovations. Staff in two centers advised that buildings and classroom conditions prevent the effective delivery of instructional programs.

In observing a number of classrooms and workshops, the study team noticed that conditions for students were sometimes hazardous with both portable and fixed equipment not suitably aligned to the architecture of workshops. Classrooms attached to these workshops were often poorly lit and there was no evidence of ventilation.

Market Connections

TVET Centers have poor access to modern information and communication technology, including computers with up-to-date software for student management information systems and services, and

financial management, including book-keeping and online professional training for staff. Naturally, as provisions for computers are limited, a wide range of e-learning is not available for staff or students. This includes virtual textbooks/manuals, virtual classrooms, virtual laboratories and virtual applications involving welding, plumbing, driving (heavy vehicles for instance).

This situation impacts on important commercial and marketing activity by the TVET Centers, including the development of their own websites, website-based information for students and Internet access in general. Four centers have developed a website, an essential marketing tool, but again, student and staff access to the Internet in these centers is limited.

As household access to the Internet throughout Palestine is quite low, this is not a major issue for marketing to potential students. But poor Internet access at TVET Centers greatly reduces opportunities for online, blended online and virtual learning, and also limits interactions with major employers and industries. This online limitation is exacerbated as centers advised that there is little contact or interactions with the Ministry of Labor as these offices are not active.

As a number of centers have a form of internship, trainee or apprenticeship agreements with local firms, poor access to e-business and e-learning is being overcome. But this gap for strengthening instructional programs and industry engagement cannot continue to widen if TVET Centers are to meet the key TVET principles of relevant, efficient, effective, flexible and lifelong learning oriented training. Given the absence of a credible labor market information system, poor Internet access also limits the capacity of a TVET Center to respond to market need, both current and emerging.

Most centers agreed that the main problems facing marketing are:

- weak and under-resourced marketing departments and the absence of career advice to students, including career guidance officers;
- low staffing volumes and skills prevent the release of existing staff to fill gaps in this important area of student and graduate guidance; and
- poor prospects for recruiting girls to boost enrollment in those trades or disciplines normally populated by girls and young women, or in non-traditional occupations for women. In many TVET Centers we observed that female enrollments are traditionally very low, but attendance, participation and retention of girls enrolled, is also quite poor.

Two centers advised that they did not have the required financial or human resources to provide capacity building or professional development programs for staff and teachers. If there is an urgent priority need to re-train staff for a specific purpose, TVET Center Directors will find areas within the budget where spending in one area can be cut to finance some short-term or intensive training. This is expedient, but not effective nor sustainable.

Those centers active in professional development of staff have secured support through donor programs which traditionally are active in capacity development interventions. Centers benefiting from this support advised that donor-supported programs were very effective and successful in terms of meeting objectives. Unfortunately, the arrival of new equipment that was sometimes the basis for professional training has often been delayed because of sensitivities at borders.

The centers saw a need for ongoing support in capacity building/professional development; provisions for e-learning and e-business; infrastructure development (classrooms, workshops, shop floors, teacher resource rooms); a wide range of equipment and tools, including power tools; cafeterias for students; and awareness and marketing campaigns for recruitment to improve the image of TVET in the community, and student exchange programs.

Several centers provide services beyond education and training. Student services include assistance to find employment and dormitories for students, providing students with scholarships for training abroad, conferences and workshops and student meals at one center.

Institutional and Capacity Development

Centers advised that they need improved equipment and tools including power tools across a wide range of training programs. **Table 9** shows the combined needs of all seven centers:

Table 9: Equipment gaps experienced by TVET Centers

Item	Total number of new items required
Computers	110
Computer laboratories	1
Computer Servers	3
Chairs	100
Filing cabinets	10
Marker boards	12
Smart boards	7
Telephones and faxes	2
Drinking water dispensers	2
Medical cabinets	22
Projectors	3

Other needs linked to this combined needs list include software for registration purposes, software for educational purposes (e-learning and virtual applications, for instance including an Internet library), a bar-code system for tracking equipment and tools, new furniture and storage for workshops, a range of vehicles central to campus business, and in several instances, cafeterias for students and staff.

The **Table 10** outlines where TVET courses need to be provided in support of economic and industrial growth sectors. Additional training to what is provided now is included for new occupations and industries. A significant range of occupations are not being taught by the VET-NGO League TVET Centers. Public TVET colleges are similarly poorly organized to deliver instructional programs in

growth industry sectors including agro-business, transportation and storage, property development, and financial services, including bank-based occupations. Where training is being provided in the TVET Centers, it is at a very basic level, equivalent to Certificate 1 and 2. But the length of training in Palestine is almost twice as long as normally required.

Table 10: Identified growth areas for TVET-NGO provided vocational skills development

Employment category	Currently Offered	Not Offered	The need to develop these courses in future.
Agricultural Management		X	Definitely
Agro-business		X	
Art and Jewelry	X		
Automotive Repair	X		Upgrade
Banking		X	
Bricklaying		X	
Communications/ Mobile phones	X		Upgrade
Concrete pouring and work		X	
Construction (Finishing)	X		Urgent upgrade
Construction (General)	X		Urgent upgrade
Drainage/Water supply		X	
Electrical (General)	X		Upgrade
Electrical (Networks)	X		Upgrade
Energy Systems		X	
Food Processing		X	
Formwork		X	
Graphic Design		X	
Hotel Services	X		Urgent Upgrade
Information Technology	X		Urgent upgrade
Maintenance (cross industry)	X		Extensive Upgrade
Manufacturing and packaging		X	
Marketing/Business	X		Extensive Upgrade
Medical maintenance		X	
Metal work	X		
Painting/Decorating	X		
Paving (Construction)	X		
Pharmaceutical		X	
Cosmetology/Hairdressing		X	
Sewing/Textiles	X		
Plastering		X	
Property Development		X	
Recycling/Environment		X	
System Development		X	
Stone Masonry/Stone Work		X	Urgent upgrade
Tiling wall and floor (finishing)		X	
Waterproofing		X	
Wholesale/Retail		X	
Window Installation (finishing)		X	

This table can be compared with **Appendix 1**, which summarizes the range of courses offered by accredited publically owned TVET Centers within the Ministry of Labor's mandate for TVET. It can be noted that the public TVET Centers do not cover many of the courses and job outcomes required

above. **Box 1** details the names of courses that are offered by the VET-NGO League TVET Centers throughout the West Bank. Note that this is a consolidated summary and a single TVET Center does not offer all of these subjects. Also note that the subjects are not broken down into units of competency, structured and delivered in a modularized form.

Box 1: Courses by subject offered by the VET-NGO League TVET Centers across the West Bank

Construction trades	Automotive	Computing and ICT
Carpentry (general)	Modern vehicle systems	Computer applications
Carpentry (décor)	Auto-electrical	Communication
Carpentry (painting)	Mechanical design	Applied programming
Office furniture construction	Mechanical electronics	Repair of mobile phones
Upholstery and décor	Auto-mechanical	Satellite communications
Central heating and ventilation		Basic computing
Air-conditioning	Business Studies	Satellite communication repair
Blacksmithing and aluminum	Executive Secretary	Information/computer techniques
Electricity (1 st phase)	Accounting	Computerized formations
Electricity maintenance	Management	Digital design
Electricity (home networks)	Capacity building	Radio and televisions repair
Industrial electronics	Office equipment repair	Internet
Electronics	Foreign languages	Graphic design
Blacksmithing/metal forming	Office automation	Computer maintenance
Wall construction		Computer networking
Water supply and sanitation	Handicrafts/Craftsmen	Computer repair
Drainage	Handicrafts	
Civil construction design	Pottery	General Studies
General construction design	Jewelry	Tailoring and design
	Mosaics	Women's training
Hospitality and Tourism	Painting	Driving
Hotel management and tourism	Glass work	Primary health care
Hospitality	Silk printing	Wellness
Reception		
Accommodation	Film Production	
Food and beverage production	Film and video shooting	
Housekeeping	Digital photography	
Kitchen hand	Cartoon production	
Foreign languages		

Of interest in the range of subjects offered is the heavy concentration of study covered by the construction industries and computing and computer technology. In terms of the industry clusters and sectors experiencing significant promise for growth there is little effort being invested in the wide range of occupations associated with the automotive industry, including transportation and storage. It is interesting that there is no focus on stone and marble (stone masonry) and also nothing in support of agriculture and agro-industry. Activity in hospitality and tourism is strong, bearing in mind that these are single subjects not courses.

What the data does not tell us, is what employers/industries are prepared to do themselves to address the gaps, constraints and issues. It is within their interest to bridge those gaps where the Palestinian National Authority and the education system are lacking. Responsive TVET systems are those where

industry/employers take the initiative to build up what the 'system' is failing to provide. If employers want to make a good profit, and they are facing skill shortages, it is within their interest to work with government in this area. If that is not possible, the logical development is for TVET Center Directors and employers to willingly enter a dialogue on measures for the continuous improvement of education and training in those areas vital to economic growth and development.

Taking this into account, the data to date does not reveal a 'corporate' interest in rectifying the situation where there is a poorly functioning, fragmented education and training system and to move it towards one based on continuous improvement. For instance, in developed economies, employers/industry have addressed shortfalls in training in the hospitality industry through group training as it is recognized that TVET Centers cannot afford the technology, equipment and information systems central to training in that sector.

In the *Regional Economic Status Report* our team found that a major property developer employs at any time between 2,000 and 10,000 people. Yet the study team was unable to gather information on how the firm selected recruits and they were trained. If they are skilled and qualified they were trained where courses of study lead to an academic award (qualification). For instance, in Zambia, despite having two very substantial tourism and hospitality TVET institutions, new staff are trained in South Africa and often by the hotel chains themselves. This results in greater efficiency in training as students are regularly exposed to real work environments and real work challenges. In hospitality and tourism it is difficult and expensive to provide real or simulated work conditions as a learning environment.

This is where the study team feels that the gap analysis needs to go further explaining how expanding industrial and commercial sectors recruit and retain qualified and skilled staff and what provisions they make for up-skilling unskilled staff. Again, taking the hospitality sector as an example, most work-based education and training results in an academic award. Group training is often a feature of the approach to education and training, and qualified staff will improve their abilities and opportunities through organizing and managing apprenticeships at different locations, including international appointments through internal skill transfer programs.

The Gap Analysis is affirming clear gaps between TVET and employment needs of employers. To address the gaps there needs to be sensible solutions that make sense to TVET Center Directors. If there is a clear need for skilled labor in the 18 construction areas listed in the *Regional Economic Status Report*, and there is merit in certain TVET Centers bridging these gaps, then a clear solution is to assist participating centers to re-calibrate their course offerings. In most cases this will mean VET-NGO League management paying more attention to the potential of running a one-trade training center or trade cluster center (general construction for instance) rather than multiple courses that are not connected. This approach enables a better industry-based training arrangement through group training, allowing students to experience both small and large workplaces.

Appendix 3: Literature Reviewed

Appendix 3: Literature Reviewed

A. Adams, (2007). *The Role of Youth Skills in the Transition to Work: A Global Review*, World Bank, Washington DC.

D. Arij, D (2006). *Geopolitical Status in Ramallah Governorate*.
(<http://www.arij.org/publications.html>)

Applied Research Institute - Jerusalem, *Geopolitical Status in Ramallah Governorate*, 2009.

Asian Development Bank, (2007). *Promoting Rural Women's Entrepreneurship in Transition Economies*, Technical Assistance Report, ADB, Manila.

Berryman, Sue, E., Natsios, Andrew, Elkins, Jill, Marquardt, Jane 2008, *Critical Elements of International Workforce Training*, USA

L. Brewer, (2004). *InFocus Programme on Skills, Knowledge and Employability*. Skills Working Paper No.19, ILO, Geneva.

C. Nink & J. Elkins, (2010) *Job Corps: A Successful Workforce Program for International Consideration*, Management & Training Corporation, Utah.

Christian-Muslim relations in Palestine. London (no date).
(<http://www.middleeastmonitor.org.uk/downloads/briefing-paper/christian-muslim-relations-in-palestine.pdf>)

DAI Washington, *Cluster Competitive Assessment. Eight industrial and services clusters in the West Bank and Gaza*, Washington DC, 2007.

L. Diyar, (2008). *Palestine Christians, Facts, Figures, and Trends*.
(http://www.annadwa.org/en/media/pdf/pal_chr_booklet.pdf)

M. Easterby-Smith, R. Thorpe & A. Lowe, (1991). *Management Research: An Introduction*. London. Sage Publications Ltd.

European Training Foundation, *Education and Business. Occupied Palestinian Territory*, 2010.
(<http://www.meda-ete.net/pubmgmt.nst>.)

G. Hilo, (2009). *The status of the Technical and Vocational Education and Training (TVET) in Palestine. An example from Hisham Hijjawi College of Technology*, Ramallah, Palestine.

GTZ, (2008). *Rapid Sector Assessment for Value Chain Intervention*. Ramallah, Palestine.

International Labour Organization, *The Changing Role of Government and other Stakeholders in Vocational Education and Training*, Geneva, Switzerland (no date).

International Monetary Fund, (2009). *Macroeconomic and Fiscal Framework for the West Bank and Gaza, Fourth Review of Progress*. Staff Report for the Meeting of the Ad Hoc Liaison Committee, New York, 22 September, 2009.

Lan Joo, (2004). *TVET Issues and Debates*, World Bank Institute, Washington DC.

Ministry of Education and Higher Education Palestine, (2008). *Education Development Strategic Plan 2008-2012. Towards Quality Education for Development*, Ramallah.

Quebec Ministry of Education, (2004). *The Engineering of Vocational and Technical Training*.

OECD, (2008). *Report on the implementation of the Euro-Mediterranean Charter of Enterprise*. Luxembourg.

Palestine Economic Policy Research Institute MAS, (2010). *Overview of the Palestinian Economy*. Ramallah, Palestine.

Palestine Trade Center, (2006). *The Untapped Potential. Palestinian-Israeli Economic Relations: Policy Options and Recommendations*, Ramallah.

Palestinian Central Bureau of Statistics, (2009). *Census Final Results- Summary. (Population, Buildings, Housing, Establishments) Ramallah & Al-Bireh Governorate*. Ramallah, Palestine

Palestinian Central Bureau of Statistics, (2010). *Palestine in Figures 2009*. Ramallah, Palestine

Palestinian Central Bureau of Statistics, (2010). *Labor Force Survey: (April-June, 2010), (Q2/2010). Press Release on the Labor Force Survey Results*.

Palestinian Central Bureau of Statistics, (2009). *Dissemination and Analysis of Census Findings. Conditions of Vocational Training Graduates in the Palestinian Labor Market*. Ramallah, Palestine.

Palestinian Central Bureau of Statistics, (2009). *Hotel Activities in the Palestinian Territory, (Annual Bulletin-2008)*. Ramallah, Palestine.

Palestinian Central Bureau of Statistics, (2009). *Economic Surveys Series, 1998-2006 Revised Results*, Ramallah, Palestine.

Palestinian Central Bureau of Statistics, (2009). *Census Final Results. Summary (Population, Buildings, Housing, Establishments) Ramallah & Al-Bireh Governorate*. Ramallah, Palestine.

Palestinian Central Bureau of Statistics, (2009). *Census Final Results. Summary (Population, Buildings, Housing, Establishments- Jericho & Al Aghwar Governorate*. Ramallah, Palestine.

Palestinian Central Bureau of Statistics, (2009). *Census Final Results. Summary (Population, Buildings, Housing, Establishments) Hebron Governorate*. Ramallah, Palestine.

Palestinian Central Bureau of Statistics, (2009). *Dissemination and Analysis of Census Findings. Conditions of Vocational Training Graduates in the Palestinian Labor Market*. Ramallah, Palestine.

Palestinian Central Bureau of Statistics/Palestine Monetary Authority, (2008). *Economic and Social Monitor*. Palestine Policy Research Institute, Ramallah, Palestine.

Palestinian Investment Promotion Agency, (1998) *Law on the Encouragement of Investment in Palestine. Law No. 1 of 1998*, Ramallah, Palestine.

Palestinian Investment Promotion Agency, 2010. *Palestine Investment Guide*. Ramallah, Palestine.

Paris Declaration on Aid Effectiveness, (2005). *Ownership, Harmonization, Alignment, Results and Mutual Accountability*, High-Level Forum, Paris.

Recovery from the Crisis. A Global Jobs Pact, International Labor Conference, 98th Session, Geneva, 19 June 2009.

Report of the Government of Israel to the Ad Hoc Liaison Committee, New York, September 2010.

S. MacDonald, C. Nink & S. Duggan, (2010) *Principles and Strategies of a Successful TVET Program*, Management & Training Corporation, Utah.

Sahem Trading and Investments Co. (2009). *Investment Sector. Palestine Real Estate Investment. 2008 Performance Report*.

G. Spöttl, P. Kämäräinen & J. Dittrich, (2008). *Quality indicators and shaping measures as a basis for standard-setting in TVET teacher education*, Teacher Training for TVET: the TT-TVET Transnational Standards for TVET Teacher Education.

State of Israel, (2010). *Measures Taken by Israel in Support of Developing the Palestinian Economy and Socio-Economic Structure*. Report of the Government of Israel to the Ad Hoc Liaison Committee (AHLC) New-York, September 2010

A.Tashakkori & C. Teddlie (1998). *Mixed Methodology: Combining Qualitative and Quantitative Approaches. Applied Social Research Methods Series (46)*. Sage Publications.

UNCTAD, (2009). *Report on UNCTAD assistance to the Palestinian people: Developments in the economy of the occupied Palestinian territory*, Trade and Development Board 56th session, Geneva, 14–25 September 2009

UNDP, Human Development Report 2009/10. Occupied Palestinian Territories. *Investing in Human Security for a Future State*. Human security: human development and human rights in oPt, New York, 2009.

UNHCR, Human Rights Council, (2010). *Human rights situation in Palestine and other occupied Arab territories*. Report of the Special Rapporteur on the situation of human rights in the Palestinian territories occupied since 1967, New York.

UNCTAD, (2010). *Report on UNCTAD assistance to the Palestinian people: Developments in the economy of the occupied Palestinian territory*, New York.

United Nations, (2008). *International Standard Industrial Classification of All Economic Activities Revision 4*. New York.

Wang-Sheng Lee & M. Coelli, (2010). *Analysis of Private Returns to Vocational Education and Training*, Melbourne Institute of Applied Economic and Social Research, University of Melbourne/NCVER, Melbourne.

World Bank, (2010). *Towards a Palestinian State: Reforms for Fiscal Strengthening*, Economic Monitoring Report to the Ad Hoc Liaison Committee, April 13, 2010, The World Bank Group, Washington DC.

World Bank, (2010). *Economic Monitoring Report to the Ad Hoc Liaison Committee. The Underpinnings of the Future Palestinian State: Sustainable Growth and Institutions*. (<http://www.worldbank.org/ps>)

World Bank, (2010). *Stepping Up. Skills for more jobs and higher productivity*, Washington DC.

World Bank (2007). *Investing in Palestinian Economic Reform and Development*. Report for the Pledging Conference Paris, December 17th, 2007, The World Bank, Washington DC, 2007.

C. Yu, C. H. (2004). *Misconceived relationships between logical positivism and quantitative research*. (<http://www.aom.pace.edu/rmd>)

Appendix 4: Questions for the Palestinian Authority

Appendix 4: Questions for the Palestinian National Authority (PNA)

Questions for the PNA representatives

Who is responsible for the national development of TVET?

As the economy of Palestine strengthens, which area of the PNA will assume responsibility for ensuring that TVET programs are relevant for employment?

What are the minimum requirements for a TVET Center to receive government recognition and registration? Is there a need to strengthen the current provisions for registering a training center?

How do employers and the public at large know if a TVET Center is successful? What evidence does a TVET Center need to provide to convince employers that its graduates are work ready?

Are there plans within the PNA to have a National Training Authority in place (to register TVET Centers and approve new TVET courses of study)?

Are there plans to strengthen the professional preparation of TVET Center Directors and teaching staff?

Would TVET Directors, teachers and instructors benefit from the creation of a TVET Teachers' Board with a strong link to a National Training Authority?

What is the current status of legislation in support of the TVET system? Are there plans to strengthen the TVET system (e.g., build new TVET Centers in response to growth in key economic sectors)?

Is there likely to be major policy changes in support of a much stronger TVET system in the near future?

Who can we contact about particular policies?

How do you evaluate TVET projects implemented by donors in Palestine? How does the PNA cooperate with donors on the success of those projects?

Do you think that the PNA would support any initiative towards independent TVET curricula? (Created by professional employers for example, or adopted from other countries with specific modifications)

Appendix 5: Focus Group and Semi Structured Interview Questions and Results

Appendix 5: Focus group and semi-structured interview questions



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Save the Children

MTC/ GCT Evaluator/s _____

Date of interview _____

Current Students Analysis Tool

of Private League Vocational Training Institutes in Palestine

Save the Children

Technical and Vocational Education and Training (TVET) Program

#	FOCUS GROUP		Notes
Q1.	Age?		
Q2.	Highest level of education completed before TVET?		
Q3.	What brought you here?		
Q4.	How did you hear about the TVET school?		
Q5.	What vocation did you want to learn?		
Q6.	Is the training meeting your expectations?	1. Training methods	
		2.Trainers	
		3.Training tools & equipments	
		4.Training material	
		5.Others	

Q7.	Are you finding your training helpful?		
Q8.	What are you planning to do after you finish training?		
Q9.	What other programs should be added in your opinion?		
Q10.	What should the TVET institute do to improve its programs?		



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Save the Children

MTC/ GCT Evaluator/s _____

Date of interview _____

Save the Children

Technical and Vocational Education and Training (TVET) Program

Some structured questions for employers hiring students who have graduated from TVET institutes

#	Question					Notes
Q1.	How do you recruit your employees?	1.Social networks				
		2.Ads				
		3.Contact institutions, institutes, etc				
		4.Others, specify				
Q2.	Was the student well trained and qualified for the job you hired them for?	1.	Yes	2.	No	
Q3.	If not well trained, what skills did they lack?	1. Writing skills				
		2. Communication skills				
		3. Computer skills				
		4. Technical skills				
		a. Quality control skills b. Maintenance c. Develop and design new products d. Others, specify				
5. Personal skills						

		6. Leadership and management skills				
		7. Accounting skills				
		8. Problem solving skills				
		9. Customer service skills				
		10. Others, specify.....				
Q4.	Did you give the student further training?	1.	Yes	2.	No	
Q5.	Is the graduate still working for your company?	1.	Yes	2.	No	
Q6.	Has the graduate advanced in your company?	1.	Yes	2.	No	
Q7.	What other programs should be added in your opinion?					
Q8.	What should the TVET institute do to improve its programs?					



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MTC/ GCT Evaluator/s _____

Date of interview _____

**Analysis Tool for students who have graduated from
Private League Vocational Training Institutes in Palestine**

Save the Children

Technical and Vocational Education and Training (TVET) Program

#	FOCUS GROUP		Notes
Q1.	Age?		
Q2.	Marital status?		
Q3.	Highest level of education completed?		
Q4.	Institute?		
Q5.	Training received?		
Q6.	How long it take you to get a job after graduation?		
Q7.	Current job?		
Q8.	How did you get that job?		
Q9.	Part time/ Full time?		
Q10.	What is your salary?		
Q11.	Was the training you received in the vocational training institute relevant to what you are doing now?		

Q12.	What skills did you lack for your current job?		
Q13.	Are you satisfied with the training methods you had? If not, why?		
Q14.	Did you receive further training from your employer?		
Q15.	If so, did that training enable you to perform efficiently on your job?		
Q16.	What other programs should be added in your opinion?		
Q17.	What should the TVET institute do to improve its programs?		



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Date of interview _____

Save the Children

Technical and Vocational Education and Training (TVET) Program

Some structured questions for donors of Vocational Training programs in Palestine:

Are you a donor only or also a program implementer?

What are the main workforce related programs you have implemented so far?

What were the main outcomes of your program?

How successful were they?

What were the main obstacles facing those programs?

Did you work with the private schools TVET league?

Focus Group Results

Current Students

Different focus groups were held in six of the TVET Centers. The MTC/GCT team was able to conduct focus groups with current students in five VET-NGO League centers. Two schools offer one year programs and as the year had just started, students had not attended long enough to form an impression. The study team will return later when the students of these schools have had time to evaluate training and teachers.

The study team held focus group meetings with 54 total students. The average age of the students was 19.5 years. Most students had finished high school (Tawjihi). Few students had a diploma beyond the high school level and very few had dropped out from high school. Of those who dropped out from school, most left between the 6th and 10th grades.

Most students advised that they were enrolled in TVET programs because they wanted to acquire a vocation and find a job quickly. Others advised that they wanted to develop further an interest or hobby they already held. For example, those who liked art were interested in pursuing a career in the arts and were looking for TVET courses to accommodate this interest. Another worked in a family business and wanted further training in business and management. Few indicated that they started in a TVET program because they had poor grades in high school.

The majority of the students said that they learned about the TVET Center through word-of-mouth. Others advised that they learned about the center through the media and/or advice from their previous school. A few said that they learned about a TVET Center through the Internet. In relation to the training they received after having made this choice, almost all students advised that they thought their courses were useful and met their expectations. Still, several said that the training method of the instructors and teachers was poor and this was further hampered by equipment and tools that were old or damaged.

When the students were asked about their plans after completing their course, most advised that they expected to find a job in their field of training. A few said that they wanted to travel, while others said that they plan to continue their education in the same career path and job outcome as their TVET field. Of the students met, only a small number of students said that they intend to establish their own business.

Students indicated that they thought the TVET Centers should offer new courses of study and training to expand the center's current TVET provisions. In response to personal interest and possible priorities held by employers, they felt that new programs should be offered in graphic design, foreign languages, especially English, management, advertising, photography, video art, modern vehicle maintenance

(Automotive Technician training for instance), air conditioning and refrigeration and aluminum industries.

A few students commented on the relevance of some instructional programs in certain disciplines including mathematics, Arabic, history and religion. One student advised:

“I dropped out of school because I had bad marks in history and Arabic. I thought that in the TVET Center I would only learn by doing, and now I m studying and memorizing just like I did in school. This is really bad.”

The students who did not like basic school education subjects thought that history and religion should be replaced by more useful electives such as bookkeeping, simple accounting, communication skills, and business English.

When the students were asked, “What can TVET Centers do to improve the programs?” most said that the centers need to introduce extra-curricular activities. This includes field trips to the work places of large employers. Others said that the centers need to introduce modern equipment and tools, build the capacity of staff and introduce new courses of study. Some students advised that the centers should engage more in networking and helping students to find employment after training. Career guidance was seen as a key need for students to make decisions about continuing education and training and employment.

TVET Graduates

The MTC/GCT team conducted a focus group with students who had just graduated from one center, as they were preparing for a rehearsal for the graduation ceremony. Nineteen graduates participated in this focus group.

The average age of the graduates was 19 years old. Most graduates were unmarried. Many had completed Tawjihi and one held a college diploma. Another had dropped out from school at the 10th grade. Most students were still unemployed as they had just graduated from the center. Only three of the 19 students participating in this focus group advised that they already had found a full time job as administrative assistants (the field they trained in is secretarial and office-related services). They had secured these jobs after an exhaustive search while still in training. The average salary they expected to receive was around 950NIS per month.

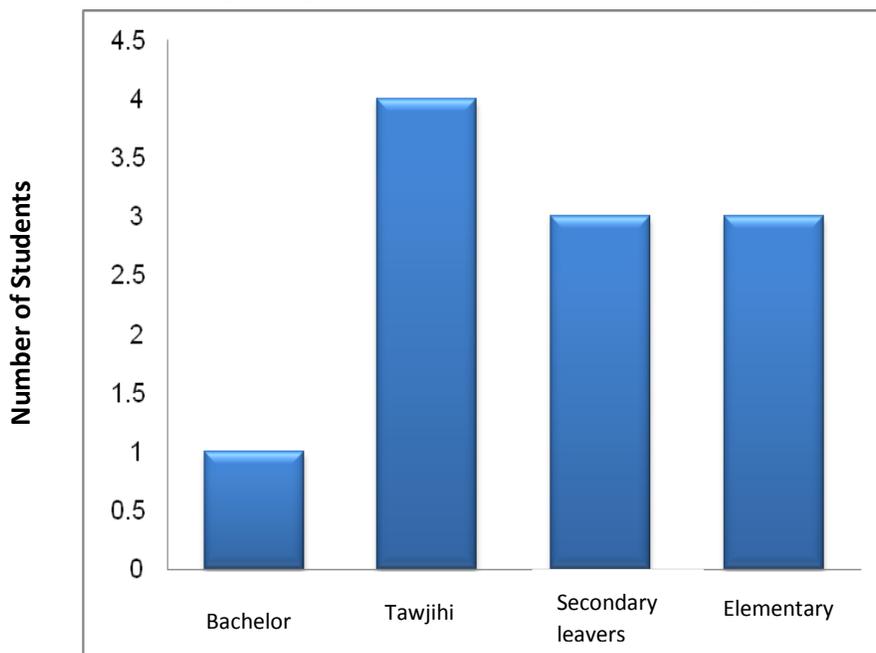
Two of the 19 graduates felt that their education and training was not relevant to the work and work place in which they were now participating. One of the three graduates now employed said that she still lacks work-related experience and that she needs training in how she approaches computer applications including key boarding and word processing skills. They all advised that they received on-

the-job training from their employers which enabled them to perform more efficiently and effectively in the work place.

Current Workers Who Graduated from TVET Centers

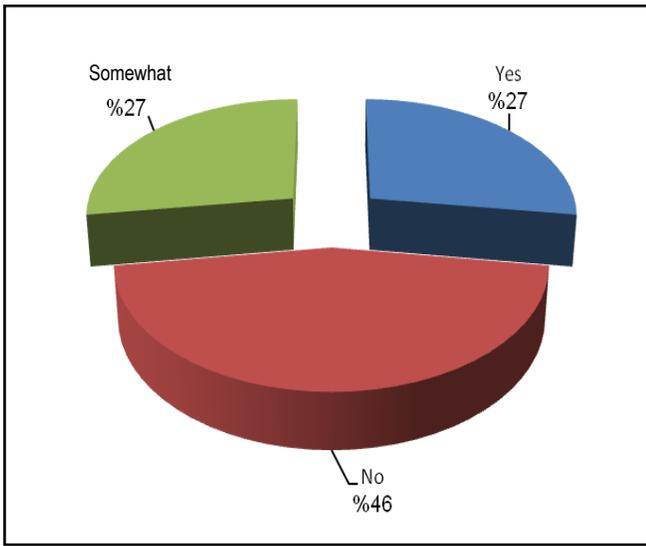
While conducting the employer surveys for the *Regional Economic Status Report*, the study team conducted interviews with 11 employees who were all graduates of a TVET Center in the two geographic areas. Four of the 11 interviewees advised that they were married, indicating that they are in stable relationships and in need of a good wage. Six interviewees were high school dropouts.

Graph 1: The highest qualification obtained before joining a TVET Center.



The education and training that graduates received, was in graphic design, welding, carpentry, automotive mechanical, automotive servicing and maintenance, and mobile phone repair and maintenance. It took five of the 11 interviewees a year or more to find a job after completing their TVET course. Six graduates secured a job within a few months. One of the graduates advised that he is now working in an office support role in which he had not received training. Five said that they are working as mechanics, technicians and in maintenance. One works as a welder, another as a carpenter, and one as an administrative assistant. Nine interviewees advised that they secured employment through personal relationships and networks rather than responding to advertisements. Another went through a long period of job searching. Only two graduates work part-time.

Graph 2: Question: Does your training fit closely with your employment?



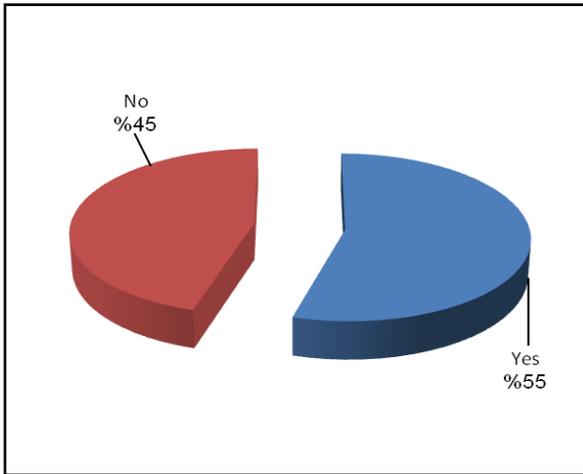
Most graduates advised that the education and training they received was not relevant to their employment. They spoke of skill gaps especially in dealing with new equipment and maintenance. Nine interviewees advised that they received ongoing, on-the-job training from their employers, which helped them perform their work more efficiently. The graduates felt that the TVET Centers would benefit through the introduction of new equipment, machinery and tools. A more hands-on approach to training was seen as highly desirable, with theoretical dimensions to the instructional programs being greatly reduced.

Employers Hiring TVET Graduates

The MTC/GCT team had the opportunity to meet with 13 employers who hired students recently graduated from TVET Centers in the two geographic areas. The employers being drawn upon for the *Regional Economic Status Report* were willing to answer focus group questions.

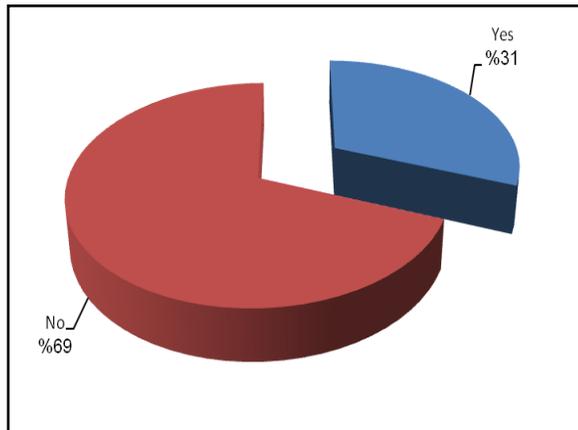
Four employers advised that they hire employees through personal relationships and networks. Three employers said that they rely on advertising while the rest advised that they use a combination of methods including personal relationships, advertising and contacting colleagues. Only four of the employers thought that their new employees had sufficient training and skills to undertake the required work. Nine employers advised that the graduates simply did not have the required skill or competency sets for the areas of employment in which they had been trained. Moreover, three employers advised that the TVET graduates they employed lacked literacy skills. They also said that their employees lacked computer skills, including word processing and key boarding.

Graph 3: Question: Are you satisfied with the education and training your employees/graduates received?



Other key skill areas which employers found lacking included personal development skills (interpersonal behavior); leadership and management skills; accounting skills, including bookkeeping; problem solving skills; customer services skills (front-line management); and technical servicing and/or maintenance.

Graph 4: Question: Are you confident that graduates had the required training and qualifications when you hired them?



Most employers felt obliged to provide ongoing training for their new recruits from TVET Centers. They advised that if TVET Centers want to upgrade their performance and the quality of the students who graduate, they should provide more in the area of leadership and management training. Also the TVET Centers should expand the range of courses of study in skill shortage areas including accounting, communication skills, literacy, report writing and customer service. A general improvement to the quality of courses of study was also deemed desirable.

Graph 5: Question: What additional skill sets would you like to see among graduates?



As most of the VET-NGO League TVET Centers do not offer training in these areas, indeed, many public TVET Centers attached to the Ministry of Labor also do not cover these fields of training. It would appear that employer perceptions or understanding of where qualified trainees actually come from is somewhat obscure. Training in accounting, management and cross-industry customer service is provided at Level 3 skills acquisition in Palestine. Most VET-NGO League TVET Centers provide education and training at only Levels 1 and 2. By-and-large employers were not satisfied that new graduates entered the workforce with the required skill sets to perform the tasks for which they were being prepared (i.e., defined job outcomes). This needs to be balanced by concerns expressed by some TVET Center Directors who found their students serving work attachments with employers where they only did menial tasks unassociated with the job they trained to do.

Appendix 6: Courses of Study Offered by Public TVET Centers

Appendix 6: Courses of study offered by public TVET Centers

A. Courses of study provided by public TVET Centers attached to the Ministry of Labor

Center	Courses of study provided
Public TVET Center of Jenin	<ul style="list-style-type: none"> • Executive secretary • Cosmetology (cosmetics/beautician) • Sewing and tailoring • Electrical • Auto-mechanical • Metalwork • Metal forming • Carpentry • Heating and air-conditioning • Automotive • Architecture/graphic design • Water supply, sanitation and drainage • Office equipment servicing and repair
Public TVET Center of Toulkarem	<ul style="list-style-type: none"> • Executive secretary • Cosmetology • Sewing and tailoring • Electrical • Auto-mechanical • Carpentry • Metalwork • Heating and air-conditioning • Water supply, sanitation and drainage
Public TVET Center of Beit Jala	<ul style="list-style-type: none"> • Executive secretary • Cosmetology • Sewing and tailoring • Electrical • Metalwork • Automotive • Architecture/graphic design • Radio and television repair and servicing • Paving • Office equipment servicing and repair
Public TVET Center of Qalkilya	<ul style="list-style-type: none"> • Executive secretary • Sewing and tailoring • Electrical • Auto-mechanical • Metal work • Heating and air-conditioning • Automotive
Public TVET Center of Nablus	<ul style="list-style-type: none"> • Executive secretary • Cosmetology • Sewing and tailoring • Architecture/graphic design

Center	Courses of study provided
Public TVET Center of Hebron*	<ul style="list-style-type: none"> • Executive secretary • Cosmetology • Sewing and tailoring • Electrical • Metal forming • Carpentry • Automotive • Architecture/graphic design • Office equipment servicing and repair

*The full program is detailed in Section C of this Appendix.

B. Courses of study offered by Dier Debwan Secondary Industrial School (Ministry of Education)- A simple TVET system example

Through the support and contributions of the people of Deir Debwan along with their municipality, Deir Debwan Industrial Secondary School was founded in 1967 on 28,000 square meters of land west of the city of Deir Debwan. The school started with three specializations but it has jumped to ten at the present time. Students from villages and the cities of Ramallah and Al-Bireh Directorate can easily apply for admission to this school.

Students who pass 10th grade successfully can be accepted in one of the specializations below. After completing the 11th grade students can be accepted in one of two pathways: the *applied route* or the *vocational route* based on student's final results in Grade 11. Students receive theoretical and practical education during two academic years based on the chosen pathway. Students on the applied route take a comprehensive examination in specialized subjects at the end of the second year to be awarded the applied general secondary school certificate. As for the vocational route, students take a comprehensive examination in specialized subjects, in addition to general secondary examination in other subjects, which qualifies them to enter a university.

The following specializations are offered in the Dier Debwan Industrial School:

1. Carpentry and decoration

This program includes learning the following skills:

- 1.1. Handcrafts (e.g., cutting, paving)
- 1.2. Learning how to use various machines and tools (e.g., saws, presses)
- 1.3. Knowledge of various kinds of wood, materials and painting
- 1.4. Forming all types of Arab Carpentry including doors and window boxes
- 1.5. Forming and assembling kitchens and bedrooms
- 1.6. Reading executive plans and carrying them out
- 1.7. Forming all kinds of separating- walls, floors and ceilings

2. Building and surveying

2.1. Survey work includes:

- 2.1.1. Measuring a piece of land or the building using the tape measure
- 2.1.2. Showing the borders of the land in accordance with land survey plans
- 2.1.3. Knowledge of all kinds of maps
- 2.1.4. Use of modern land survey equipment to prepare survey plans

2.2. Construction work includes:

- 2.2.1. Preparing concrete mixture
- 2.2.2. Brick work and estimating quantities
- 2.2.3. Various construction work
- 2.2.4. Various reinforcement work
- 2.2.5. Rock building
- 2.2.6. Preparing architectural plans
- 2.2.7. Furnishing buildings (e.g., painting)

3. Car mechanics

This program includes the awareness of cars

- 3.1. Knowledge of all components of engines.
- 3.2. Diagnosis of malfunction of engines
- 3.3. Maintenance of injection system
- 3.4. Maintenance of electronic and normal spark
- 3.5. Follow up electric circuits
- 3.6. Use of various diagnostic equipment to determine the malfunction
- 3.7. Knowledge of speed system
- 3.8. Define the malfunction of brake system and ABC
- 3.9. Acquire the necessary skills to determine a malfunction of various electronic systems (e.g., HDC, SRS, SLS, TC)

4. Communication

This program includes learning the following skills:

- 4.1. Knowledge of basic information of analog and digital communication systems
- 4.2. Maintenance of telephone kits
- 4.3. Maintenance of mobiles
- 4.4. Installation of telephone networks
- 4.5. Knowledge of data transfer techniques

5. Electricity use

This program includes acquiring the following skills:

- 5.1. Home electrical layout
 - 5.1.1. Reading electrical plans

- 5.1.2. Knowledge of parts used in the electrical layout plan
- 5.1.3. Estimating the required quantities
- 5.1.4. Carrying out home electrical layouts

5.2. Industrial electrical layouts

- 5.2.1. Reading plans necessary for an industrial layout
- 5.2.2. Fixing necessary circuits
- 5.2.3. Fixing control circuits
- 5.2.4. Estimating the required parts for the industrial layout

6. Computer maintenance

This program trains a student to be a maintenance specialist who masters maintaining both the hardware and software, in addition to network maintenance via the acquisition of the following skills:

- 6.1. Installing operating systems
- 6.2. Assembling components of the computer and being aware of characteristics
- 6.3. Maintenance of computers through defining the malfunction and repairs
- 6.4. Constructing networks and awareness of protection systems
- 6.5. Awareness of the latest developments in the computing field

7. Industrial electronics

This program includes learning the following skills:

- 7.1. Studying the principles of electricity and the rules that control it
- 7.2. Using various measuring equipment
- 7.3. Diagnosing various electronic parts
- 7.4. Building electronic circuits
- 7.5. Carrying out various industrial electrical layouts
- 7.6. Building electronic control units

8. Air-conditioning and cooling

This program includes learning the following skills:

- 8.1. Constructing various types of air-conditioners
- 8.2. Assembling cooling units
- 8.3. Maintenance of cooling units
- 8.4. Layouts for cooling and air-conditioning units
- 8.5. Electrical layouts for cooling and air-conditioning units

9. Plumbing and central heating

This program includes acquiring the following skills:

- 9.1. Proper use of various equipment
- 9.2. Learning how to construct a hygiene layout (e.g., sewage, hot and cold water)

- 9.3. Constructing hygiene equipment (e.g., water heaters, boilers, basins and sinks)
- 9.4. Mastery of constructing and laying out all kinds of central heating

10. Welding and metal work

This program includes learning the following skills:

- 10.1. Welding processes using an electric bow
- 10.2. Aluminum 7000 works
- 10.3. Iron formation works
- 10.4. Welding processes TIG, MIG, aluminum welding processes and stainless steel
- 10.5. Cutting using plasma bow
- 10.6. Forming various steel doors and windows

C. Courses of study offered by Hebron public TVET Center- An example of a Ministry of Education and Higher Education program

Hebron public TVET Center provides 10 month courses including training with employers in market analysis which runs for a month. The cosmetology/beautician and the executive secretary are based on a six month instructional program which includes four weeks of workplace learning.

Course summaries

Executive secretary- This course aims at providing trainees with the necessary skills for using computer applications especially Windows, Microsoft Office, Internet, E-mails, and typing in Arabic and English. It also aims at enhancing communication skills and planning, preparing reports and letters and using office tools, in addition to principals of accounting and management.

Tailoring and design- At the end of this course, the trainee acquires all necessary skills to take measurements and sizes, draw patterns, choose the most suitable fabrics, and design and prepare garments.

Cosmetology- By the end of this course, the trainee acquires all necessary skills to cut, die and fashion hair, in addition to skills for working with chemicals and beauty products.

Metal forming- The trainee in this course acquires all necessary skills to cut, design and weld metals, in addition to basic skills in calculating quantities and costing, and reading architecture sketches.

Carpentry- This course aims at providing trainees with the necessary skills to prepare carpentry work including furniture, and most importantly finishing.

Architect/graphic design- This course aims at preparing trainees with the necessary skills to draw architectural plans, and construction, electrical and mechanical sketches, in addition to calculating quantities. The course involves reading sketches and using the AutoCAD program.

Automotive- Trainees during this course learn all parts of a car, especially the electrical components. At the end of this course, trainees are able to identify the malfunction of the car and follow the approved procedure to fix it, use modern devices, read catalogues and car manuals, and read and understand electrical sketches for modern cars.

Electricity- This course focuses on teaching trainees how to work with electrical cables and wires. It introduces students to electricity circles, in addition to introducing them to essential electric parts like electric switches and other devices. This course also focuses on teaching trainees to identify where to drill and place electric points, in addition to teaching them how to read architectural (blue-prints) sketches necessary for electric networks.