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ANALYSIS OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING SYSTEMS IN THE PACIFIC



Overview

This chapter presents an analysis of TVET systems in the Pacific according to five criteria: economic relevance, quality, access and equity, organizational and management effectiveness, and finance and internal efficiency.

- (i) Economic relevance. Most countries report skills shortages partly because of emigration. However, surplus of rural labor in the informal sector is the larger overall challenge. Lack of information about labor market demands keeps most Pacific training systems operating in the dark. Employer involvement is essential to steer training supply in the right direction, but employers are not consulted sufficiently. Pacific training systems have had difficulties in making their programs flexible, up to date, and responsive to changing demands.
- (ii) Quality. Quality is increasingly important in TVET systems in the Pacific. Various systems of quality assurance are operating or being developed in the region. A prevocational course in secondary education is an appealing concept, but has been difficult to implement well. Vocational training systems vary markedly in quality. Postsecondary technical training, in contrast, tends to reach reasonable standards because resources can be concentrated in fewer institutions. Informal sector training has been successful in places, but it is difficult to maintain consistent quality.
- (iii) Equity. Access to TVET is low in total and highly imbalanced by geographic area, income group, and especially by gender.
- (iv) Organizational and management effectiveness. TVET is arguably the most difficult subsector to manage in the whole spectrum of education and training. Strengths exist in the organization and management of TVET systems in the region and several promising developments have taken place. However, unclear mandates, lack of coordination among TVET providers, and excessive centralization are important organizational issues. Two other organizational weaknesses stand out: supply orientation and insufficient resources to perform stipulated functions. TVET plans are necessary for strategic direction, but they have to be costed, budgeted, and implemented. TVET management varies because of inadequate standards, accountability, and opportunities for in-service training. Finally, lack of data and research on TVET is an almost universal handicap to progress.
- (v) Finance and internal efficiency. Public/donor financing for TVET is limited and, in some cases, declining. Countries will inevitably have to find ways to reduce dependence on government financing by mobilizing nongovernment financing. Limited public resources require greater attention to increased internal efficiency. Insufficient use has been made so far on financial transfer mechanisms, such as training funds.

Analytical Framework

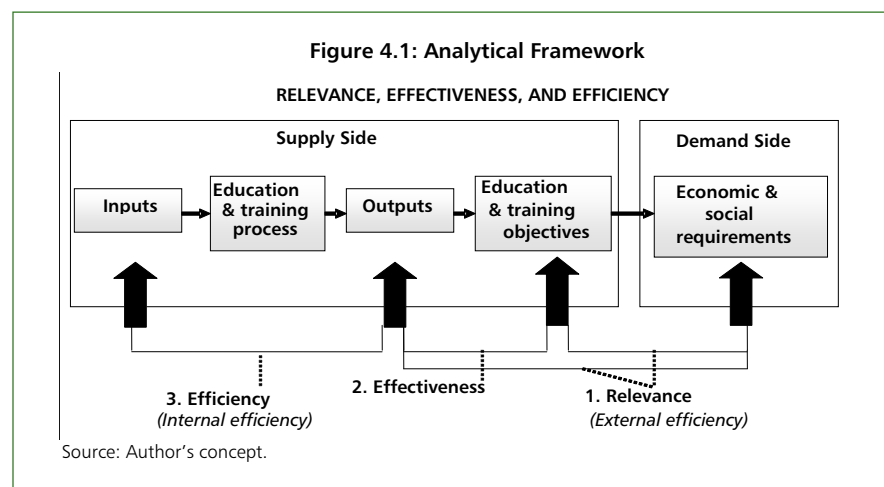
Five criteria are derived from the following analytical framework for the purposes of analyzing Pacific TVET systems.

“Relevance” is the relationship between training supply and demand, or between the objectives and outputs of the TVET subsector and economic and social requirements. It includes both economic relevance and social relevance, or access and equity. Questions of relevance take precedence over all others. If the system is not aimed in the proper direction, it matters little whether it is effective or efficient.

“Effectiveness” is the relationship between outputs and objectives. Something is said to be effective if it achieves its objectives. Effectiveness has two aspects: quality and organization/management. “Internal efficiency” is the relationship of inputs to outputs. Cost effectiveness is actually a matter of internal efficiency. Thus, the analysis is presented in terms of five criteria: economic relevance, quality, access and equity, organizational and management effectiveness, and finance and internal efficiency.

Economic Relevance

The main purpose of TVET is to provide knowledge and skills for trainees to be productive in jobs, either in the wage economy or in self-employment. A disconnect between the skills acquired and those needed in the labor market means the training could be wasted. Close linkage with the labor market is the first requirement of a successful system of skills development. The first criterion for evaluation of TVET, therefore, defines the relationships between the skills demand and supply.



Mismatches in Demand–Supply Balance

Mismatches in the demand–supply balance for technical skills are seen in many countries of the region, particularly those with emigration of labor or surplus of rural labor. The TVET systems in Kiribati and Vanuatu, though, in terms of the wage economy, are largely able to meet the countries’ quantitative skills needs, and no major shortages are reported. An ample supply of workers exists with some skills obtained informally or through a basic skills course. But some specific skills are in short supply in the formal sector, including chefs, electricians, maintenance and automotive mechanics, construction technicians, and managers. The construction sector has skills shortages for carpenters, joiners, sheetrock installers, and construction supervisors. Shortages appear for significant expertise and ability to perform to standards. Overall supply–demand balances are the exception in the Pacific.

Most Countries Reporting Serious Skills Shortages. The FSM acknowledges the demand for a skilled workforce, particularly in domestic services, such as home repair, electrical wiring, plumbing, furniture making, general maintenance, and repair. People reportedly have money to pay for these services, but they are unavailable. The low turnout of trained and skilled workers interacts with a reciprocal annual intake of cheap overseas labor in the same trades and occupational areas. Skill gaps in the Fiji Islands are important issues from employer perspectives. The main way for employers to recruit people with requisite skills—particularly in the tourism industry—is through poaching, which only raises wages and hurts the medium or smaller enterprises most. Reportedly, the Fiji Islands lacks mechanisms to reconcile supply and demand of skills, which means resources could go to areas not in shortage.

PNG faces a paradox in skills gaps. Substantial numbers of people graduate from training institutions, but industry complains about a lack of skilled workers and recruits foreigners to fill the gap. The paradox is a question of experience and expertise. Fresh graduates lack the attitudes needed in the workplace such as punctuality and general discipline. This occurs in part because the culture of the training institutions differs significantly from that in industry. Shortages exist for experienced skilled and semiskilled workers and supervisors. The industrial sector reports difficulties in recruiting plumbers, air-conditioning and refrigeration mechanics, welders, and electricians. In building construction, skills gaps are seen in finishing skills including tiling, plastering, and painting/decorating for high-value buildings such as hotels and embassies.

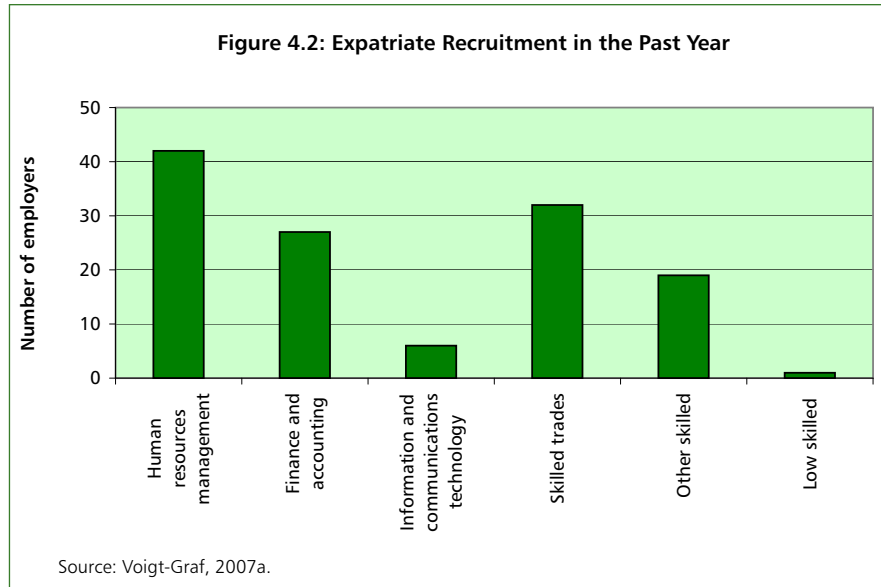
In the RMI, the output of technical and vocational skills undersupplies the domestic market, as evidenced by vacancies and increasing employment of expatriates. The limited scope and scale of the TVET supply chain produces limited outputs in terms of job-ready graduates. Output is particularly limited in traditional trades, such as construction skills. In Solomon Islands, the tourist industry reports that hotels, resorts, and restaurants

badly need operational staff, including maintenance workers, housekeepers, etc. Industry needs well-trained electricians, builders, bricklayers, mechanics, and ICT technicians. However, the current TVET system fails to produce these skills adequately. In Tonga, the following skills are in demand but no formal training is available: air-conditioning and refrigeration, plumbing, fisheries, and hairdressing. Tuvalu lacks a domestic source of training and only 4% of public scholarships for education and training are allocated to the private sector.

Skilled Worker Emigration. Emigration of skilled workers exacerbates shortages, particularly in PICs along the northern and southern rim (Chapter 2). Work experience is a key factor in demand for skills. Migration removes a significant proportion of workers who have acquired a reasonable level of expertise in the Cook Islands, Fiji Islands, Samoa, and Tonga. In Tonga, the continual flow of skilled workers to Australia and New Zealand has compounded the problem of skills shortages. For example, TIST could find a replacement for instructors in air-conditioning and plumbing who emigrated, causing a temporary suspension in training. Elsewhere, the RMI is unable to take advantage of its access to the US labor market to provide skills and secure well-paying jobs. Not all news is negative, however. Emigration reportedly keeps the demand high for enrollment at FIT and opens job possibilities for younger workers in the Fiji Islands.

Expatriate Employment. Employment of expatriates indicates significant skills shortages since work permits for expatriates are only issued in most PICs if employers can prove that they could not find anyone locally for the position. This constitutes a “labor market test.” In practice, this is not always followed, but employment of expatriates is still a good indicator of skills shortages. The employer survey found that 40% of employers had recruited expatriates to fill job vacancies (Voigt-Graf 2007a). The rates were particularly high in the Cook Islands and Solomon Islands and low in Kiribati and Tuvalu. Figure 4.2 shows the occupational distribution of expatriates hired in the past year. Human resource management and skilled trades were the top two categories.

Supply–Demand Imbalance. A major supply–demand imbalance results when the economy cannot generate enough wage jobs to absorb all those entering the labor market. Economic growth in most PICs can generate only a fraction of the new jobs required to meet annual increases in the labor force (Chapters 1 and 2). Additional employment opportunities, therefore, must be created by using informal sector training to promote self-employment in the local economy and by increasing the income-generating potential of subsistence agriculture. Moreover, training for the rural and informal sector suffers from a lack of prominence in the training agendas of most countries. As a result, such training receives inadequate public funding and policy attention to meet the needs of the great majority of unemployed, youth, women, and rural poor in the Pacific.



The majority of those entering the labor market will have to survive in the informal economy. This applies particularly to group 1 countries—PNG, Solomon Islands, Vanuatu—and even the Fiji Islands. In PNG, less than 15% of total employment is in the modern sector. An estimated 50,000 school-leavers enter the labor market annually, competing for only about 1,000 new wage jobs.

The labor market of the Fiji Islands also suffers a significant imbalance between the supply of and demand for labor. A surplus exists of labor market entrants with meager skills and experience, who do not satisfy the important demand for skilled personnel. Each year, over 17,000 new entrants join the labor market in the Fiji Islands, including about 14,000 school-leavers. The prospect of these young school-leavers getting paid work in the formal economic sector is limited. In 2004, about 4,000 new jobs were generated by the economy and 5,000 vacancies were created from emigration and natural attrition in the labor force. Therefore, wage jobs were available for only about half those entering the labor market. Most of the rest had to find work in the informal sector.

In Vanuatu, with the economy producing less than 700 new wage jobs each year and the annual output from the education system approaching 3,500, opportunities for school-leavers to access jobs in the formal economy are meager.

Elsewhere, the RMI lacks a system of imparting livelihood and income-generation skills to unemployed youth. In Solomon Islands, little attention has been given to how training in RTCs could enhance the livelihood of trainees and their families. Tuvalu lacks any means of training for the informal sector and livelihoods. In Vanuatu, though agri-

cultural development is the top government priority and agriculture the main employer, little training in this area is provided. Yet, on the other side of the coin, financial incentives that would stimulate demand for such training are lacking. Major gaps exist in income-generating activities in rural areas. RTCs tend to be directed exclusively at the youth; as a result, adults lack access to skills development. The limited agricultural training that is there concentrates on production and neglects agribusiness and food processing.

Youth Unemployment. This is a particular issue in urban areas, e.g., in Solomon Islands and Tonga; and governments in the region are giving considerable attention to the matter. It is a recurring concern throughout the Pacific Plan and there is widespread concern throughout the region about the link between TVET, youth, and lack of economic opportunities. Sometimes the simplistic view is expressed that if all unemployed youth could have some skills training, the problem would be solved. Youth unemployment, however, is not a reflection on the TVET system. It reflects the economy failing to generate enough decent jobs in relation to growth in the labor market. Attempts at training youth in crash, sometimes massive, programs have failing records the world over.¹ Vocational training for youth is most likely to succeed in employment and earnings when it is provided as part of a comprehensive package that includes internships, performance incentives, employment services, counseling, job search, and livelihood skills. Still, training for the informal sector can help people acquire skills for self-employment, income generation, and sustainable livelihoods in rural areas, particularly when accompanied by access to credit.

Economic relevance of TVET systems requires three things: (i) labor market information, (ii) employment orientation in guiding and directing the TVET system, and (iii) properly oriented, flexible supply response by training providers. Each is examined in sequence below.

Lack of Information on Labor Market Demand

Most Pacific training systems operate in the dark. The Fiji Islands lacks a functioning labor market information system to provide input to the training system on the nature and extent of skills shortages and surpluses in the economy.² Kiribati has no system of review of labor market needs. PNG lacks a labor market system and relevant information, and no labor market survey has been conducted recently for the modern sector. The RMI lacks an adequate and comprehensive labor market information system. In Tuvalu, lack of demand information handicaps the allocation of overseas scholarships.

However, important exceptions exist. Detailed surveys have been carried out on the informal sector in PNG. These surveys have provided important information on training

1 See Betcherman et al. (2004) and World Bank (2006, 91–92).

2 The Ministry of National Planning reportedly has good data on labor supply, but not on demand.

needs and skill requirements. Still, training providers are servicing rural areas without information on the types of technical and business skills needed for self-employment in the rural sector. In Samoa, the Ministry of Commerce, Industry, and Labor undertook a series of labor market surveys in 2000, 2001, and 2004 that identified training needs by sector. In Tonga, the 2005 business survey by the Ministry of Labor, Commerce, and Industry indicated the scope and extent of unfilled vacancies. In the Fiji Islands, TPAF undertook the following activities in 2006 to understand demands better: (i) held 15 industry-focus group meetings; (ii) undertook more than 550 industry visits to gauge training needs; and (iii) carried out a training needs survey, to which more than 350 companies/organizations responded. Vanuatu conducted a survey on the informal sector and training needs in 2001, the results of which are still valid.

The Solomon Islands carried out training needs surveys of employers in both the formal and informal sectors as part of the analytical work to support the National Skills Development Plan. The results are as follows: the informal sector has three general types of skills training requirements, including skills required to (i) improve the general quality of village life (through, for example, electrification and access to safe water); (ii) prepare young people to find wage employment in rural industries such as logging and mining; and (iii) promote village-based enterprises to provide self-employment and supplement family incomes.

In the 122 villages surveyed for the study, about 80% of interviewees reported that they were currently trying to implement community development projects requiring specialized skills. In addition, about 60% of their stated needs fell within three major occupational categories: forestry/logging, farming (both plants and animals), and construction. The survey also identified 11 job categories where many young people might be able to find employment: farmer, teacher, housekeeper/home-duties, shopkeeper/market vendor, carpenter, fishing, police/security officer, nurse, mechanic, chainsaw operator, and timber miller (World Bank 2007, xii).

Information about the absorption of training output/graduates in the labor market is essential. This is done through “tracer surveys” that track the destination of graduates in the market. The Fiji Islands has little information available about the destination of graduates from skills training.³ Reportedly, emigration of skilled workers makes it difficult for TPAF to track its graduates. Kiribati, similarly, has little information about the outcomes of training. In PNG, training institutions have virtually no statistical or systematic qualitative data on what happened to their graduates upon completion of training. Training providers thus have little information about the markets, occupations, salaries, and performance of graduates. In Samoa, tracer studies have not been carried out yet.

³ TPAF is undertaking a tracer survey of a sample of graduates of its various training programs and apprenticeships. The results are expected by the end of 2007.

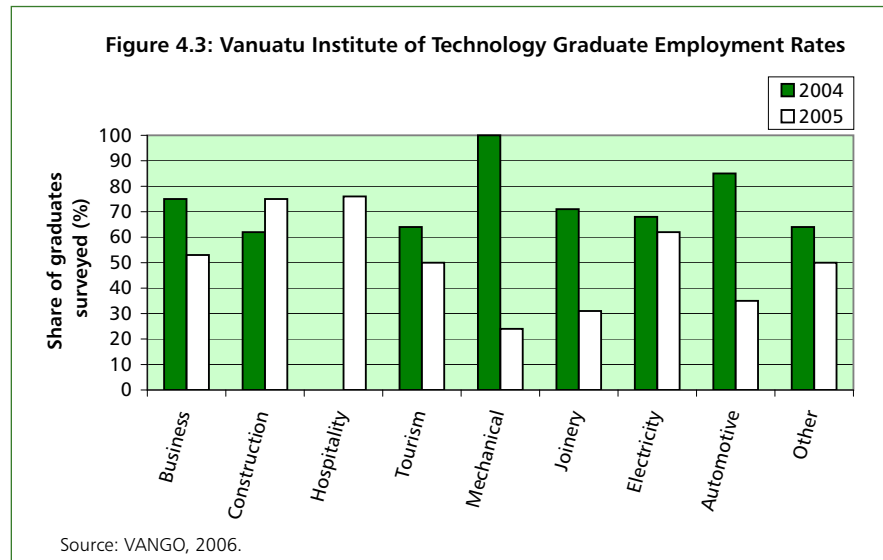
In Tonga, most TVET providers have not constructed tracer studies of their graduates, but TIST did survey how well students valued their training.

Three countries have exhibited good practice by undertaking tracer surveys recently: Solomon Islands, Vanuatu, and Palau. Solomon Islands carried out tracer studies on tertiary graduates and those who have completed informal sector training.⁴ In 2006, the VIT traced 76% of its graduates from 2004 and 2005. Employment rates varied substantially by field for the classes, as shown in Figure 4.3:

Overall, about two thirds of the graduates were in some form of employment, but graduates of 2004 fared better than those of 2005. This may reflect time required to find work—the study was carried out only 6 months after the 2005 students graduated—or a worsening job market. Employment by field was consistently strong in building and construction and in electricity. However, employment rates dropped dramatically in mechanical and engineering, joinery, and automotive, and even fell slightly in tourism and business studies between the 2 years. Of the graduates employed, 96% worked in private enterprises.

The tracer study of SICHE found even stronger employment rates for graduates, including 91% of the 2003 graduates and 93% of the 2004 graduates. Employment rates by school were as follows (Figure 4.4):

Virtually all SICHE graduates from the education and nursing schools were employed. One reason for this is that a very high proportion of those graduating in these two fields (100% of employed nurses and 79% of employed teachers) found jobs in public



4 World Bank, 2007.

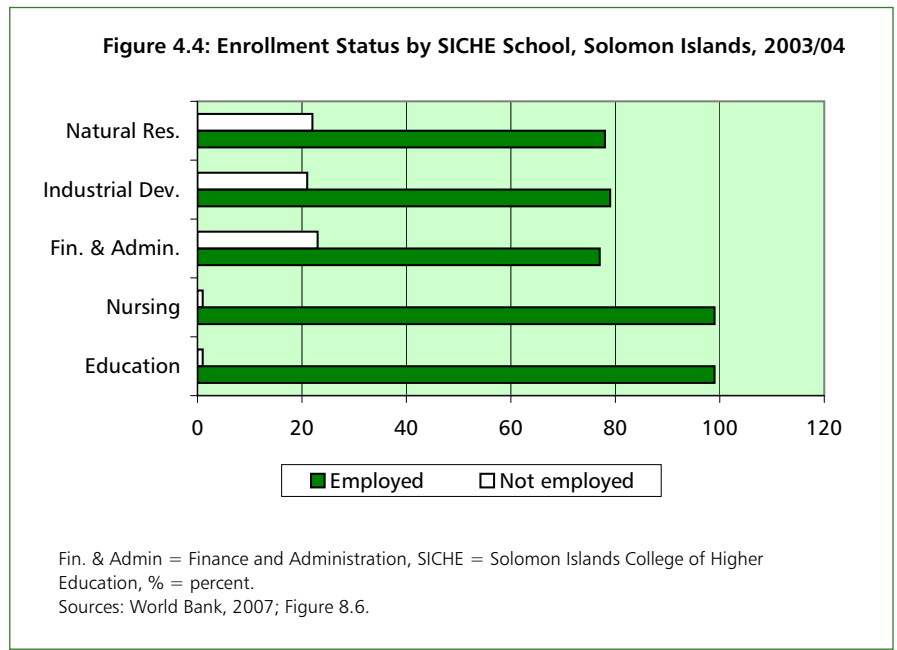
service. Within the School of Industrial Development, more than half of those employed were working in private enterprises and 12% were self-employed.

The Palau Community College collected tracer information of its 2003–2005 graduates. The data showed that about 60% were employed, Thirteen percent had moved off the island, and 16% could not be traced. Fewer than 3% of the graduates were unemployed (Takashy 2007a).

These examples of good practice showed relatively good to strong employment rates for tertiary graduates, and that the graduates tend to remain in urban areas (39% for SICHE and 87% for VIT).

Necessity for Employer Involvement

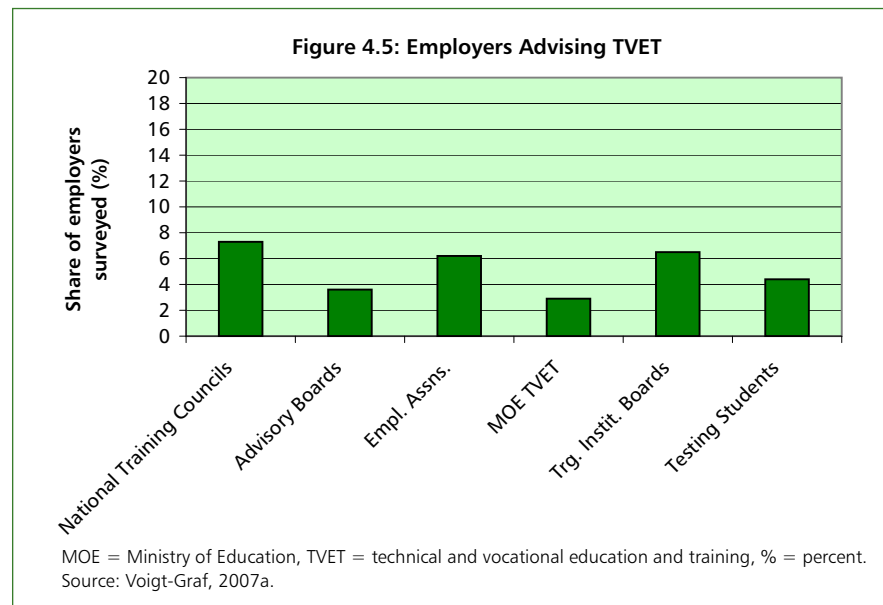
Training Organizations’ Supply Orientation. Employers, representing the demand for skills, are inadequately represented and boards tend to be dominated by government representatives. Employers in the boards of the three NTCs in the RMI, PNG, and Vanuatu are in a minority compared with bureaucrats. The VIT board also appears to be weak on employer representation, though it is training mainly for the small wage sector of the economy. The exceptions to this pattern seem to be TPAF contacts with industry, the FIT board. Originally, two thirds of the members were permanent secretaries of government, but now the proportion has reportedly been reversed.



Limited Employer Involvement. The employer survey found that relatively few employers participated in advising TVET systems in the Pacific. As shown in Figure 4.5, fewer than 7% of employers advised TVET through national training councils, advisory boards, or employment associations. Just 3% advised ministries of education on school curricula and 6.5% on advisory committees of training institutions. Only 4% participated in the testing and evaluation of TVET students.

In the Fiji Islands, MOE reportedly has little contact with industry and gives its programs largely in isolation from the labor market. In contrast, FIT uses heavy employer representation on its board and industrial advisory committees to check the relevance of its programs, while TPAF maintains close relationships with employers through program advisory committees and its contact with enterprises on productivity enhancement. In Kiribati's TTI, processes for industry involvement are not formalized. Industry involvement is needed in developing curriculum documents. In Nauru, the Government runs education and training without dialogue with stakeholders; what little training is done does not include packages developed in consultation with industry. PNG employers are inadequately involved in advising and directing formal TVET provision. For example, employers constitute a minority on the NTC board. The same applies to RMI where only two employers on the NTC board have little opportunity to influence training.

Solomon Islands reports little involvement of employers in developing skills in the country. The Chamber of Commerce, with 72 members, is not involved in training



programs at SICHE, RTCs, or community-based training centers. Sometimes it is a challenge to get employers interested in TVET. Tonga reports difficulties in making employers interested in contributing to TIST curriculum revisions. This lack of participation is to be addressed in regulations for the planned National Qualifications and Accreditation Board, where employers will play a key role in curriculum development. Vanuatu, too, lacks enterprise involvement in advising and directing TVET, as exemplified by low employer representation on the NTC and VIT boards. Moreover, industrial advisory committees do not meet regularly at VIT. On the other hand, the Vanuatu qualification framework criteria for accreditation of training courses require ratification by employers.

A Strength of TVET in the Pacific. Workplace attachments establish employer contact at enterprise level. In the Fiji Islands, training by FIT, MOE, and TPAF all include workplace attachments as integral parts of their programs. In doing this, they have to overcome obstacles, such as the need to insure all workers and include them in the national pension scheme. The Fiji Islands and PNG apprenticeship schemes, by definition, are founded on extensive on-the-job training. In PNG, widespread efforts provide workplace experience as part of training. In Samoa, both NUSIOT and Don Bosco require students to spend time in work experience with industry as part of the curriculum. Between 70% and 80% of students are then offered jobs by their employers after graduation. In Vanuatu, job attachments are also an integral part of studies at the VIT, but 1 month is perhaps insufficient.

Informal sector training needs to be closely linked to the world of work if it is to achieve credibility and long-term sustainability. Partnerships between training providers and the private sector should be promoted wherever possible as a means of improving the relevance and external efficiency of informal sector training.

Lack of Training System Responsiveness to Changing Demands

Current training programs are often too long and rigid. In PNG, the vocational centers run the same standard 2-year program every year with little attention to their outcomes and impact. Arrangements for staffing at vocational centers are inconsistent with a responsive training approach. No possibility exists to hire local craftspeople for short assignments. Courses are offered—such as welding—because staff are on the roster, regardless of the labor market need. In Samoa, most TVET providers use traditional time-based courses. Closing a program to open a new one in response to market changes is very difficult. Providers prefer to offer a new one while maintaining the old ones because of the sunk investment costs, especially in trade areas. In Vanuatu, most TVET is long, e.g., the 2-year programs in RTCs. The training is too long and fails to achieve the performance required to ensure productivity in the labor market.

In contrast, vibrant private training markets tend to be more responsive to demands. The longevity and profitability of private training depends on good employment records for graduates. The private training market is growing in both the Fiji Islands and PNG. In contrast, the RMI lacks completely flexible, for-profit training providers. No training market exists whatsoever.

Several countries are already following good practices to make their training programs flexible and responsive. In Kiribati, TTI appears responsive to industry needs by offering full-time and part-time, long- and short-term courses, in both Tarawa and the outer islands. In PNG, some elements of certificate courses in technical colleges run based on competency attainments. In Samoa, TVET providers with competency-based training (CBT) curricula have full- or part-time courses that are more flexible. This facilitates adult retraining and upgrading programs. The new facilities for construction of hospitality and tourism training at NUSIOT were programmed through industrial advisory panels and stakeholder workshops. In Tonga, TIST courses are taught in modules and some are being taught in CBT mode. The VIT curricula follow a CBT approach. Vanuatu qualifications framework accreditation of courses requires that they be modular and competency based.

Properly oriented and up-to-date curricula are other aspects of responsiveness. In the Fiji Islands, employers complain that the present curriculum of FIT and vocational secondary schools tend to be theoretical and based on time spent, rather than being practical and based on competencies achieved. Curriculum updating is needed. For example, the franchise program on office technology includes shorthand, a skill that is little in demand in most businesses. In PNG, some observers state that the menu of vocational center courses has not changed much in 25 years. Provincial education boards often take a school orientation as opposed to a community training initiative. Though the vast majority of people work in rural areas and the informal sector, most training is oriented almost exclusively to wage jobs in urban areas. Little attention is given to the relevance of short courses to local labor markets, e.g., in agribusiness and food processing. Entrepreneurship training is underemphasized and underprovided.

In Kiribati, short courses conducted by TTI appear to be an appropriate approach for training for the cash economy. However, they are not based on an objective and systematic analysis of current needs and labor market demand. A more flexible approach would be to undertake training needs and labor market analysis, and develop short programs to target those skills of highest priority. A course may only need to be offered once every few years to satisfy the need. Trainers could be hired solely for the period of the program. Each year, a different list of short programs would be offered based on market analysis.

Examples of good practice include the use of the “develop-a-curriculum” methodology in Samoa to define training programs, involving employers in identifying training demands and the skills requirements for various occupations. The Vanuatu qualification framework and the competency-based curricula at VIT focus on outcomes, not inputs.

Two Conclusions

Overall, the analysis of economic relevance and labor markets leads to two main conclusions. The first is a need for the TVET sectors in each country to refocus their role in the context of emigration and the dominant role of the informal sector. The second is a need for TVET sectors to redirect their activity away from supply-driven programs to working collaboratively with industry and assisting them in skills formation, particularly expanding in-service and on-the-job training.

Quality of Skills Provision

Next to relevance, the most important criterion for successful TVET is quality. The purpose of TVET is to provide relevant knowledge and skills for employment and income generation. If the skills are not acquired, the money spent is wasted. Quality can be viewed as a function of inputs, processes, and outputs. An array of inputs is important in determining the quality of training provided, including the existence of employer-ratified standards; clear and attainable objectives; adequately prepared students on entry; trained instructors; appropriate training content with definition of associated learning outcomes; availability of tools, equipment, and supplies; assessment of performance against training objectives and standards; and strong management of the training process. Procedures to monitor and evaluate both the formative and summative results of training and feed the findings back into the design of subsequent activities are important quality-enhancing measures.

Few TVET systems in the Pacific report that they are receiving adequate inputs to provide quality instruction. Some quality assurance systems are operating and others are planned, but little can be said systematically about outputs because of lack of measurement.

Increasing Importance of Quality

Training in the Pacific must satisfy different markets such as international and internationally competitive local enterprises, and wholly domestic markets. The standards of quality may differ for each. In labor-exporting countries, TVET systems can earn high returns to the country through remittances and developing the skills of emigrants before they leave, enabling them to take up better-paying jobs. The TVET system must also produce

graduates able to participate in global labor markets. The standard of TVET has to rise to meet comparable international performance in key areas, e.g., construction, electrical and mechanical trades, as well as competency in English, math, and science.

Operation and Development of Quality Assurance Systems

Trade Testing Systems. These have been operating for decades in PNG and the Fiji Islands. In PNG, standards are in place for seven trade areas, as developed by NATTB. These provide benchmarks for training providers and goals to aim for. PNG trade testing under NATTB helps provide quality assurance. A system of skills testing exists through NATTB that provides quality assurance for training providers. In the Fiji Islands, TPAF is a respected agency providing trade testing. In the view of employers, obtaining qualifications through the TPAF trade tests is reportedly a close second to completing apprenticeship training. However, some questions have been raised about the level three skills tests and franchise arrangements, since its tests do not appear rigorous. A pass is possible even when tools and equipment are not up to standard. Some countries though, such as the RMI, have yet to develop an adequate testing and assessment system.

National Qualification Frameworks. NQFs that promise advantages are being developed, but must deal with complexity. These frameworks, typical of TVET in Australia and New Zealand, establish standards and processes for quality control. A qualifications framework has been established in concept in Vanuatu. In Samoa, the Samoa Qualifications Authority (SQA) has already been set up. Among other things, it will register and accredit training institutions, both public and private. In Tonga, a National Qualifications and Accreditation Board is being established. Other countries are also in the process of adopting national qualification systems for TVET, including the Fiji Islands and PNG. So far, NQFs are not being considered in Kiribati, Solomon Islands, or the northern PICs (probably because of their relationship to the US, which does not have an NQF). The South Pacific Board for Educational Assessment is working with PATVET to create a regional qualifications register as a first step toward a regional framework.

International experience suggests that NQFs offer several advantages.⁵ They can stimulate individuals to continue their education and training by establishing specific, clear steps on the ladder to higher qualifications and incomes. They can lead to cost-effective training by focusing on outcomes regardless of how the skills are obtained—in classrooms or out of school. They can also support efforts to level the conditions under which private and public institutions compete for public funds. NQFs stress the competencies acquired, not the avenues or ownership of the institutions that teach the skills. They can also promote equity through recognition of prior learning and skills acquisition. In

5 Johanson and Adams. 2004, 81. See also Cotes, 2006; and ILO, 2005 and 2006.

addition, they can be used as an important element in increasing labor competitiveness and mobility in the Pacific. NQFs are also able to promote job mobility, and therefore, increase labor market efficiency.

NQFs reflect a conceptual shift from the classical focus on the input process toward a more modern focus on outputs and a market-oriented policy agenda. However, NQFs are relatively new and little is known about their long-term effectiveness in developing countries. The NQF system has been criticized in the United Kingdom as possibly contributing to deskilling because of a narrowly defined concept of competencies, based on the performance of elementary tasks, rather than a wider range of comprehensive skills and knowledge.

There may also be overexpectations on NQFs and underappreciation of the work involved. The application of NQF models from Australia and New Zealand in other development contexts may be problematic because of the different, much weaker, education, economic, and institutional environments. NQFs are based on the assumption that the primary responsibility for training must rest with individuals instead of government, which may not be relevant for countries with low enrollments. NQFs may not be as relevant where the main problem is insufficient access to skills rather than improving the quality of assessment. Moreover, little is known about either (i) the costs of developing qualification criteria or assessment and certification procedures, or (ii) their impact.

The South African experience, in particular, has been a complex, bureaucratic, and slow process. The difficulties center on coordinating the multiple standard-generating bodies and managing the effectiveness of sectoral education and training qualification authorities. Success of any reform depends on interrelations between complexity of design and implementing capacity. The relative slowness in implementing some interventions in developing countries may be due to a weak institutional implementing capacity relative to the high level of complexity. In short, NQFs may end up imposing more regulations on training providers, which could reduce their responsiveness to demand.

Private Training Providers. Standards are being applied to private training providers, but these systems have been difficult to enforce. Assessing and accrediting such providers constitute an essential first step toward achieving minimum standards. MOEs are carrying this out in the Fiji Islands, NTC in PNG, and VNTC in Vanuatu. The lack of quality assurance on private training providers has been noted as an issue in the FSM. Registration of new schools or programs is wide open and discretionary. This opens possibilities for noncompliance and opportunistic ventures and phantom schools.

This review has found that, while desirable, it is difficult to operate quality assurance systems for private training providers. Effective monitoring and control require reasonable criteria and procedures, sufficient staff with expertise and training in assessing institutions, and funds to make periodic inspections. NTC in PNG has been trying to

do too much with too few resources. It reports inadequate staff capacity to carry out the assessments of training providers, courses, and trainers. It also lacks prosecutorial powers for institutions failing to register. As a result, there are substantial weaknesses in the registration process for private training institutions. Even some registered private institutions operate below acceptable quality and provide little value for money.

MOE in the Fiji Islands has also had difficulty in monitoring approved institutions to ensure that they maintain their quality levels. In Vanuatu, criteria for registration of training institutions seem far too sophisticated for the prevailing level of TVET institutions. A substantial backlog exists in processing applications for registration and accreditation. The new quality assurance agencies in Samoa and Tonga could learn from these experiences.

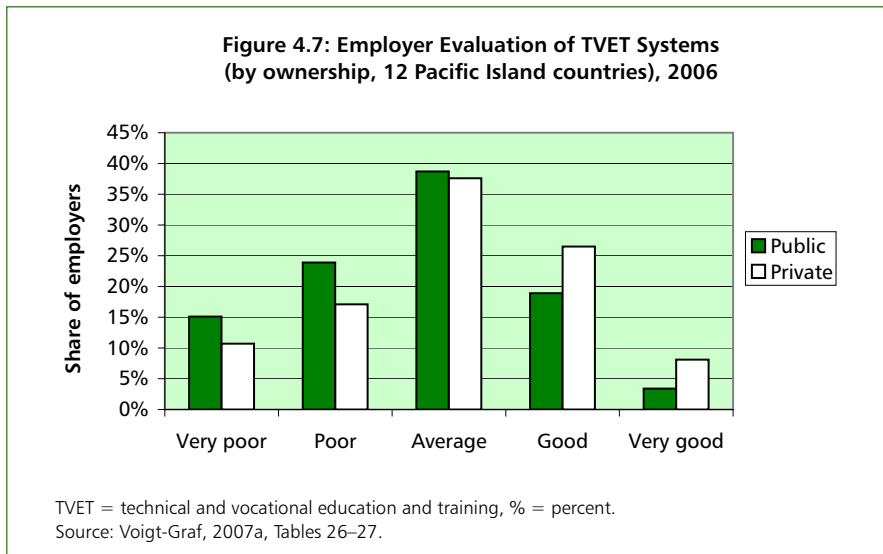
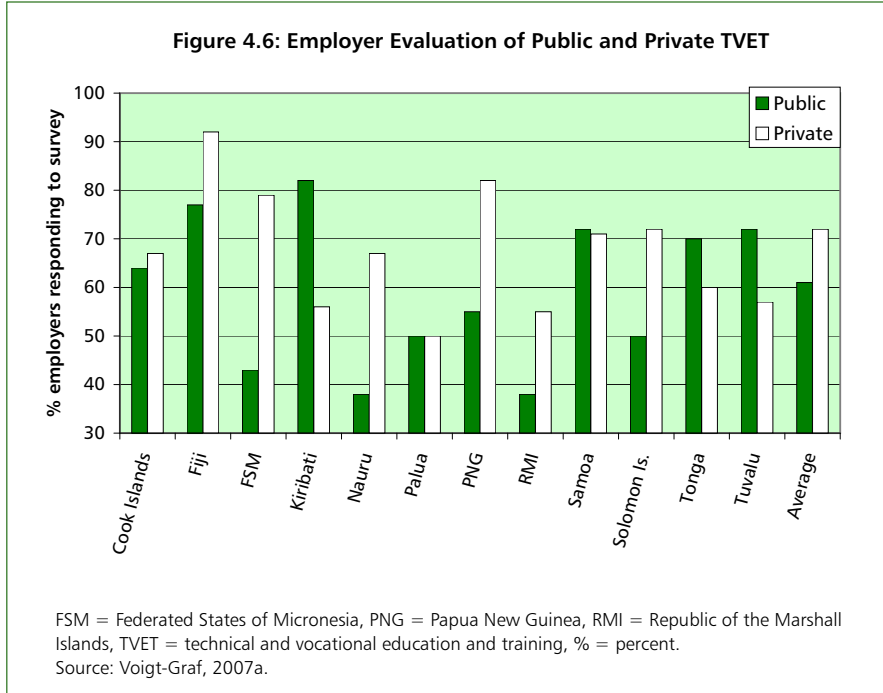
Comparisons differed widely by country (Figure 4.6). Employers rated the private training system higher in all countries, except Kiribati, Samoa, Tonga, and Tuvalu; and in the FSM, Nauru, and PNG, it was rated substantially higher. The Fiji Islands and Kiribati both rated public systems highly, as did Samoa, Tonga, and Tuvalu. The lowest ratings for public systems came from the RMI, FSM, and Nauru.

Still, when asked to evaluate the quality of TVET systems employers tended to rate nongovernment and private training providers more highly than public ones (Figure 4.7). Across the 12 countries surveyed, 39% of the employers rated the public TVET system as poor or very poor compared with 27% for private TVET; 22% of employers rated public TVET as good or very good compared with 35% for private TVET.

Quality Assurance. Some regional programs show exemplary quality assurance. The clearest example is the SPC maritime training system (Chapter 3). It is a superb example of internationally defined standards, content, and quality assurance processes that ensure adherence to international standards. Two other examples also indicate regional quality processes at work. The South Pacific Board for Educational Assessment and PATVET are in the embryonic stages of developing a regional qualifications framework. The Pacific Qualifications Register started by identifying existing training programs and classifying their levels. Moreover, the University of the South Pacific (USP) builds quality standards into its programs. USP has standardized certificate and diploma programs used throughout the Pacific.

Prevocational Courses in Secondary Education

Almost all Pacific countries have some form of vocational education in secondary schools (Chapter 3). Adding prevocational courses is an idea with wide appeal. However, experience worldwide suggests that it is difficult to carry out prevocational programs well in countries with resource constraints. The Pacific region appears to be no exception.



Appealing Rationale.⁶ Many educational leaders in the Pacific are concerned because young people complete primary and secondary education without learning any occupational skills. It is thought that occupational skills will ease their transition into work when they leave school. Consequently, some policy makers want to change the curriculum of general education by adding vocational skills useful in agriculture, business studies, or construction, for instance. Such arguments have a long history of debate in education policy. The main reasoning behind such a policy is something like this:

- School-leavers need skills in the labor market to be productive and earn incomes.
- The general school curriculum does not provide sufficient occupational skills, and many graduates are unemployed.
- Therefore, the school curriculum should be revised to add vocational preparation so that graduates can function better in the labor market.

An update⁷ of the literature on vocationalization found that not much empirical research has been done on the topic since the 1980s.

Unmet Promise. “Economic relevance” has been the core argument among policy makers. Earlier research documented severe problems with the “economic-relevance” case. First, vocational subjects can be desirable on general education grounds, as part of a well-rounded education intended for everyone, if they could be afforded and provided without detracting from efforts to improve quality in core subjects in the secondary school curriculum. The skills learned may also have their private uses. Nevertheless, research has not borne out the labor market justifications for such subjects. So far, no study has shown that the kind of secondary school vocationalization that affects a minor proportion of the students’ total curriculum—e.g., five class periods a week, or even one third of the timetable—gives an advantage in finding work (let alone self-employment) within the first year or first few years after leaving school under severely depressed labor markets for youth. Exposure to vocational subjects may enhance interest in the types of work for which these subjects are broadly preparatory. However, tracer studies have failed to show a positive impact on actual access to work after students leave school. Neither have they found any strong effect on access to relevant further technical training.

High Cost of Vocationalization. Most vocationalization variants are much more costly per student class-period than mainstream general education subjects, mainly because of smaller classes and greater expense on facilities, equipment, and consumables. Unless a course can be taught to a full class of students (but few can), running costs will be more than twice that of non-laboratory academic subjects.

6 See footnote 5, pp. 87–89.

7 Lauglo and MacLean. 2005.

Gender Bias. The skills concerned are culturally identified with one gender only, e.g., domestic science and secretarial skills with girls, industrial arts subjects with boys.

Difficulties in Implementation. Vocationalization requires specially trained instructors, preferably with actual work experience in the types of skills being taught. Teachers with those qualifications are hard to recruit and retain. It also requires administratively difficult coordination of inputs. Time spent on vocational skills training can detract from the teaching of the basic academic skills that badly need improvement—also for labor market purposes. Finally, the “ethos” of the secondary school is academic. Practical subjects are prioritized less and accorded less status.

Vocationalization may be considered in some cases. The first is use of computers since they can be used for a variety of occupations and, potentially, across subjects within education itself. This is costly, however, and financial constraints limit the pace at which computers can be introduced. The second is low-cost programs that do not require workshops and are not gender specific, such as agriculture and business studies. Both are useful for broad occupational segments. However, in introducing any practical subjects, it is important to implement systematically rather than precipitously analyze cost implications before going to scale, and evaluate learning outcomes and impact.

Mixed Pacific Experience. Several countries have had difficulty in implementing prevocational programs in secondary schools. Prevocational teaching works well in Palau where the school-to-work scheme effectively blends practical courses and work exposure with academic courses. It is also extensive in the Fiji Islands where many students take prevocational courses at lower- and upper-secondary levels (Chapter 3). Still, quality varies greatly between schools. No norms have been established or applied uniformly across schools so that the equipment provision, for example, varies widely.

Other countries are less successful. In Nauru, unqualified teachers teaching practical subjects negatively affect the quality of training in secondary schools. Teachers lack curriculum guides on key learning outcomes. A lack of physical resources means students cannot easily do practical work, e.g., technical drawing. In Solomon Islands, few schools have the equipment and facilities to teach the subject properly. Even where there are facilities, the standard and quality are very poor. The academic or core subjects take precedence over TVET subjects because of the academic bias in the examination system. In PNG, secondary schools generally follow only an academic curriculum, but some private secondary schools—notably Don Bosco and Caritas technical high schools—have been successful in applying a balanced academic–practical curriculum. Only a few schools provide practical courses in Vanuatu, but the privately managed ones appear to do it well.

The policy lesson is that concentrated training in dedicated, stand-alone training institutions after the student has completed formal education may be a preferable avenue for skills development rather than adding small amounts of practical instruction

as part of secondary education. However, this alternative is unlikely to be feasible in the smallest island states. In Tuvalu, as in the other smaller Pacific islands such as Palau and Nauru, there is probably no alternative to providing vocational education through schools. The smaller countries can concentrate the necessary technically trained teachers and equipment in just one school.

Vocational Training Systems

Vocational training systems vary markedly in quality, as discussed in the following paragraphs.

Quality as Inputs

Standards. The existence of employer-ratified training standards is the first requirement for quality training. Trade testing provides standards for training in the Fiji Islands, Kiribati, and PNG. In the FSM, T3 reportedly follow International Labour Organization (ILO) standards. In the Fiji Islands, MOE-standard TVET curricula and centrally set exams help even the quality of training in vocational centers, and the FIT franchise system incorporates minimum standards. In the RMI, the standards and curriculum guidelines of the Fisheries and Nautical Training Center are based on international norms.

Instructors. The Fiji Islands and PNG have developed programs for training technical and vocational instructors, as has VIT. FIT has introduced a degree program in technical teaching. Postsecondary institutions in PNG have developed qualifications and programs for teaching vocational programs (e.g., University of Goroka and Don Bosco Technical Institute). Moreover, the technology department at the University of the South Pacific offers a bachelor's degree in education (technology) based on a 3-year program. Most students in the program are practicing teachers. However, vocational institutions still have shortages of qualified teaching staff. Many vocational teachers in the Fiji Islands are unqualified: 42% in office technology, 44% in automotive engineering, and 59% in carpentry and joinery. The FIT trade certificate is required for teaching in secondary schools; FIT leaves practical training to work attachments, which hold no guarantee of skills acquisition. TPAF emphasizes practical qualifications (Box 4.1). Its instructors must have completed apprenticeship. In addition, it registers industry-based instructors and training officers using criteria assessment of their competencies on the job and the need to complete training programs. This is part of the levy-grant system.

In PNG, most instructors have trade qualifications and practical work experience, thanks in part to a well-functioning apprenticeship system. However, 20% of vocational center instructors are not recognized as qualified. More important, upgrading of and retraining for teachers are insufficient, with no systematic means of providing ongoing professional development. Introduction of CBT in vocational centers has failed, in part,

for lack of in-service training of instructors in the new methodology.

Equipment and Financing. Staff of vocational training institutions throughout the Pacific complain almost universally about lack of equipment and financing. In the FSM, the T3 training facilities are poor and ill equipped. The Fiji Islands' vocational centers have variable equipment provision, even in franchise courses. Some centers lack essential equipment. Poorly equipped and resourced workshops were evident in many rural schools. Moreover, the majority of stationary equipment observed in workshops in secondary schools, e.g., carpentry, was inoperable. In PNG, vocational centers are characterized by poor standards of maintenance and lack of suitable facilities. Trainees have to observe work practice rather than do it themselves because of insufficient equipment. Even apprentices complain about lack of equipment in heavy machinery programs at the Mt. Hagen Technical Center. CBT could not be implemented in PNG's vocational centers partly for lack of teaching equipment to the standards required. In Vanuatu, VNTC has established a quality fund to provide incentives to training providers to raise standards. Only registered and approved institutions can apply, but a small amount of funds, apparently, can create strong incentives for quality improvement.

Box 4.1: Quality Skills Training in the Fiji Islands

The Training and Productivity Authority of Fiji (TPAF) is arguably the best provider of trade training in the region. Its trade testing system helps provide the standard for training. Instructors must have apprenticeship qualifications to ensure competence in practical activities. Employers are closely involved in reviewing training content, which focuses on practical applications. The system is reasonably well financed in part through a training levy on enterprises. The trade testing system provides both a goal and a standard for measuring acquisition of skills (outputs). The TPAF system is well managed and has an enterprise ethos in the organization. Finally, TPAF provides not just training but also a wide range of services to enterprises, including productivity advice. The TPAF model could be considered by other countries with a sizable private sector, such as Papua New Guinea, Samoa, and Solomon Islands.

The Monfort Technical Institute in Fiji Islands is another example of high-quality training by a church agency. Seemingly a wonderful training institution, it takes 134 male drop-out students each year from disadvantaged backgrounds and puts them through a 2- to 3-year training program in fitting and machining; cabinet making and upholstery; building construction, carpentry, and plumbing; electrical and automobile maintenance; and panel beating. It claims a 100% completion rate and 100% employment rate. The Government finances about 40% of the costs of the institution, which raises the balance through sale of produce and products (e.g., furniture). The quality of training is evident in the products and samples produced by students, which is attributable to many factors. Perhaps, chief among those factors is the competence, dedication, and experience of its management. It would be difficult to replicate this in other institutions. The rough cost per trainee per year is F\$7,100 (about \$4,330).

Source: Fiji Islands in-depth report.

Quality as Process

Quality Assurance. In the FSM, the lack of a quality assurance, accreditation, and certification authority is a major shortcoming. The Fiji Islands also has weaknesses in terms of quality assurance. MOE has no working system for quality assurance of its vocational centers in terms of monitoring indicators and systems. As a result, institutions vary in the quality of providing training. TPAF is ISO9001-certified and uses this as a tool to maintain and improve the quality of its systems. FIT lacks quality assurance over the complete franchise program. It only monitors theory, mainly through examinations that it processes. The franchise system lacks systematic monitoring and evaluation.

Quality as Outputs

TVET fails to monitor or evaluate the quality outcomes of training in terms of competencies achieved. It is virtually impossible to evaluate the outputs of vocational training directly, except where trade tests are used systematically. In Kiribati, the Marine Training and the Fisheries Training Centers provide training to an international standard. The same is true for most other maritime training institutions, which must undergo rigorous periodic external audits. In PNG, several institutions exemplify excellence, including the Maritime Training School and church agency institutions Don Bosco and Caritas. The RMI has high quality, but limited, vocational training given by an NGO—WAM—in traditional canoe building and carpentry. The Fiji Islands has little information available about graduate achievements, and the training effectiveness of secondary vocational centers is unclear. Only one indicator could be found of training effectiveness, namely, TPAF test results. Passing rates in these tests vary from year to year, and range from 66–75% for level 3, 50–66% for level 2, and 40–65% for level 1. More use could be made of trade training statistics, e.g., passing rates, to establish benchmarks for quality and effectiveness of training.

Postsecondary Technical Training

Postsecondary technical training tends to be of reasonable quality because fewer institutions and resources can be concentrated.

Standards. The College of Micronesia (COM) uses the Western Association of Schools and Colleges standards, as does the College of the Marshall Islands (CMI). CMI's business standards and curriculum guidelines are based on US college business standards. FIT, the leading technical institution in the Pacific, could develop more international benchmarks for its programs. USP has established standards for its courses throughout the region.

Students. One main issue affecting quality in the region is the poor educational background of entering students. This limits greatly what can be accomplished. The FSM's

incoming students have a poor education foundation. Low-quality general education results in deficiencies in basic academic foundation studies (English, math, and science). Similarly, in the RMI, CMI is handicapped by the low quality of incoming students. This leads to wasted time in remedial instruction and high dropout levels. Incoming students entering the TVET system start from low achievements in English and math. Completion times are exceedingly long as a result. Kiribati and Tuvalu suffer from the same low quality of general education that compromise efforts in quality skills development.

Instructors. At FIT, only a minority of teachers have industrial experience in their fields. Teaching staff have little opportunity for regular upskilling and industrial attachments. FIT has used its own graduates to teach in the institution without intervening work experience. In Kiribati, TTI possesses human resources who can deliver programs effectively. In PNG, high staff turnover impacts negatively on the quality in technical colleges and business colleges. Even expatriate staff on contract in the country for many years may be out of date. In the FSM, the number of trained teaching staff is inadequate for all COM campuses and training centers.

Equipment and Financing. In the FSM, COM facilities are adequate, but limited in training equipment and supplies. In PNG, according to some employers, graduates of technical colleges have been trained on out-of-date equipment. In Solomon Islands, at postsecondary level, little budget is left for equipment and facilities. SICHE workshops have out-of-date equipment. However, TTI in Kiribati is adequately equipped.

Curricula and Methods. PNG follows CBT emphasized in certificate courses of technical colleges. Samoa introduced CBT at NUSIOT, which has greatly reduced the number of students that fail. VIT in Vanuatu has adopted CBT, which has helped reduce repetition and raise throughput. The CBT method ensures that trainees can perform stipulated tasks. Standards seem reasonably high.

Quality Assurance Processes. COM and CMI are both accredited by the Western Association of Schools and Colleges, and are subject to periodic reviews. Other tertiary institutions, except the maritime institutions, are not generally subject to outside quality review. FIT itself has well-developed internal procedures for reviewing proposed new courses, but lacks sufficient international benchmarks and periodic external reviews of its quality. This omission is important in view of its stature as a regional technical training institution.

Outputs. Little comparison can be made of graduates of postsecondary technical institutes. However, in PNG, employers complain that trainees do not acquire proper work attitudes and discipline as part of their training partly because of the wide gap between the culture of the training institutions and the workplace.

High-quality Informal Sector Training

There are successes in informal sector training, but it is difficult to maintain consistent

Box 4.2: Leveraging Traditional Trades for Basic Skills Training, RMI

Founded in 1989, the Waan Aelon in Majel (WAM) program is a nongovernment organization-run nonformal training program that uses traditional Marshallese boat-building techniques as a model for developing vocational skills. The program targets at-risk youth and uses the traditional canoe as the medium for teaching livelihood skills, boat building, woodworking, as well as other elements. WAM has received widespread recognition both locally and in the Pacific for its unique technical and vocational education and training approach combining customs and modern skills. Perhaps just as important, WAM has almost single-handedly revived the traditional practices of canoe building, sailing, and noninstrument navigation in the Republic of the Marshall Islands (RMI).

WAM's trainees are predominantly young male school dropouts who come from low-income families around Majuro's urban areas. The model demonstrates that innovation in training can achieve multiple objectives—economic, social, and cultural. WAM has also succeeded, to a modest degree, in countering rural to urban drift. Many of its graduates return to the outer islands to practice their craft.

Source: RMI in-depth report.

quality. High-quality training programs are characterized by clear target group and training focus; strong institutional backing; well-qualified instructors; well-designed, modular training materials; flexible, field-based delivery systems; built-in follow-up and evaluation; close collaboration with local authorities; and access to donor funding.

Teacher Qualifications. These are a key quality-enhancing element in rural and informal sector training. Over the past 3 years, with NZAID's help, the Vanuatu Rural Development Training Center Association—the coordinating body for the country's 37 RTCs—has developed and implemented a CBT training of trainers' manual and organized a series of in-service programs to upgrade the pedagogical skills of RTC teaching staff. The manual introduces teachers to the CBT approach, illustrates how CBT programs are designed and delivered, and covers aspects of assessment and evaluation. What is lacking, however, is a similar program to upgrade the technical skills of RTC staff.

Similar measures are under way in PNG under the ADB-supported Employment-Oriented Skills Development Project. Here, project capacity-building measures cover both government and private sector training providers of informal sector training programs. By mid-2006, more than 1,100 trainers and training managers had received some form of technical, pedagogical, or management training, including a 4-week training package for formal and nonformal providers on improving their management and entrepreneurship knowledge and skills. There is little doubt that these measures have helped improve training quality in participating provinces and training institutions. This is mainly a result of the higher-quality training inputs: the modular course materials and the training of trainer programs.

In Solomon Islands, however, the results appear somewhat different. Training of

teachers and developing curriculum were the focus of a two-part EU project that began in 1993 and ended in 2004. Under the project, new syllabi were developed for the RTCs and a teacher-training component was created, consisting of an in service training program for staff who were teaching but lacked the requisite pedagogical qualifications, and a preservice component in the form of a new institution, Vanga Teachers College, which had its first intake in 2002.

Despite these input-enhancing measures, the EU's midterm review of its project in 2003 and a recent World Bank study⁸ of TVET in the Solomon Islands found that the quality of RTC training was variable at best, with most being less than satisfactory. These findings supported those of a 2001 tracer study of graduates, which found that graduates were not well integrated into their communities and the skills gained were not regarded as high quality. A separate evaluation of the project's curriculum development activities in 2005 indicated that the project had only a limited impact on the performance of RTCs. This was largely due to focusing on curriculum development and teacher training, and neglecting fundamental issues such as the quality of output, management of the training centers, and the institutional structure of the program.

Smaller Countries. Short courses are generally effective in smaller countries. Lacking a dedicated network of rural or informal sector training institutions, the smaller countries tend to organize ad hoc short courses in existing training centers using part-time or seconded staff. This has been the practice in the Cook Islands for short courses for school-leavers organized through the Hotel and Tourism Training Center. Despite the fact that in 2005, nine instructors with degrees and six with diplomas staffed the programs, the programs were judged to be of only "indifferent quality" by a recent tourism and hospitality training framework report.

Local instructors, accredited by recognized technical training institutions in New Zealand and funded by NZAID, staff short upskilling courses in carpentry, automotive, and electrical fields conducted, mainly for outer islanders, by the Trades Training Center of the Cook Islands. The quality is regarded as good and the courses provide the necessary foundation for participants to move up to certification-level programs. The key element appears to be the direct involvement of the donor country, New Zealand, in funding certified trainers and meeting other course costs.

In the FSM, short-term training courses and community-based skills training in such subjects as small-engine repair and maintenance, solar power energy, and small-appliance repair and maintenance, benefit from the resources available in T3 training centers. Courses organized in the centers, communities, and remote islands range from 2–4 weeks in length. They are designed mainly to improve productivity and promote

8 World Bank. 2007.

self-employment and income generation. Little information is available on the level of staff qualification or the outcomes of these short programs. T3 is the national trades testing authority in the FSM and issues of quality are, therefore, central to all its programs. The T3 program also establishes linkages and cooperative efforts with existing training providers and with ancillary enrichment programs to ensure that high-quality training meets performance standards and quality assurance measures.

Post-Training Support Services. These services are important. In informal sector training, success is measured less by examinations and certification, and more by the extent to which training results in actual employment, income generation, or increased productivity. The quality of programs is also a function of a range of post-training support services that have shown themselves crucial in facilitating the application of training to productive activity. Among the most important of these are providing information and assistance for accessing microcredit; facilitating technical and business advisory services; helping link participants with potential employers; and facilitating access to information on new products, markets, and services.

In the Fiji Islands, the quality of the training programs provided to unemployed school-leavers suffered from a lack of funds for monitoring and following up graduates to determine how they were progressing or what kind of post-training assistance they required. This was felt to be one main reason for the fact that only about 40% of graduates had found wage employment or started self-employment.

MOE's Advanced Vocational Training Program placed only about one in four graduates in employment or income-generating activities in 2000–2002, a figure suggesting problems with both the quality and the relevance of the training. In part, this may be because the program relies on the use of existing—and often underequipped—vocational school facilities and local resource persons hired ad hoc. There appears to be little in the way of monitoring or follow-up support services for participants. Obtaining credit for self-employment start-up is reportedly a particular problem for young school-leavers.

Lack of Feedback and Evaluation. Informal sector training throughout the Pacific lacks the necessary feedback and evaluation measures to provide information on the impact of training. Information from graduates in the form of post-training tracer studies should be collected 3–6 months after the completion of training and the results used to inform decision making on subsequent training provision. This has been a standard component in externally funded projects for the informal sector, such as the ILO-implemented community-based training projects in Bangladesh and Nepal in the 1990s and, to some extent, in the current ADB Employment-Oriented Skills Development Project in PNG.

Partnerships. Informal sector training programs can improve the quality of their output by establishing partnerships with local businesses and industries to provide trainees

with opportunities to gain practical work experience through short attachments. In Nauru, for example, the Nauru Youth Affairs (NYA) Institute provides preemployment training to school-leavers and dropouts on aspects of good workplace behavior, to help prepare them for employment later. In partnership with both government departments and the private sector, trainees are then placed in paid work to gain practical experience. Remuneration is minimal and paid by NYA monthly. For 3 months, the youths would learn on the job. Workplace performance is assessed by supervisors and the assessment is submitted to NYA. At the end of the 6-month training-cum-practice period, youths graduate with a certificate of participation. In some cases, the period of practical workplace experience leads directly to permanent employment upon completion of the program.

NGOs. In all PICs, NGOs are major providers of rural and informal sector training, and in many cases, the quality of the training inputs, processes, and outputs is high. Both the Tutu and Montfort training schools in the Fiji Islands are cases in point. Here, a combination of selective-entry procedures, active support from parents and local authorities, and close supervision of the training process by dedicated staff appear to be the key factors leading to a high-quality training product.

Other NGOs focus on providing quality capacity-building programs for trainers on their own or other NGOs working at the grassroots level. The Foundation of the Peoples of the South Pacific Kiribati has been active in promoting sustainable livelihood training and projects for rural youth in Kiribati and building the capacity of I-Kiribati trainers in coral reef management. The international arm of the Foundation of the Peoples of the South Pacific International enables it to draw on high-quality training expertise from throughout the region for its capacity-building programs.

In other cases, however, NGOs themselves lack the training resources and expertise to design and deliver good programs. In the RMI, this problem was addressed partly in 2000 by the ADB Skills Training Project, which sought to establish a women's training and marketing center together with an NGO-based outreach capacity to provide training for women and youth on the outer islands. The project was only partly successful and a subsequent evaluation found that neither the outreach training nor the programs offered were up to expectations. The main problem was the lack of expertise to design and develop quality training products.

Short-course training in basic trade skills is the most prevalent category of NGO training in PNG. Information on the quality of training and outcomes is difficult to obtain, as many students are boarders who return to their home villages after training. However, vocational center officials in PNG's Western Highlands province estimate that only 15–20% of those who complete short courses in that province find wage or self-employment. The remainder return to their villages where, it is reported, they often come to later CBT activities. This says little about the quality of the training inputs or

process, but suggests that there is hardly any demand for the output of NGO technical training in the province.

Outreach Training in Atoll Economies. Almost all atoll economies of the central Pacific have had difficulties in delivering high-quality and cost-effective outreach training. Few have the institutional or other resources required to invest in dedicated and purpose-built delivery systems such as in Vanuatu, or to develop materials and programs for the small- and sparsely populated outer islands, where employment and income-generating activities are scarce. In Kiribati, for example, the Ministry of Commerce, Industry, and Cooperatives can only conduct between three and five start- or improve-your-business training courses a year because of a combination of lack of local demand and high delivery costs. While the results of evaluations carried out at the end of each course indicate that the quality of training provided is acceptable, the training has not led to much success in terms of actual new business start-ups.

Examples of High-Quality Informal Sector Training. Two initiatives in the informal sector—both outreach activities—appear to have been successful in creating good training programs: the Integrated Agricultural Training Program in New Britain, PNG, and the Mobile Training Program for Coastal Fisherfolk in Santo, Vanuatu (Boxes 4.3 and 4.4).

While different in terms of content and delivery system, the two-boxed examples share common design and development features that appear to be closely associated with a high-quality training product. Both focus on subsistence target groups (farmers and fisherfolk); have as their main objective, adding value to an existing subsistence economic activity; were developed by established institutions with the necessary technical and training expertise; and use flexible and field-based delivery systems (giving maximum convenience for trainees). Each also relies on collaboration with local authorities in organizing its training and each attracts donor support.

The use of training technology to support informal sector skills development is limited in most PICs but prospects are improving as computer facilities begin to penetrate rural areas. In the Fiji Islands, for example, the Advanced Vocational Training Program is planning to use existing e-learning facilities in 21 rural secondary schools to establish e-community training centers and e-training-cum-production centers to strengthen informal sector training programs. Here two main areas of application are for consideration: use of technology to provide or enhance the content of informal sector training programs, e.g., accessing the experiences of similar programs in other countries via the Internet; and use of technology to produce more effective audiovisual training materials. The latter is particularly relevant in situations where target groups lack functional literacy skills, e.g., school dropouts and rural women.

Box 4.3: Integrated Agricultural Training, PNG

The Integrated Agricultural Training Program (IATP) is a training program developed by the University of Vudal in Rabaul, Papua New Guinea (PNG) to introduce subsistence farmers to basic tools and techniques for managing their assets and resources more effectively.

With help from, and close collaboration with, provincial authorities and local nongovernment organizations, based on a series of 12 training modules, IATP provides regular and field-based training that focuses on overcoming or reducing farmer-defined problems and constraints. The emphasis for IATP has been on developing and delivering a truly integrated program—integrated both in the sense of developing a livelihood approach to training and developing training partnerships with other providers.

The modules comprise a mix of technical, business, and livelihood skills geared toward empowering farmers to make sound decisions on how best to use their limited resources. They are typically implemented in 2-day programs, which include subjects such as basic record- and bookkeeping, managing savings and credit, and small enterprise planning and management. By mid-2005, more than 4,000 farmers—twice the expected number—had taken part in the program.

An evaluation of the IATP program in 2004 confirmed that the major impact had been a broadening of perspective in the way subsistence farmers view the world and their crop management. In particular, the livelihood course has significantly impacted on farmers in terms of providing an opportunity for reflection about their lives and their community.

Source: PNG in-depth report.

Box 4.4: Mobile Training for Coastal Fishermen, Vanuatu

The Mobile Training Program for Coastal Fisherfolk (Santo, Vanuatu), is a novel boat-based training program developed by the Vanuatu Maritime College to deliver short courses on improved fishing and fish-processing techniques to coastal communities in Vanuatu. This 2-week program is delivered in a specially outfitted boat. It helps coastal fishing people around the country's numerous islands develop or improve their fishing and seafood-handling skills, learn how to operate small boats safely, operate and maintain outboard motors correctly, and maintain and repair small boats. This enhances their lifestyle and improves small vessel safety.

A team from the college takes the training modules on rural fisheries to remote coastal villages using college vessels and equipment, thus ensuring training in a familiar environment with the least disruption to village life. Each year, the college sends advance information on the course to the six provincial offices in Vanuatu to ascertain interest. Since 2000, between eight and 12 courses have been delivered each year. The average number of participants per course is 15–20. The Secretariat of the Pacific Community subsidizes the program.

Source: Vanuatu in-depth report.

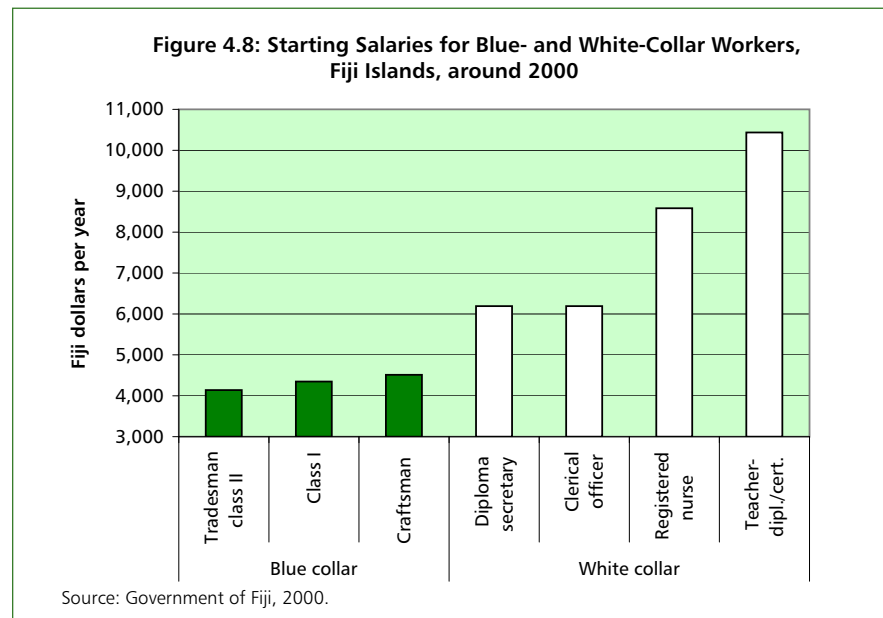
Equity**General**

Negative attitudes affect TVET. In addition, access to TVET is low in total and imbalanced by geographic area, income group, and, especially, by gender.

Access to skills development is a function of availability, affordability, and personal choice. Personal choice is influenced by the general view of TVET as a “second-class” option in many countries. The low status of TVET comes from many sources, including the low priority it receives in public budgets, lower academic ability of those channeled into it, and perceptions about the financial payoffs to TVET. In Solomon Islands, the public’s perception of TVET is that it is the pathway for the “failures” who do not go through the formal education system. TVET students, particularly those who finish RTCs, are seen as second best and have less status than those in academic streams. In the Fiji Islands, students who enroll in vocational centers are commonly called “dropouts.” In part, lower status is a direct result of the wage structure. The Fiji Islands is a case in point (Figure 4.8).

Fiji’s education system is so accustomed to academic education that strong parental pressure for academic credentials has made the TVET program a second-class option rather than a “second chance” education. This can be explained partly by the difference in salary of blue-collar workers compared to that for white-collar workers. Until wages for blue-collar workers are more attractive, the status of TVET will continue to be below that of an academic education (Government of Fiji 2000).

On a positive note, the FIT franchises in the Fiji Islands have given students who would otherwise terminate their secondary education another chance to gain access to tertiary education. This has perceptibly raised the status of the vocational programs in secondary schools.



Equity can be evaluated by overall access of trainees to training (the “index of opportunity”) and equality of access in terms of location, income, and gender. These are presented in sequence below.

Overall Access

Overall rates of access to TVET are relatively low in relation to the number of school-leavers resulting in a widespread poverty of opportunity (Table 4.1). “Poverty of opportunity” means a lack of opportunities to achieve an acceptable quality of life. The most common interpretation of this is insufficient access to education, health and other basic services, or economic opportunities. Poverty of opportunity applies particularly to TVET. Few opportunities exist to acquire technical/vocational skills by school-leavers or “pushouts,” females or adults, or those who live in remote areas.

The point is not a comparison among countries. Rather, only a small minority of school-leavers have access to skills acquisition through training. No more than one in four school-leavers is able to get a place in vocational training centers in the countries studied, and more likely, it is only about one in 10. Since the output of school-leavers is increasing faster than access to vocational training, an increasing proportion of those who need skills for employment and income are not given the opportunity to access such skills.

The growing number of young, out-of-school youth is becoming a matter of prime concern to governments in the Pacific and this is articulated in the Pacific Plan endorsed by Pacific Island Forum Leaders in 2005. For example, a key problem in Kiribati is addressing livelihood training for the 2,000 annual school-leavers, especially those on the outer islands who are unable to secure formal employment at the end of junior secondary school.

Table 4.1: Index of Opportunity for Vocational Training, Selected Countries

Country	Estimated no. of school leavers	Estimated no. of entrants to vocational training	Share accommodated (%)
Fiji Islands	14,000	1,300	10
RMI	1,300	100	8
PNG	50,000	9,000	18
Solomon Islands	9,000	1,000	11
Vanuatu	4,500	1,000	22

Note: Fiji Islands excludes TPAF.

PNG = Papua New Guinea, RMI = Republic of the Marshall Islands, TPAF = Training and Productivity Authority of Fiji, % = percent.

Source: In-depth reports.

Location

Access is low in rural areas and the outer islands. The network of vocational training centers is geographically diverse in several countries, including the Fiji Islands, PNG, Solomon Islands, and Vanuatu. In the FSM, those on far islands do not have easy access because the programs are centralized in the state capitals, increasing their costs of attendance. In Samoa, location is the main problem with access. Most TVET providers are located around the urban areas with only a few in rural areas. In Solomon Islands, those who live in or around Honiara have the easiest access to SICHE and Don Bosco. In the RMI, almost all the TVET programs are concentrated on Majuro. Ebeye Island and the rural atolls, with 30,000 people, see just a few training opportunities a year. The main reasons are lack of funds to deploy programs beyond the capital, poor planning, and logistical difficulties, including a faltering interisland transportation system.

In Vanuatu, RTCs are unevenly distributed geographically. Some provinces have multiple centers; others with larger populations have few. Access to RTC training varies greatly from province to province, ranging from one center per 2,400 people in Penama to one center for every 18,000 people in Sanma. This is the consequence of private ownership and initiatives: the RTCs are established where NGOs and communities have an interest in setting them up. However, government plays no role in providing incentives to balance provision geographically. Hence, locational inequities persist.⁹

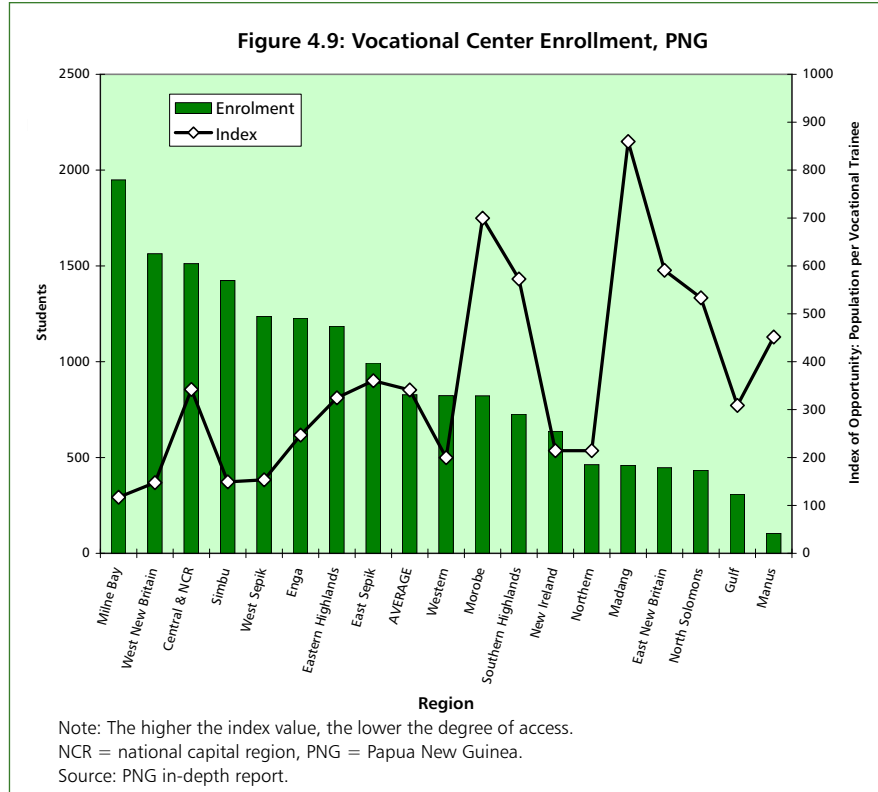
In PNG, vocational center enrollment varies considerably in relation to population by district, as seen in Figure 4.9. For example, there are 860 people for each vocational trainee in Madang, compared with just 117 and 148 people per trainee in Milne Bay and West New Britain, respectively. This means people in Milne Bay have seven times greater access to vocational centers than those living in Madang.

Two major consequences of geographic inequity are limited income-generation opportunities for rural areas and outer islanders (which increases their hardship) and continued high urban migration.

One bright spot in geographic equity is the Tuvalu Maritime Training Institute (TMTI). It deliberately allocates places by island. As a result, the outer islands in Tuvalu produce 83% of the graduates, substantially more than their 53% share of the total population. In Tonga, the Short-Term Training Center enrolled 19% of its 310 participants in 2005/06 from outer island participants, almost reaching its target of 20%.

Access also pertains to quality as well as physical places. In the Fiji Islands, the quality of TVET provision reportedly varies inversely with the distance from Suva. Access to quality vocational training remains a problem in most rural areas, where training facilities are poorly equipped and underfinanced, and the expertise of teaching staff is

⁹ To a certain extent, geographic inequities in center location are minimized by the presence of extensive boarding facilities at the rural training centers (RTCs). People from underrepresented regions can be accommodated at RTCs in other regions. This, however, adds to their travel costs.



inadequate. Access to quality is also problematic in Vanuatu—the variable quality provided by different institutions results in some students getting relatively less value for money, depending on which RTC they attend. The notes that accompany the submission of annual statistics indicate considerable variance in RTC operations and in the quality of the services.

Income

Lower-income groups tend to have less access. The place of residence tends to be highly correlated with level of income; and level of income, in turn, is highly correlated to affordability, another determinant of access to vocational training. Affordability includes not only the direct costs of attendance, but also indirect costs such as transportation and income forgone. The review collected almost no information about access to TVET by income group. However, some inferences can be made.

An apparent contradiction exists. On the one hand, vocational institutions cater to students from low-income groups. Within Majuro in the RMI, anecdotal information suggests that the majority of beneficiaries of training programs and activities are, indeed,

those from lower-income groups. Certainly, that is the case of WAM, which deliberately targets at-risk youth. In Solomon Islands, vocational courses tend to draw students of less academic ability and from the more-disadvantaged income groups.

On the other hand, many low-income people cannot afford the direct and indirect costs. In PNG, training in vocational centers is limited to those who can afford to pay tuition fees. Potential students do not enroll because of inability to pay, and many students drop out and do not receive certificates because their parents cannot continue paying. In Tonga, statistics are unavailable, but observations have indicated a high-dropout rate among students in the islands and among those from poorer segments of society. This limits their opportunities for developing skills for income generation.

NGOs and church agencies provide expanded access to TVET at little or no cost to government. In Vanuatu, RTCs and the 2,000 students enrolled are financed entirely from private funds.

Failure to recover costs at higher levels of education and training also tends to discriminate against low-income groups. Costs recovered could be used to provide greater access to skills.

Trade testing systems in the Fiji Islands, Kiribati, and PNG facilitate upward mobility by conferring qualifications on those who have acquired skills outside the formal TVET system (i.e., recognition of prior learning).

Gender

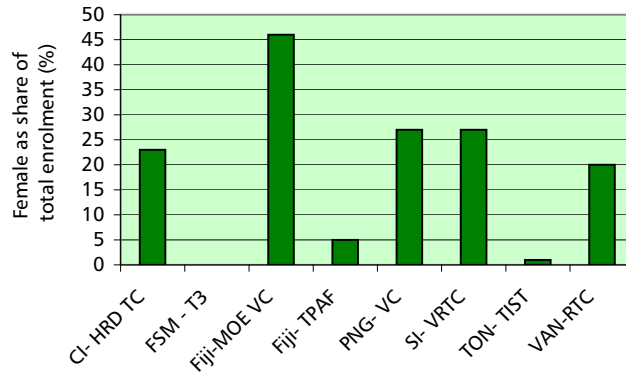
There appears to be widespread gender bias when it comes to the types of informal sector training provided to men and women in the Pacific. Men tend to monopolize technical and trades training while women are found almost exclusively in home economics, domestic science, and commerce-related programs. This constrains women's ability to start their own businesses or compete for jobs in the local labor market. There is an urgent need to broaden the training opportunities available to women and promote their active participation in "nontraditional" trades and management-related subjects.

Largely, the TVET systems favor males over females. In contrast with general education, where gender parity is close to reality in most PICs, girls and women tend to be under enrolled in TVET programs, as seen in Figures 4.10 and 4.11.

In vocational training institutes, the proportion of women enrolled ranges from 0–45%—T3 in the FSM and only a small share in TPAF—in MOE vocational centers in the Fiji Islands. The proportions tend to be higher in postsecondary technical institutes. Except for the technical colleges in PNG, women account for 30–60% of enrollments.

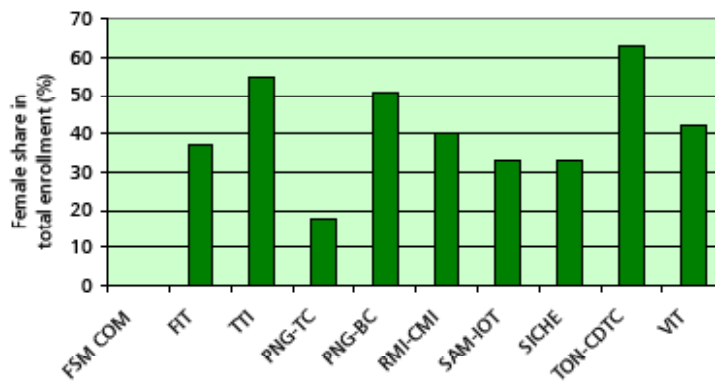
As with informal sector training, females tend to be channeled into courses supporting traditional female occupations, e.g., home economics, secretarial work, and hospitality. For example, the proportion of girls in vocational training courses in the Fiji

Figure 4.10: Female Enrollment, Vocational Institutions



Notes: Data are estimated for TPAF in traditional areas such as carpentry, metalwork, and automotive. Females reportedly make up about half the enrollments in hospitality, information technology, and accounting, and about 70% in garment trades.
 CI-HRD TC = Cook Islands Human Resource Department Training College, FSM = Federated States of Micronesia, MOE = Ministry of Education, PNG = Papua New Guinea, RTC = rural training center, SI = Solomon Islands, T3 = trades, training, and testing, TIST = Tonga Institute of Science and Technology, TON = Tonga, TPAF = Training and Productivity Authority of Fiji, VAN = Vanuatu, VC = vocational center, VRTC = vocational rural training center, % = percent.
 Source: In-depth and background reports.

Figure 4.11: Female Enrollment, Postsecondary TVET Institutions



BC = business college, CDTC = Community Development and Training, CMI = College of the Marshall Islands, COM = College of Micronesia, FIT = Fiji Institute of Technology, FSM = Federated States of Micronesia, PNG = Papua New Guinea, RMI = Republic of the Marshall Islands, RTC = rural training center, SAM IOT = Samoa Institute of Technology, SICHE = Solomon Islands College of Higher Education, T3 = trades, training, and testing, TC = training center, TON = Tonga, TVET = technical and vocational training and education, TTI = Tarawa Technical Institute, % = percent.
 Source: In-depth and background reports.

Islands is 20–40% of total enrollments in the institution level. However, almost all women in these institutions are in traditional home-oriented training courses. The exception is in tourist areas where hospitality-related courses provided in local vocational centers are in demand from local hotels and resorts and result in a high proportion of female students in some schools. In rural areas, however, low levels of female enrollment prevail and one main reason for this is the lack of hostel facilities for girls. About 36% of FIT students are female, concentrated in commerce (63% of the total), general studies (58%), and hotel and tourism (72%). TPAF caters mainly to traditional male trades and does not even keep enrollment statistics by gender. In PNG, only 25–30% of enrollments were female and this proportion has not increased. Most are registered in traditional home economics courses. The same applies to colleges, where women tend to be concentrated in business studies.

A similar pattern occurs in Solomon Islands. Only about one quarter of all trainees are female in RTCs. Females are disadvantaged in the availability of accommodation. Further, in almost all RTCs, training opportunities are restricted to life skills, agriculture, and business studies. With few exceptions, there is no active consideration to allowing females to register on courses such as woodwork. Center managers regard this as culturally inappropriate.

However, in PNG, though the Government owns and operates 73 vocational centers against 56 church agency centers, the latter enroll over thrice as many female students.

Box 4.5 shows the progress that the Community Education Training Center has achieved within SPC.

There are multiple causes of female underenrollment. These enrollment patterns reflect both cultural values and employer preferences. Cultural stereotypes of women inhibit young women from participating in the programs. In some places, parents deem travel to vocational institutions by daughters as unsafe. In Nauru, employers do not normally practice equal employment opportunities. Parents may be unwilling to invest in the training of their female children. Factors internal to the TVET system also discriminate against girls, including lack of female boarding and other facilities and low proportion of female teachers. In Vanuatu, to some extent, underrepresentation of girls in RTCs may also reflect the fact that in most provinces girls tend to outperform boys at both Grade 6 and senior secondary school levels, i.e., fewer girls than boys are pushed out of the system at these levels.

The education system is still reinforcing vocational training for girls toward domestic roles or towards poorly rewarded careers. ... Many parents do not recognize the importance of girls' education especially in rural areas. However, this opinion varies from region to region and reflects different

Box 4.5: Community Education Training Center

The Community Education Training Center (CETC) of the Secretariat of the Pacific Community (SPC) provides access for Pacific women in technical–vocational and livelihood areas as well as in governance and business. CETC, established in 1963, is the only regional provider that specifically targets Pacific island women. It provides residential, short-term courses with a robust, broad-based integrated 7-month community development program focusing on technical–vocational and livelihood skills. The former are specialist courses in leadership and local governance as well as entrepreneurship training for women in middle management and supervisory positions from state and nonstate sectors in the region. The latter targets women engaged in community or development work. It involves a mix of core, modular courses self-accredited by SPC and technical and vocational short courses, most of which are accredited by outside providers like the Fiji Institute of Technology, Training and Productivity Authority of Fiji, or University of the South Pacific, which run the course for CETC. Each course feeds into the other. The community development certificate received at the end of the 7 months is not formally accredited by CETC. A tracer study and a database on its graduates record a 99% employment rate (self or paid).

CETC's residential arrangements comprise specialist-training rooms (e.g., radio training station, food, tailoring rooms, and laboratory); gardening plots; fishpond; piggery; and chicken hatch, which make the training experience highly practical.

The center's core courses underwent a gender mainstreaming exercise in 2005, perhaps the only technical–vocational program to do this. However, what appear to be special in this broad-based program for women are the microfinance elements interwoven into the courses. In this way, women are prepared to use the knowledge and skills learned both for livelihood and for cash income generation.

The center's impact is reflected in its annual waiting list, continuing support from development partners and member governments, and success stories from graduates. To date, close to 1,500 Pacific women have been trained at CETC.

Source: CETC management.

cultural behavior. Within the school settings, fewer funds are allocated to girls' programs. Often there are no boarding facilities or arrangements for female students because of security problems. In some isolated rural areas in Western and Gulf Provinces, the enrolment of girls and the presence of female teachers is almost zero. In comparison, the New Guinea Islands Region is completely different, with many girls taking up the so-called 'male trades' and female teachers holding senior positions (Schaffer 2002).

Because of inequitable access for females, many lack the basic skills to become employable and this directly limits their ability to improve their welfare and that of their families. For unmarried females with children and no husband, this inequity to training makes it difficult for them to lift themselves out of poverty.

Yet exceptions exist. In the RMI, various ministries and Women United Together Marshall Islands undertook more female-targeted short-term training activities in recent years, including income-generation training like producing noni tea and virgin coconut

oil, floral arrangements, and handicraft marketing. Gender equity has been achieved in Tuvalu in terms of scholarships, helped by the Training and Scholarships Policy of 2003. The RMI has also achieved gender balance in its scholarship awards.

Vanuatu has also sought equity in awarding scholarships at VIT with some success. The proportion of females enrolled at VIT increased from 37% (2004) to 42% (2006). Equity scholarships have enabled girls to make inroads into traditionally male-dominated occupations. Every department in VIT includes females, including 31 trainees in joinery and electricity, compared with 79 males. In PNG, church-agency vocational centers achieve much greater gender equity than public institutions. In Tonga, the Short-Term Training Center has achieved its 50% objective with 67% female participants among the 310 participants.

However, the overall conclusion remains clear: the most disadvantaged in terms of access to TVET are women and girls.

Organizational and Management Effectiveness

Pacific TVET systems face formidable challenges in the organization, management, and delivery of relevant training services.

Difficulties in Managing TVET

TVET is arguably the most difficult subsector to manage in the whole spectrum of education and training. It is much more difficult to plan and deliver than any other level of education and training. Its demands tend to be unarticulated and changing. It faces a complex repertoire of competing interests and heterogeneous target groups, many of whom do not know what they want to do after training. Managing TVET is made more difficult by the different forms of provision—formal plus informal training provision, modular, short term, and long term. It has lower status than general and university education. In addition, it competes with these larger and more popular subsectors for financing. Moreover, managing small-scale, dispersed infrastructure is difficult.

The organization of university education, for example, does not have the complex repertoire of competing interests to consider in its planning and delivery of educational services. University students are relatively homogeneous in terms of educational background. Courses are formalized and clearly articulated. The objectives of the university are aimed at well-defined targets. The university has an unassailable status as far as its position in education is concerned. The university does not have to concern itself with the local community. The staff is highly trained and motivated and students have a clear understanding of why they are at university and what they hope to do after graduation.

In contrast, vocational centers are invariably faced with a heterogeneous group of students who have enrolled for a variety of reasons, some of which are not conducive

to learning. The capacity of vocational instructors varies quite a lot and course articulation may be poor. Recent developments require a strong relationship between centers and local communities, which may or may not be forthcoming. Vocational centers find themselves competing for scarce resources with technical education and technical high schools (Guy and Mueller 2002).

Additionally, public sector training institutions tend to inertia. Budgets continue, more or less the same year after year, regardless of performance. Long-term teacher contracts must be honored and expensive equipment and facilities must be used. Installed plant makes it difficult sometimes to change direction and provide new training needed in the market. The management of training institutions usually sees little need to conduct tracer studies because it views its main task as production of skills, not how well they are used. The picture mentioned paints a caricature perhaps, but it illustrates the lack of incentives to change inherent in many training systems.

Strengths in Managing TVET

Much strength exists in organizing and managing TVET systems in the region; several promising developments have occurred. The management of postsecondary technical institutes, in particular, is relatively strong in such places as the Fiji Islands (FIT), Samoa (NUSIOT), and Vanuatu (VIT). TPAF stands out as a unique training organization with strong management, close relationships to employers, and stable, independent financing.

Several recent organizational changes are promising. National training councils in the RMI, PNG, and Vanuatu—the last with support from provincial training boards—provide a venue for the main stakeholders to articulate training priorities and to steer the TVET system in the direction of user demands and market changes. If VNTC—the central body for coordination and quality assurance—did not exist, Vanuatu would have to create it. This goes for NTC in the RMI as well.

In addition, national qualification agencies in Samoa and Tonga hold the promise of better quality assurance in accrediting institutions and establishing quality standards. Separate organizations have been established to focus attention on postsecondary and post-schooling TVET, the Ministry of Training, Employment, Youth, and Sports (MOTSEYS) in Tonga, and the Department of National Human Resources Development in the Cook Islands. Several TVET-specific plans have been prepared (PNG, Solomon Islands, and Vanuatu). Coordination has been established among nonformal providers through organizations such as the Vanuatu Association of Nongovernment Organisations (VANGO) and the Vanuatu Rural Development and Training Centers Association. Moreover, TVET institutions are networking through the regional PATVET organization and through several national TVET associations (Fiji Islands Technical Vocational Education and Training Association and Samoa Association of TVET Institutions).

Organizational Issues

Unclear Mandates. In PNG, the division of labor is unclear between the Ministry of Labor and Industrial Relations and the National Department of Education (NDOE) as evidenced by different and sometimes contradictory plans for the same policy areas. Roles are also unclear between NDOE and the Department for Community Development on responsibilities for informal sector training. Department of Community Development (DCFD) has responsibility for training for the informal sector, but lacks the training expertise that resides in NDOE.

In the RMI, unclear mandates lead to duplications in several areas. The roles and responsibilities of MOE, NTC, CMI, and other entities often overlap and cause confusion. Legislation for these three institutions states that each entity has some responsibility for providing TVET. NTC and MOE are both responsible for monitoring and regulating training providers. Both the NTC and the Ministry of Resources are responsible for regulating apprentices. In Vanuatu, the division of responsibility between MOE and the Ministry of Youth Development and Training is unclear and artificial. With only 12 staff to cover the whole country, the ministry has little capacity to oversee and stimulate nonformal training. In the Fiji Islands, observers have remarked on the inherent conflict of interest in TPAF being simultaneously the financier, provider, and assessor of training.

Coordination Issues. The FSM lacks coordination among the three main TVET systems—T3, College of Micronesia, and the Workforce Investment Act. Moreover, the structure of the country is reflected in a TVET system that duplicates functions, fragments training, and leads to unsustainable providers. Ten TVET public service training providers and more than 30 ancillary enrichment programs is just too much for a small country to manage effectively or support financially. As an example, having five COM campuses and five T3 programs is taxing on financial and administrative resources.

In the Fiji Islands, FIT and TPAF have their individual legislative acts that make them semi-autonomous under different ministries—MOE and Ministry of Youth and Sports, Employment Opportunities and Productivity, respectively. MOE administers and monitors TVET directly but only in secondary schools and vocational centers. Private education providers have no proper monitoring system by MOE to keep track of the adequacy of their offerings after initial approval and registration. FIT and MOE coordinate through their vertical linkages (secondary graduates moving up to tertiary studies) and the franchise program. TPAF has MOE representation on its board, councils, and industry advisory committees, but TPAF seems to operate largely on its own without any relationship to school-based training. TPAF has stated that there is little, if any, coordination with MOE facilities. This can lead to duplication of facilities (e.g., in hotel and tourism training around Nadi). A case could be made for having one overall national training authority for policy, coordination, quality assurance, and monitoring.

In PNG, the three main parts of the TVET system do not work harmoniously. NTC, NATTB, and TVET Division of NDOE can be seen as dysfunctional. Each has its own board and management structures, develops its own policies, forges its own linkages with enterprises, is responsible for some registration and certification of training providers, and each uses different criteria in the process.

In Solomon Islands, there is little connection or coordination among the different TVET providers, other organizations, and the Government. The Ministry of Commerce, Industries, and Employment has its own training system, as does MOE. SICHE, RTCs, and nonstate actors operate without many linkages. No coordinating body exists to oversee training policy, set standards, or oversee monitoring and inspection. Similarly, Tonga at present lacks a national authority for the overall governance of TVET. This has led to lack of clear linkages among stakeholders and providers, leading to duplication of courses and lack of common objectives and standards. The establishment of the Ministry of Training, Employment, Youth, and Sports [MOTSEYS] and the Tonga National Qualifications and Accreditation Board are the Government's intervention to address this issue. Tuvalu, too, lacks overall coordination and policy direction for TVET. The Manpower and Training Committee established in 2003 was not sustained. In Vanuatu, despite a coordinating body for rural training, nonformal training programs appear to be characterized by an ad hoc approach to activities.

Fragmentation of Training. In the Fiji Islands, for example, both the Ministry of Youth and MOE deliver similar short-cycle training programs to school-leavers but each develops its own separate portfolio of programs and materials. Improved coordination could facilitate the pooling of resources and a more cost-effective means of producing common programs and training materials. In Vanuatu, poor coordination between various NGOs operating RTCs has resulted in a geographic imbalance in facilities and unequal access to training in different parts of the country. In the Cook Islands, the lack of coordination between compulsory and postsecondary education and training was a major finding of the 2002 training needs analysis report (Catherwood and Topa-Apera 2002).

Excessive Centralization in PNG. The technical and business colleges are administered through NDOE, and principals chafe at the degree of administrative centralization. According to one, NDOE "still has the string around our neck." Approval must be sought from the TVET Division of NDOE for virtually everything, e.g., replacement of computers, even if the institution has the funds available from student fees. This hermetic control stifles initiative and innovation. It prevents institutions from using resources flexibly according to need and adapting programs to local requirements. Devolution of authority would seem appropriate for postsecondary technical institutes.

Resource Constraints. In PNG, NTC lacks resources and expertise to carry out registration and accreditation of private training providers. VNTC lacks budget line

revenue and sufficient staff to handle its work—resulting, among other things, to a backlog of applications for accreditation. TPAF is an exception in this pattern. It has a stable, independent source of financing through a payroll levy. This, plus income from tuition for its popular training programs, means it is financed entirely outside the government budget.

Building institutional capacity to design, deliver, and follow up informal sector training activities is a common need among both government and NGO training providers. Here there appears to be considerable scope for cooperation and complementarity, with government providers focusing on the development of policy guidelines and appropriate methodologies and materials, and NGOs using their grassroots organization to provide effective delivery systems and follow-up services.

TVET Planning

Group 1 Countries. TVET plans are necessary for strategic direction, but they have to be costed, budgeted, and implemented. Although TVET plans have been developed in group 1 countries, these are more aspirational than operational. Vanuatu has well-developed plans for the TVET sector and its major institution, VIT. These plans are well conceived and they provide clear direction for developing the system. However, the plans have not been supported by detailed costing and priority financing by the Government.

A TVET plan was developed in Solomon Islands in 2005. The plan is thorough and comprehensive, but it lists nearly 100 recommendations—too many for concerted action—and its financial implications were not costed or budgeted. PNG has a plethora of TVET plans. Apart from sections in national plans in 1995 and 2005, these include the TVET Corporate Plan (1999–2003), the TVET Policy, Rationale, and Action Plan—Lifelong Learning and Training for PNG (2005) all by the NDOE, and the National Human Resource Development Policy and Strategy (2005) by the Department of Labor and Industrial Relations. Little follow-through or implementation has been seen.

Groups 2 and 3 Countries. These lack national plans and policies on TVET. In the FSM, there are no stated vision and mission for TVET, which will be necessary if TVET is to make an impact on human resource development and economic growth. In the Fiji Islands, TVET figures only marginally in national development plans. At present, no national policy or plan exists for TVET covering all three main organizations and providers, although there is interest in developing such national policies. Kiribati has no TVET plan addressing the implications of national strategic plans. In RMI, the TVET system and NTC have never established a clear set of objectives, policy, or framework for TVET, although NTC is finalizing one. Tuvalu also lacks a policy and plan for developing TVET.

Variability of TVET Management

TVET management varies because of lack of standards, accountability, and opportunities for in-service training. It is difficult, if not impossible, to separate management of TVET from that for the sector in general or public administration as a whole. Too often, managers are not held accountable for performance. Standards of performance and performance indicators are lacking. Budgets are not linked to performance, but they tend to be based on historical levels regardless of achievements. In many cases, management authority has not been devolved, thereby restricting incentives and management performance. In PNG in particular, the business and technical colleges would perform better with greater authority to act on their own, particularly if boards with a majority of employers could govern their actions. Managers observe that little opportunity exists for their in-service training and development.

Yet there are high-quality exceptions, including management of the SPC maritime training system, where standards of performance are clear and periodic quality controls are practiced: Vanuatu, with strategic direction from top education management; RMI and its NTC; and TPAF and FIT in the Fiji Islands.

Data and Research Issues

Lack of Data on TVET. This is an almost universal handicap to progress, with almost all countries reporting this issue. In the FSM, TVET lacks a database, and access to information was the main constraint to the study. In the Fiji Islands, data on the scale and operations of the TVET system are missing. TVET information is lacking in Kiribati and Nauru, as records about training are either not kept or they are recorded incorrectly. Virtually no data are available on the outcomes of training. PNG lacks a tabulation and analysis of information by NTC on private training providers. In Samoa, repetition and dropout rates are not properly recorded in most institutions. In Tuvalu, it was difficult to obtain information about prevocational courses though only one institution exists. The most difficult data to obtain are repetition and dropout rates, completion rates, costs per trainee and, of course, employment of graduates.

Lack of Research. No country has yet developed monitoring and output indicators for TVET. Two countries have the potential to do research on skills development,¹⁰ but do not because of low priority assigned to it. PNG has no monitoring and evaluation officer in MOE, or on providing private training. In the Fiji Islands, the lack of statistics contributes to, but does not fully explain, the lack of research on skills development. Such research on trends and issues is essential for monitoring progress and developing policies.

¹⁰ The University of the South Pacific reports that some graduate research has been or is being done on TVET in the Fiji Islands and Samoa.

Finance and Internal Efficiency

TVET systems need to diversify their sources of financing and use them more efficiently. This is because public or donor financing for TVET is limited and, in some cases, declining. Consequently, countries will inevitably have to find ways to reduce dependence on government financing by mobilizing nongovernment financing for TVET. Limited public resources also mean greater attention should be given to increased internal efficiency, as well as to financial transfer mechanisms.

Limited Public or Donor Financing

As seen in Chapter 2, public financing of TVET varies by size of country. The larger countries tend to spend proportionately more on TVET than smaller countries. Still, most countries spend relatively little on TVET except PNG, where TVET consumes 13% of the MOE budget; Vanuatu spends about 6%, and the Fiji Islands 4%.

Most TVET systems depend exclusively or excessively on public financing or donor support. In the FSM, the Compact finances more than 90% of the total annual operating budget of TVET programs. In the Fiji Islands, the upper-secondary vocational centers depend almost entirely on MOE allocations, but these do not cover basic equipment needs. In Tuvalu, the Government finances 100% of the costs of the Maritime Institute, supplemented by external financing. SICHE gets 85% of its revenue from the Government and donor sources. Staff and operations absorb this with little left for training equipment or facilities. In Samoa, the Institute of Technology receives 84% of its financing from the Government.

However, budget increases have not kept pace with enrollment increases. Between 2003 and 2004, the budget for COM declined from \$6.7–4.1 million before bouncing back to \$5.6 million in 2005. This results in a kind of “forced starvation” in per capita and even in absolute terms. These declines apply in particular to postsecondary technical institutes. In PNG, the Government declared that TVET has the second highest priority within the education sector, but financial allocations have not matched this ranking. Funding for technical and business colleges has dropped in real terms. Little funding goes beyond the payment of salaries.

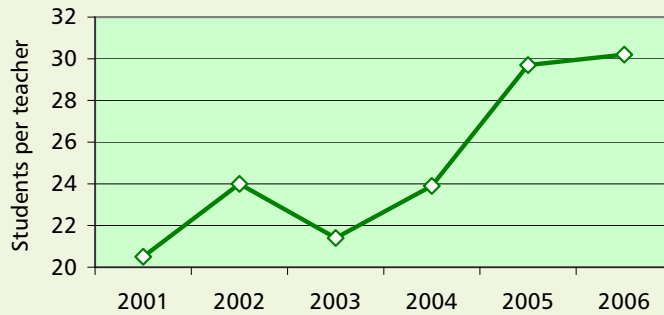
In Samoa, budget increases for IOT have been below enrollment increases. In Tuvalu, financial shortfalls in government revenue and reliance on government financing of TMTI have placed the continued financing of TMTI in doubt. In Vanuatu, enrollment at VIT reportedly doubled while the budget was reduced. At present, VIT gets nearly all its revenue from the Government (58%) and from student charges (32%).

Box 4.6: Coping with Reduced Public Financing, FIT

The case of reduced public financing for the Fiji Institute of Technology (FIT) is dramatic. Its subsidy from the Government remained virtually the same over 8 years, while the number of equivalent full-time students increased by 61% from 5,000–8,100 over 2001–2006. This increased enrollment was achieved by keeping staff numbers constant, increasing sharply the average number of students per teacher, increasing tuition fees, and admitting “private” (i.e., non-scholarship) students.

	2001	2002	2003	2004	2005	2006
Staff	246	260	257	268	267	268
Equivalent full-time students	5,032	6,241	5,500	6,393	7,922	8,100
Students per teacher	20.5	24.0	21.4	23.9	29.7	30.2

Fiji Institute of Technology-Students per Teacher (equivalent full-time)



Source: Fiji Institute of Technology.

Because of these changes, in 2006, FIT raised 51% of its revenue from students, 4% from other income, and just 45% from the government.

Source: FIT Management, 2006.

Tight constraints on public financing mean that TVET systems cannot count on increased public financing. This applies particularly to the former US territories along the northern rim. US support to both RMI and the FSM is scheduled to decrease over the next several years.

Quality tends to be sacrificed when budgets are constrained, since salaries squeeze out financing for materials, equipment, and maintenance. For example, in FIT, CMI in RMI, and the MOE centers in Fiji Islands, expenditure on consumables is 3% or less of total recurrent spending (table 3.8). Capital outlays are often the first to be cut. In the FSM, the T3 program received only 1.7% of its capital budget request. In PNG, capital financing for TVET virtually ceased between 2000 and 2006. As a share of the development budget for education and training, vocational and technical programs received an average of just 1.9% a year over the period. In most cases, development partners are the only source for capital development in TVET.

Mobilizing Nongovernment Financing

Countries inevitably will have to find ways to reduce dependence on government financing by mobilizing nongovernment financing for TVET. Strong mobilization of resources outside the public budget characterizes many TVET systems in the Pacific. These include VIT and RTCs in Vanuatu, vocational centers and colleges in PNG, and especially FIT and TPAF in the Fiji Islands. As stated in the FSM background country report, financial sustainability of the FSM TVET programs is a major issue. Replacing Compact financing for TVET is the greatest challenge. Other countries face a similar challenge. Four ways can be used to mobilize nongovernment financing and reduce dependence on public funds.

First, shift some costs to parents and students. The rationale is that students benefit from TVET through higher income and earnings. It is only appropriate, therefore, that they share in the costs of their training. This is termed “beneficiary financing.” Cost recovery is particularly appropriate at higher levels of TVET, as in postsecondary technical institutes. One can even make a case for this on equity grounds. To the extent that student beneficiaries help pay for their training, the financial burden on government is reduced, allowing it to subsidize more and better training for lower-income groups. VIT and FIT, in particular, have been successful in increasing the proportion of revenue raised from student fees. TPAF also raises about half its revenue from tuition payments by trainees in short courses. In some cases, short courses have become a source of supplementary income for cash-strapped vocational centers in PNG.

Parental willingness to pay for TVET is polarized in the region. In the Fiji Islands and PNG, parents and young adults are willing to finance training courses. The northern rim of Pacific countries in this review has no tradition of paying for TVET in the RMI or the FSM. Of course, there are limits. Many trainees in vocational centers in PNG cannot afford to pay tuition charges and either drop out or fail to collect certification on completion. In Vanuatu, wastage rates in the RTCs, in the form of high dropouts in 2nd- and 3rd-year students, is reportedly a result of fee fatigue.

Second, generate income through sale of products. Private institutions, such as Montfort, rely on the sale of products to generate income. Public institutions can also do this, but it is important for the institutions to be able to keep and apply the proceeds to raise quality. Of course, there is a line beyond which using students to generate income crosses from raising revenue into exploitation of trainees, distracting from the training goals. As a rule of thumb, institutions can expect to generate no more than about one fifth of revenue from the sale of products. The highest proportion of revenue generated from the sale of products and services by PIC institutions visited as part of this review was 15% (Port Moresby Business College, PNG). The highest proportion of revenue from products alone was 9% (St. Joseph's Catholic Technical School, Lae PNG).

Box 4.7: Training Levy in the Fiji Islands

The Training and Productivity Authority of Fiji (TPAF) levies a 1% fee on the gross salaries of all employees in registered firms regardless of enterprise size. The public service is included, but certain workers are excluded, e.g., teachers, nurses, and military personnel. The purpose of the levy is to stimulate training within enterprises. TPAF collects the levy itself by requiring employers to submit documentation and payment semiannually, and by contacting delinquent employers through four levy-enforcement officers.

At present, about 5,200 employers pay the levy and an estimated 600 do not. The proceeds amounted to F\$8.8 million in 2003 and F\$9.5 million in 2004. In theory, employers can recoup up to 90% of the amount they pay into the levy each year. However, this is largely theoretical. In 2005, 5,200 enterprises contributed to the levy, but only 270 enterprises were reimbursed for training through 1,800–2,000 individual claims. These 270 organizations accounted for two thirds of all levies paid. The training levy makes a sizable net contribution to TPAF's operating funds. In 2003, TPAF paid out only about 30% of the levy revenue it received, and 38% in 2004. The balance, plus income from course fees, means TPAF does not depend on public funds to finance its training operations. This makes it unique among Pacific countries.

Source: Fiji Islands in-depth report.

Third, shift the training costs to enterprises. Training levies—usually 1% on payroll of enterprises above a certain size—can be an important source of income. Training levies seem only appropriate in countries with a sufficiently wide enterprise base to justify the administrative costs of operating the levy (collections and allocations). TPAF benefits from a training levy in the Fiji Islands for about half its operating revenue (Box 4.7).

In contrast, receipts collected from the training levy in PNG go to the treasury and they are not earmarked for training.

Variants of the TPAF payroll levy are levies on foreign workers and ship sizes. The RMI collects a nonresident workers' tax from employers based on hours worked by expatriates (\$0.25 per hour), and allocates the proceeds to NTC. NTC, in turn, distributes the funds for development and delivery of training programs. In PNG, the Maritime College receives a modest income each year from a tax on ships according to length.

However, training levies can be implemented in a way that does not benefit training. PNG provides proof. There, a training levy is collected from companies with a payroll in excess of 200,000 kina (K) a year. The levy is 2% of the payroll and is offset by any training conducted for company staff. The levy is collected by the Internal Revenue Commission but is forwarded to consolidated revenue. It is not used directly for training purposes. This levy discourages enterprise support for public TVET. The reasoning goes that the enterprises are already supporting TVET through the levy. Why should they do more?

Apprenticeship programs in the Fiji Islands, Kiribati, and PNG also shift most costs of skills development to enterprises. In PNG, some employers have demonstrated willingness to sponsor trainees in colleges and through apprenticeships. Some enterprises have also set up their own training institutions, such as Ok Tedi and Hastings Deering in PNG.

Fourth, encourage private training providers to expand and improve. In many countries, encouragement of private training providers is a way to increase training provision without requiring additional government funding. To the extent that private training providers take up excess demand for training, and are financed through nongovernment means, they can provide an important way to complement government spending on training. As seen previously, the private training market is growing in the Fiji Islands and PNG. In addition, NGOs and church agencies provide substantial training in rural areas, such as RTCs in Vanuatu, which are entirely nongovernment financed.

Increasing Internal Efficiency

Inefficiencies in TVET. The FSM is a good example of inefficiencies. Resources are fragmented and spread too thinly over so many programs that funds are insufficient to cover training delivery, facility upgrades, equipment purchase, and program improvement. Small average enrollment per institution indicates diseconomies of scale, although this is almost inevitable in rural training. In Kiribati, the number of students per instructor is low by international averages, resulting in higher costs per student. This is likely to remain a problem as too few students use fully the infrastructure. Few countries have policies to maximize the use of facilities. The effective use of time and resources does not appear to be a priority in most RTCs in Vanuatu. Teaching inputs are limited to a few hours per day, pupils are often away doing other things, and facilities often appear to be used sporadically. Teaching appears to be minimal with some centers providing only 2–3 hours of classroom and workshop instruction per day.

Low teaching loads also point to inefficient use of staff resources, although in areas of low population density this is difficult to avoid. In PNG, one technical college in Madang has an average of just 4.5 students per teacher. In Palau High School, the teacher/student ratio is just 1:3 in construction technology. In Vanuatu, the average number of students declined from 10.6–9.7 in part because of the rigidities imposed by the dual language policy. At the other extreme, FIT's average of 30 students per teacher goes too far for a tertiary institution and risks quality at the expense of economy. In Tonga, TIST trade courses average 30 students per class, high for trade classes considering the resources available.

Long courses and high dropout also indicate inefficient use of resources. In PNG, the vocational centers provide training over 2 years in basic skills. The same is done in the RTCs in Solomon Islands and Vanuatu. In many cases, the targeted skills could be provided in 3–6 months of concentrated training. In some countries, dropout is not a major factor, e.g., in the Fiji Islands and Vanuatu where completion rates appear to be 80–90%.

However, completion rates are relatively low for the associate degree (2-year) program in both COM and CMI. From 2001–2005, CMI took an average of 8.8 semesters for students to graduate in business and computer science compared with a norm of 4. Completion rates reportedly were only 10% in accounting, business administration, and computer science. The weak educational background among entering students was a major contributing factor. High dropout and repetition rates lead to high costs per graduate. At CMI, the average cost per graduate from the business and computing

department would be \$22,000 with full efficiency. However, with repetition and dropout factored in, the actual costs approach \$50,000 per graduate.

Between 2003 and 2005, only about 5% of the enrollment at the Department of Technical Education of the Palau Community College graduated (compared with a norm of 50% with full efficiency). Reportedly, the factors responsible were dropout, repetition, changing programs, accepting employment, and migration abroad.

Improving Resource Use Efficiency. The first step in this is for institutional managers to calculate the actual total costs of their training. This may mean getting access to additional information of expenditure, such as salaries and allowances of staff. Such calculations of total costs would establish a baseline for monitoring progress. The introduction of CBT reduced dropouts and increased throughput in two institutions where it was adopted—NUSIOT in Samoa and VIT in Vanuatu. Shortening the length of training, e.g., through modular training, can reduce overall costs and use teachers more intensively. Enforcing minimum class sizes can help, as well as enforcing minimum teaching loads by instructors.

The delivery cost of outreach programs in atoll economies such as Kiribati and RMI constitute 80–90% of total training costs. The disproportionate ratio of delivery to total costs is one main reason for the paucity and low quality of training programs in the outer islands. In such cases, attaching informal sector training programs to existing educational infrastructure would be justified for reducing delivery costs and freeing resources for program development and improving quality.

Providing informal sector training programs using ICT-based open- and distance-learning (ODL) modes could significantly reduce the delivery costs of certain types of training for outer island target groups, e.g., small business training, entrepreneurship, and self-employment-oriented programs. But experience from TTI, which received funding from AusAID to conduct online training from Australia in the early 2000s, shows that the telecommunications costs of running such programs in the Pacific is high and the institutional capacity needed for monitoring and following up ODL programs substantial. These twin constraints are unlikely to be overcome by individual atoll economies in the near future.

Use of Financial Transfer Mechanisms

Greater attention should be given to financial transfer mechanisms (i.e., the way funds are allocated and disbursed) to achieve greater effectiveness and efficiency in TVET. The present review has found no cases of use of financial transfer mechanisms, e.g., payment for results. Instead, budgets are allocated based on history regardless of performance. Training funds have proved to be effective in stimulating innovation and achieving efficiencies. Examples include the ADB-funded Employment-Oriented Skills Development Project in PNG (Box 4.8), the NTC fund in RMI, and the donor-supported capital fund for innovation in Vanuatu. However, training funds have been underused in the Pacific.

Box 4.8: Training Funds for Sustainable Skills Development in PNG

The ADB-funded Employment-Oriented Skills Development Project in Papua New Guinea (PNG) established a donor-government training fund to provide a permanent source of financial support to informal sector training. The fund was managed by an experienced professional and the accrued interest from the invested capital (about K50 million) was used to cofinance short-term employment-oriented skills training conducted by vocational centers, churches, nongovernment organizations, and private training providers. As long as the annual interest generated by the fund was equal to, or greater than, the annual expenditure on skills training, sustainability was assured.

The fund was slow in starting because of requirements for special legislative and bureaucratic measures, and the need for individual provinces to contribute first to the fund's capital before qualifying for its resources. Consequently, disbursements only got underway in late 2003, i.e., almost 3 years after the project began. By mid-August 2006, the fund had cofinanced 151 short training activities for some 2,500 beneficiaries in four provinces. In financial terms, this represented only about 6% of the accrued interest that had been generated by that date. Sustainability, therefore, was not a problem, mainly because the volume of activity was still low.

Despite a slow start and the need to streamline administrative procedures to increase the level of disbursements, the fund appears to have had some added benefits. Thus, through the required provincial contributions, it increased the financial commitment to skills training in the provincial level, while stimulating development of local training markets where it operated. By mid-2006, provincial contributions to the fund totaled some K2.2 million and 88 different training providers had accessed fund resources. Moreover, as the fund covered only a part of the total training costs, both providers and participants contributed to the cost of programs, resulting in a degree of broad-based ownership not normally associated with project-financed skills training activities.

Source: PNG in-depth report.