Technical and Vocational Studies in Fiji Secondary Schools:
A modular approach

Akhila Nand Sharma

Introduction

For more than half a century, the search for an appropriate secondary school curriculum has preoccupied educational thinking. The role of technical and vocational education and training (TVET), especially in relation to delivering quality education, has been the subject of considerable discussion, research and policy reforms. TVET is now perceived largely as a possible second chance educational opportunity for students who are not academically inclined. Moreover, in response to the rapidly changing nature of the workforce and the skills required to perform effectively within the changing context, schools are now being called upon to provide programmes that support greater understanding of the world of work. Such programmes are intended to equip students with those skills and abilities that they would need to use in their working lives. Greater school retention beyond the compulsory years of schooling, resulting partly from the lack of employment opportunities for early school-leavers, has added to this imperative. The post-compulsory curriculum, previously designed for a minority of students who aspired to higher education, no longer meets the needs of the increasing number of students staying on at school to improve their chances of meaningful and worthwhile employment. In many countries, it has been the employers and businesses themselves which have driven the quest for a more relevant curriculum and the development of higher skill levels amongst all school-leavers. The UNESCO Second International Congress on Technical and Vocational Education, held in Korea in 1999, called for:

A new holistic approach … so that education for the twenty-first century will include all domains of learning incorporating general and vocational education to enable the learner to
launch into a lifelong continuum of knowledge, values and attitudes, and competencies and skills (UNESCO 1999:4). This paper discusses Fiji’s secondary school-based TVET and then suggests ways in which it can become an equally important component of the total learning system. The paper concludes by suggesting future directions that TVET may take to improve overall educational development.

**Models of TVET in the School Sector**

At the secondary school level, there are a large number of different models for TVET programmes. The vocationalisation of the school curriculum is a major strategy in this direction. It involves introducing practical, vocational and technical subjects into the school curriculum. In many countries, vocational education is introduced as a compulsory component of the school curriculum. In the United States, for example, high school graduates pick up as many as 20 per cent of their credits from vocational subjects. Similar programmes exist in Australia (Centre for Workplace Learning, 1995) and Great Britain.

In Papua New Guinea yet another approach, namely, the Secondary Schools Community Extension Project (SSCEP), was introduced to accommodate technical and vocational education in mainstream schooling. This approach was an attempt to integrate academic and vocational curricular components in order to promote a unified education system without streaming (Crossley & Vulliamy, 1986; Crossley, 1990). It was expected that SSCEP would cater for both academically gifted students, who would continue to higher education, and students who would return to their villages after leaving school. According to Crossley (1989:16), the project did not achieve much because it was “overly ambitious, too complex (in that it incorporated multiple innovations), and over-demanding of the teaching force”.

Similar programmes were attempted in some countries of the South Pacific, but the magnet of the academic schools dampen these
initiatives considerably. The junior secondary schools in Fiji (Tavola 1991), the community high schools in Tuvalu (Tewei 1985) and the new secondary schools in Solomon Islands (Thaman 1989) with a vocational focus now exist as a poor replica of the urban secondary schools.

**TVET in Fiji schools**

Unlike academic studies, some forms of vocational educational activities were carried out in Fiji and other Pacific Island countries long before the introduction of the western mode of formal education. Several studies have shown some of the ways in which members of the community ensured that their values, skills and attitudes were passed on to the next generation. This type of education, often referred to as traditional, was then considered relevant by the community. Basically, it was concerned with the continuity and maintenance of the community, which involved passing on to young people the knowledge and skills that they had acquired through many generations. Through legends, observation, imitation and practice, the younger members of the community developed the appropriate skills and technologies of the time. The advent of the western mode of education, however, has largely destroyed these traditional forms of technical and vocational education. Although some critics could argue that these traditional forms of technical and vocational education are not suitable for the modern sector economy, there is still a market for items such as handicrafts and many people are making and selling them for their livelihood.

The Fiji Education Commission of 1969 reported that there was little relationship between the educational programmes and the world of work. It recommended the establishment of junior secondary schools with a more vocationally oriented programme of study. The Commission (1969:53) wrote:
If the importance of the new junior secondary curriculum, and
the growing number of secondary technical pre-vocational
courses is to be fully appreciated, the development of some
sort of career or vocational guidance is necessary.

The 1969 Commission also felt that principals and career advisers
themselves should study vocational education so that they could
facilitate it at the school level. These recommendations were
accepted and junior secondary schools with a vocational education
and training focus were established in key locations throughout
Fiji. However, principals and career advisers were not adequately
prepared to facilitate vocational education at the school level. It is
also important to note that the junior secondary initiative, with its
emphasis on vocational education, did not achieve much success
against the strong desire for academic education. In fact, the junior
secondary schools, located principally in rural centres, existed
largely as poor replicas of their urban counterparts. Then, because
of the increasing demand to continue beyond the Form 4 level,
many of the rural junior secondary schools added Forms 5 and 6.
Thus, these schools have not become technical and vocational
oriented, as was originally envisaged, and the school system
continues to remain largely academic.

Historically, TVET programmes at the secondary school level in Fiji
have taken at least two approaches. First, technical subjects such
as Woodwork, Metal Work and Home Economics have been
introduced as optional subjects in the secondary school curriculum.
It is expected that, on leaving school, students will have some
knowledge of technical and vocational education that can lead them
to employment opportunities and improved life-skills. Secondly,
school-based TVET was established in about 40 selected secondary
schools to provide ‘second chance’ education to early school-leavers. Fiji’s education system, however, is so accustomed to
academic education, and there is so much parental pressure for
academic credentials, that TVET programmes have become a
‘second class’ option rather than a ‘second chance’ education. This
can be explained in part by the difference in salary of blue-collar
workers compared to that for white-collar workers as shown in Tables 1 and 2.

**Table 1: Minimum Wage Rates** (Note: General tradesman may not necessarily be qualified. The other categories are for workers who hold trade certificates.)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Hourly rate ($)</th>
<th>Per annum ($) (40 hr week)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General tradesman</td>
<td>1.92</td>
<td>3,993</td>
</tr>
<tr>
<td>Tradesman Class 11</td>
<td>1.99</td>
<td>4,139</td>
</tr>
<tr>
<td>Tradesman Class 1</td>
<td>2.09</td>
<td>4,347</td>
</tr>
<tr>
<td>Craftsman</td>
<td>2.17</td>
<td>4,513</td>
</tr>
</tbody>
</table>

Source: Wages Council Act 1997

**Table 2: Starting Salaries for Civil Servants**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Starting salary ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit officer (graduate in accounting)</td>
<td>18,723</td>
</tr>
<tr>
<td>Veterinary officer (graduate in veterinary science)</td>
<td>19,564</td>
</tr>
<tr>
<td>Dental officer (graduate in dentistry)</td>
<td>13,084</td>
</tr>
<tr>
<td>Primary or secondary school teacher (graduate)</td>
<td>14,266</td>
</tr>
<tr>
<td>Primary or secondary school teacher (diploma or certificate holder)</td>
<td>10,436</td>
</tr>
<tr>
<td>Medical doctors (MBBS graduates)</td>
<td>15,884</td>
</tr>
<tr>
<td>Nurse (registered)</td>
<td>8,582</td>
</tr>
<tr>
<td>Clerical officer (FSLC or Form 7 level)</td>
<td>6,192</td>
</tr>
<tr>
<td>Secretary (Diploma in Secretarial Studies)</td>
<td>6,192</td>
</tr>
</tbody>
</table>

Source: PSC Circular No. 32/99

There are considerable possibilities for salary increases and promotions within the civil service. Until wages for blue-collar workers are more attractive, the status of TVET will continue to be below that of academic education.
The fact remains, however, that the inclusion of technical and vocational education courses in the school curriculum is based on a sound rationale. As optional subjects, they may or may not be taken. An important feature of this vocationalisation of the school curriculum is that it combines with general education and does not forfeit the possibility of further academic education. However, it does not provide sufficient training for entry into a particular occupation. Instead, it is a form of ‘vocational-familiarization’ that may assist students in their future career choices. In our rapidly changing economy and employment market, it is difficult to prepare students for a particular job as, on leaving school, the job may not be there. Therefore, it is important to prepare informed-students who can make productive career choices based on the understanding of their interests, skills and abilities and the employment areas to which these apply. Appropriate training can then be provided on the job or through in-service training.

Some secondary schools in Fiji have a TVET programme as a separate stream within the ambit of the secondary school organisation. This programme caters for lower achievers. To enter the programme, however, they should have completed at least Form 4 and be in the 15 to 20 year age group. In many cases, such students are unable to access further academic studies given the intense competition for the limited places beyond Form 4. In others, they are actively discouraged from continued participation in the general academic programme due to their low achievement. The separate TVET programme provides intensive skills training aimed at educating and training students for paid as well as self-employment. The programme has four courses: Tailoring, Food and Catering; Carpentry and Joinery; Automotive Engineering; and Secretarial Studies. In recent years, Agricultural Science has been revived and is offered in some schools.

A recent study of the TVET programme (Sharma, 1999; 2000) indicates that it is perceived largely as a ‘second best’ mode of education by the majority of students, parents, teachers, educational administrators and employers. As in other developing countries, most Fiji citizens prefer academic schooling because it is seen to
pave the way for greater career opportunities and higher financial rewards. The TVET programme is seen as a minor innovation in Fiji’s education system in comparison with other ‘heavyweight’ innovations.

The study also revealed that, before the programme was established, there was inadequate consideration given to the issues of relevance, clarity and practicality, readiness of the clientele and availability of suitable resources, including personnel. Many schools initially accepted it because it came with material resources and personnel. The TVET programme is virtually an imposed innovation in a ‘top-down’ process. In fact, political, bureaucratic, and micro-and macro-political perspectives motivated the establishment of the programme at the school level in particular, and the system-level in general. Thus the present initiative is resource-driven and not education-driven.

Continuity and commitment are identified as being the most critical determinants of successful implementation of any planned educational change. In the case of TEVT, the co-ordinators of the programme said that the senior Ministry of Education officials were not supportive enough and usually paid lip service to TEVT. The teachers and students at the workshop level said the same thing about their principals who, in turn, shifted the blame to the course co-ordinators. Consequently, the course co-ordinators, teachers, students and parents were not adequately prepared to accept the innovative ideas of TEVT programmes. A shortage of adequately qualified staff has also been identified in the TEVT section at the Ministry. Moreover, the effective implementation of TEVT programmes was hampered by a lack of sound functional administration procedures, such as record-keeping, allocation of resources and monitoring at both Ministry and school levels. There were also few career structures and promotional opportunities for teachers within the programme. These conditions led to low self-esteem and self-image among teachers. With such feelings, it is understandable that teachers did not promote the programme with enthusiasm and commitment (Sharma, 1999). TVET should be taught
with a learner-centred focus. However, teacher-centred approaches tended to characterise the teaching and learning process in TEVT.

There was also an absence of community participation (students, teachers, parents and employers) in decision-making and the teaching-learning processes of the programme. This ‘top-down’ decision-making strategy was one of the reasons for the lack of a basic understanding of the programme at school and community levels. Thus, the programme did not get much community support. This situation is not unusual in similar initiatives elsewhere in the developing world. In Fiji, schools look largely to their communities to support them in terms of providing the material resources that their budgetary allocation cannot meet adequately. Participation in school policy-making, curriculum decisions and teaching-learning processes was strictly limited. This lack of participation was one of the major reasons that many members of the school community did not really understand what the TVET programme in their school was all about. Neither were the divisional and district education officers fully committed to TVET, despite being in a position to facilitate greater community awareness of and support for it.

Most of the students enrolled in the programme were from working class families. These students were likely to get into a track leading to lower paid jobs. Most students from higher socio-economic groups were in mainstream education and were more likely to enter professions such as medicine, law, accountancy and management in the private and public sectors. The programme, therefore, further reinforced the existing socio-economic inequalities.

A further observation is that, with the limited number of places available in TVET programmes, students with relatively higher academic qualifications were increasingly being enrolled. Therefore, a large number of early secondary school-leavers were denied the opportunity of a second chance in education. Given their growing
exclusion, the programme was not achieving the purpose for which it was created.

**Future Directions**

Several writers have advocated a ‘bottom-up’ approach wherein teachers, administrators and the members of the school community are accorded greater opportunity for participation in the decision-making and learning processes. Such an approach has a number of benefits. First, it generates a more relevant teaching and learning programme and addresses the developmental needs of the school community. Second, community involvement in schooling facilitates an improved learning environment for students. Third, community participation in school affairs provides an opportunity for the members of the school community to learn about TVET as well as other school programmes. Last, given the multicultural context of Fiji, the involvement of community in schooling makes it possible for policy-makers, administrators and teachers to accommodate the interests of various social and economic groups of the population in education policy, programmes and projects.

A second notable suggestion for educational policy-makers concerns the provision of ongoing context-based and centre-based staff development programmes for TVET administrators and teachers. Such staff development programmes would prepare teachers and all those involved to manage major transformations in an educational setting that is characterised by a dynamically complex environment and in the face of a somewhat unknowable future. Further, well-informed teachers and administrators can inspire initiative, vision and the ability to plan.

To establish these in Fiji’s school-based TVET, it is necessary for those leading it to be convinced at a personal level about the value of TEVT. Once convinced, they would invest more effort in bringing their colleagues, students and the members of the school community along with them. In this way, it may be possible that their most vociferous opponents among colleagues and school community
become their strongest supporters. This transformation is likely to eventuate only when they themselves are convinced of the benefits of the programme. Research findings show that Fiji's TVET programmes did not have many committed leaders and teachers (Sharma, 1989; 1999).

In short, then, there is sufficient evidence to suggest that policymakers should seriously consider introducing ongoing staff development programmes for its administrators and teachers. This suggestion is made on the grounds that the success of any planned educational change rests not so much on the abundance of material and financial resources but more on well-informed and talented human resources. Practical proposals arising from this suggestion include the need for the organisation of:

- staff development programmes based on adult learning styles;
- management courses in areas such as record-keeping, management of resources, and financial management for programme administrators and teachers;
- school-based TVET promotional programmes for members of the school community, including information on vocational pathways and employment opportunities deriving from TVET programmes;
- short courses for TVET graduates and their employers;
- co-operative professional development activities between employers and educators to support the development of relevant curriculum and delivery strategies and increased partnership in this delivery;
- courses on action research and reflective practice for teachers and principals in order to promote ongoing personal and professional development.

A third broad suggestion for policy-makers emerges from the TVET innovation itself. It is difficult for such initiatives to realise their full potential when academic education remains the preferred system and promises greater career opportunities and social and economic
rewards. Literature suggests that, in many developing countries with a dualistic system of education, where academic and technical and vocational education run parallel to each other, the latter is often rejected. There is a less promising future for Fiji’s school-based TVET programme while it operates alongside mainstream schooling. In the light of this argument and the existing literature on TVET from developing countries, two suggestions are made. The first is to integrate these school-based TVET programmes within mainstream schooling. The second is to establish separate Institutes of Technical and Vocational Education and Training (ITVET) for early school-leavers, one in each of the four divisions of Fiji’s education system.

The first suggestion implies that the separate courses currently offered in TVET (as well as any other important skill-based courses identified) should be included in the pre-vocational courses presently offered in Fiji’s secondary school programme. In accordance with the international literature on TVET, these pre-vocational courses should not be perceived as providing sufficient training for direct entry into any occupation. They should be taken as a broad familiarisation programme, introducing and developing a range of skills that may be useful in subsequent training or for making a more informed choice about such training. To facilitate this, it is suggested that all students be required to study technical subjects in the course of their primary and secondary education. These technical subjects should be accorded equal value with all other subjects and be assessed and reported. At the primary school level, such programmes should be experiential and promote familiarisation with the nature and purpose of work in all its forms, and with the broad range of work skills required to function effectively in the working world. Specialised studies should be introduced at an appropriate level within the secondary school curriculum, once students have had sufficient opportunity to identify their interests, abilities and preferred study pathways. In the early years of schooling, the technical areas studied could be derived from those industries located locally and those that can serve as rich resources for learning and practical experience. In rural areas, in particular,
the study of agriculture can provide a sound basis for an understanding of how to meet basic subsistence needs and also the importance of agriculture as a source of enterprise and income within the Fiji Islands economy.

Although constraints, such as the shortage of teachers, equipment, material resources, and appropriate opportunities for practical work, along with the dilemma of the low status of pre-vocational courses, will inevitably continue, greater progress will be realistically possible under this new arrangement. A cost-effective strategy that could be considered for adoption in Fiji is a cluster secondary school system. Under this scheme, a number of secondary schools in a neighbourhood could share technical facilities such as workshops, equipment and specialist teachers that could be located at a central institution. This will allow the introduction of a greater variety of pre-vocational courses in the secondary school programme. Another strategy could be the offering of TVET programmes in blocks of time, such as one-week intensive programme rather than one or two weekly programmed-lessons over a term, semester or year. With the development of stronger community relations, it may be possible to negotiate the use of the facilities of business and industry to further support contextual learning. In the tourism and hospitality areas, for example, schools located within tourism areas could negotiate partnership with local hotels and tourism facilities.

In the light of scarcity – time (in relation to the demands of other subjects), personnel and resources – it is difficult to introduce a range of specific vocational education courses at the primary or secondary school levels. Therefore, it is suggested that only one TVET course, given the general name of ‘Technical Studies’, be offered in primary and secondary schools during the compulsory years of schooling. The current pre-vocational courses such as Agriculture, Woodwork, Home Economics, Metalwork, Automotive Engineering and Technical Drawing are to be incorporated as modules within Technical Studies. The amount of time available for
these studies is to be increased progressively over the different levels of schooling.

As shown in Figure 1, the following is a possible approach:

At the primary school level, three modules – Woodcraft, Home Economics and Gardening – form the basis of the Technical Studies course. These modules would support the development of basic life skills and introduce the nature of vocational studies.

At the secondary school level, modules such as Agriculture, Home Science, Carpentry and Joinery, Light Engineering, Information Technology, Metalwork, Plumbing, Electrical Work, Forestry, Fishery, Tourism and Fiji Studies are to be included in the Technical Studies Course. Students are to select five modules in Forms 1-4, four in Forms 5-6 and three in Form 7. These modules would familiarise students with technical and vocational education and skills that they may like to pursue in their future careers. These modules will further develop basic life skills. Other mainstream subjects such as English, Accounting, Management, Art and Craft, Music and Sports are to reinforce vocational skills where possible.

Block timetabling is to be introduced to manage limited resources for the benefit of all the students and for the accommodation of all the other subjects in the school curriculum.

This proposed model is to be based on a spiral curriculum model as illustrated in Figure 1.
Figure 1: Technical and Vocational Education and Training: A Modular Approach

WORKPLACE

Tertiary eg USP, FIT, FNTC

Secondary Form 7

Secondary Forms 5-6

Secondary Forms 1-4

BROAD BASED

Primary Classes 1-6

Homecrafts, Woodcraft, Gardening

Five modules from: Agriculture, Information Technology, Carpentry and Joinery, Light Engineering, Home Science, Electrical Work, Plumbing, Fishing, Forestry, Tourism, Fiji Studies (Traditional Cultures)

Secondary Forms 1-4

Four modules from those shown for Forms 1-4

Secondary Form 7

Three modules from those shown for Forms 1-4

Tertiary eg USP, FIT, FNTC

District Institute of Vocational Education and Training

Source: Sharma (2000:143)
The problem of early school-leavers has been a major concern for policy-makers in Fiji. To some extent, this problem can be addressed with some creativity in the proposed ITVET, where the focus should be on the preparation of human resources capable of finding wage employment or generating self-employment enterprises. The ITVETs should be managed in partnership with employers and members of the local community. It is suggested that ITVETs provide a ‘basket of skills’ so that those enrolling can select from a variety of available vocations. In addition to the technical and vocational education subjects already offered in our schools, it is suggested that the ITVETs take a modular approach as suggested above for the primary and secondary schools. They should also include studies that ensure the continued development of language, arts and numeracy skills, scientific understanding, and health and personal development to ascertain that social, emotional and physical developmental needs of students are addressed.

It is emphasised that the proposed ITVETs should have the capacity to enrol students at whatever their level of primary or secondary school attainment. In this way, they will be able to address the plight of early school-leavers who are currently denied entry into selected TVET Centres, such as the Fiji Institute of Technology, that have minimum qualification requirements.

Research evidence and the submissions made to Fiji Islands Education Commission 2000 have identified key vocational areas that need to be developed in the education sector (Sharma, 1999; 2000). These included the areas of Information Technology, Fisheries, Marine Studies and Aquaculture, the Visual Arts and Media, and Sport and Recreation. It is recognised that it is not possible for all schools or vocational centres to offer studies across this broad spectrum of vocational areas. However, a strategy for their progressive implementation could be the establishment of special interest secondary schools (either self-identified or designated) that focus on studies in one of these areas and take the lead in the development of curriculum and programmes.
Obviously this has implications for resources and personnel, but targeted resourcing for establishment and development could fast-track new programmes.

Post-Secondary TVET

The technical and vocational education programme at the secondary level and in the proposed ITVETs must also provide the foundation for further education and training in tertiary institutions that are responsible for preparing students for employment. At present, technical and vocational education at this level is provided by a number of institutions, such as the Fiji Institute of Technology (FIT), the Fiji National Training Council (FNTC), and the Fiji College of Agriculture (FCA). The main concern at this level relates to the scarcity of resources, including financial and quality human resources. One of the concerns in staffing relates to the difficulties of attracting and retaining quality staff, particularly in skilled areas where there are few qualified local personnel, such as in Information Technology, Building, Civil Engineering, Electronics Engineering and Mechanical Engineering. The TVET post-secondary institutions are not sufficiently attractive to lure skilled professionals away from the private sector or to retain bright young graduates. The institutions are also strapped financially. They are mainly funded from two sources: a block grant from government, which provides two-thirds of the income, and the fees obtained from students. This current revenue is not sufficient to provide attractive remuneration packages to staff, or to fund well-equipped training facilities, future growth, research and development. Entrepreneurial activities and donations in cash and kind that are received from time to time generate small additional funds but they are not guaranteed income. It is notable that a comparative analysis of government funding in 2000 indicates a contribution per student enrolled at the University of the South Pacific (USP) of $5,712 compared to that at FNTC of $2,131, i.e. the university attracts 2.7 times more government funding than its TVET counterpart (Fiji Institute of Technology 2000). This is clearly
an inequitable situation. It is not suggested that USP should receive less funding, rather that TVET should attract at least an equivalent amount, given its importance in supporting human resource development in the country.

While different training facilities are located in each of the four educational divisions, the issues of access and equity have yet to be fully addressed. Demand for places is rising and will continue to rise. This means that some programmes that are already over-subscribed must be expanded. In some, programmes and centres facilities need considerable upgrading and expansion. In others, new equipment needs to be provided. Libraries, for instance, in most national and private institutions providing national training, need considerable upgrading if they are to meet the call for quality education and training. Given that there are many institutions providing TVET, there is an urgent need to facilitate the articulation of courses and programmes among sister institutions in Fiji and abroad. This will ensure quality control and comparability across institutions, and student and staff mobility in and beyond Fiji.

There is also a need for institutions, such as the FIT and FNTC, to develop a more collaborative and better working relationship with the other levels of education, especially the secondary level. Secondary school students need career counselling to assist them with the selection of appropriate programmes that suit their abilities, interests and aspirations. TVET prepares students for the world of work so it is critically important for these institutions to develop partnership with the industrial, commercial, and private sectors as well as with communities and employers. This will ensure relevance and appropriateness of the programmes on the one hand and provide a mechanism for supporting and monitoring programmes, courses and activities on the other. Better use of information technologies can facilitate the establishment of networks for mutual
participatory, collaborative and consultative processes and for sharing experiences, knowledge and materials.

**Conclusion**

Fiji's secondary school-based TVET Programme is trapped in a framework of social and economic inequality, as are the majority of TVET initiatives in developing countries. It is argued that, as long as academic education credentials dominate as the most important pre-requisite for the job market, TVET programmes have little chance of making any significant contribution to educational and labour market development in Fiji. This is consistent with the work of writers such as Foster (1987), Lauglo & Lillis (1988), Watson (1991) and Sharma (1999). Given the present socio-economic and political benefits and privileges accrued through academic qualifications, TVET programmes will continue to exist as a 'second class' option in Fiji. Therefore, the policy makers and practitioners are urged to pay particular attention to TVET and give it a more important place in its educational policy reforms. An integrated approach to education and a modular approach to teaching and learning will result in education that will promote the overall development of the learner and the nation. Without doubt, such approaches will also contribute to the development of capacities in our citizens to live together peacefully.

**References**


