

10.0 COMMENTARY ON PROPOSED ALTERNATIVES

10.1 In Papua New Guinea it is useful to think of haus lain development along with village development. Cross group learning is possible, but projects are best done on a family basis, (Tietze, in press).

There will also be increasing mixes of groups which combine both clan and modern organizational assumptions, but when faced with an issue it is best to let the group representatives in the community decide how it should be resolved. For instance, at Hauna there were 160 women from four different clans who wanted to learn to sew on 14 sewing machines. Clan leaders discussed the issue and decided each clan would have use of the machines one week per month.

Throughout the world successful cooperatives (Rogers, Coletta, and Mbindyo, 1980) have the following characteristics:

- 1) location in relatively egalitarian, non-stratified communities;
- 2) a high level of community homogeneity and solidarity;
- 3) the existence of linkages with appropriate government support agencies and
- 4) the cooperative is for altruistic community, not individualistic benefits.

In Papua New Guinea such an entity is the clan or haus lain.

Thus, the primary unit is not the individual, but the

family, and the primary cooperative corporate unit is not the village as a whole, but the village household.

"A village household is a type of firm - an interested party in a corporate lineage group [or clan]" (Dalton, 1984, 42).

It has status as a household and as a lineage. An element in such status is how well household and line are linked, including extra-lineage links with church, government services, politicians and business concerns. This kind of status might be measured in terms of such concepts as "social involvement" and "lineage strength" (Dalton, 1984: 45), or what Wasilewski called "social currency (or capital)" (1980). This can be a critical factor in the identification of community leadership for development projects.

Ten years ago Niehoff and Anderson (1974) suggested that in the Pacific region competition between communities could be used to motivate development. It has been suggested that here in Papua New Guinea the rapid development of Highlands communities in the last two decades was fueled by a desire "to catch up" with the rest of Papua New Guinea. In the Southern Highlands motivators exhorted "the last village, in the last district, in the last province, in the last country in the world" to catch up. In North Solomons separatist sentiment was part of the motivating force behind the Tok Ples Skul movement, and in Hauna Village the competition between the women's store (selling clothes, baby things and toys) and the men's store (usual tradestore - tinned fish and rice with some very fancy radios) contributes to the

economic success of each.

So, in the words of Eli Wanira, Secretary of Education in East Sepik Province, what does PNG modernization, (not Westernization) look like?

In the 1970's there arose about 200 self-help groups. About 100 of these were assisted by the Task Force on Village Development, the Village Economic Development Fund, the Rural Improvement Programme, the National Cultural Council and by Development Bank loans (Somare, 1974, 138-139; Gerritson, 1981, 23-24; May, 1981, 65-67, 71-75). There has, however, been no systematic study of these groups' failures and successes, so any policies for promoting self-reliance at the village level are being formulated in an information vacuum (May, 1981).

Nahau Rooney (personal communication) who was involved in the administration of the village development programs, feels that they did leave behind a residue of skill in the communities involved, that present local leadership was "trained" in these projects, and that when development projects like that are done they have to be evaluated in terms of educative results, as well as in strictly economic terms.

Walter (1981) has looked at the leadership structure of such groups and pointed out that in areas of PNG where you have "big peasants" leading interest groups (usually concerning cash crops) you have enduring organizations, as compared to the community improvement-type groups which usually occur in areas with no "big men" and a history of cargo cult activity.

In the process of inventing an appropriate leadership and organizational structure for the implementation of basic education we want to address a pressing national organizational problem, one identified for us by Archbishop Meier in Mt. Hagen (personal communication) and that is the integration of traditional leadership into national administrative/political structures. In the 1960's in the name of democracy the government replaced the "modern traditional" leaders, the luluais and tultuls, appointed officials, with elected officials. This exercise in leadership eradication had unexpected results. It was discovered that in the Papua New Guinean context the dispute settling function of these officials is perhaps not an appropriate task for elected officials (Cleland, 1983, 216).

Recognized or not, traditional leadership and organizational patterns manifest themselves in modern contexts (Hau'ofa, 1981). Currently, village magistrates are often the traditional peacemaker. In one province in the late 1970's the Department of Education and DPI had difficulty cooperating, and it turned out that each was completely staffed (except for the expatriates) by members of two different lains who traditionally had not gotten on well with one another (Croft, personal communication). At the moment, when traditional leaders have no effective input into programs, they often act in an obstructive fashion, which was often the case with the student led village self-help projects of the 1970's (May, 1981, 71). Furthermore, these traditional leaders, especially those of the older generation who are considered to be "men of understanding", have considerable influence on provincial politicians as to the allocation of funds (Wanira, personal communication).

Thus, with the development of local government in Papua New Guinea the patterns of local leadership are continuously emerging, especially as regards the educated

young and their elders.

A valuable sub-project for this basic education project would be a history of self-help efforts in Papua New Guinea and the involvement of educated, often urban clansmen and women in village development activity.

In Vanuatu the Council of Chiefs has a regular consultative role in government decision making, especially on matters of custom and land (Crowley, 1985). In Ghana (Evans, 1983) effective village facilitators had the ability to establish a participatory process that was non-threatening to village leaders, and in Mali (Belloncle, 1983) in a program involving newly literate youth regular information sharing sessions between village elders and youth facilitated real dialogue between the modern and the traditional. It is hoped that by building on the basis of village leadership in the development of the basic education delivery system that a mutually beneficial on-going dialogue will develop between traditional and modern forms of education.

During a workshop associated with the literacy program in the Southern Highlands (Croft, personal communication) one old man sat quietly listening all week long. Finally, on the last day he got up and spoke to the entire group in the style of the finest village orators. It turned out that he was one of the men who had led one of the first patrols into the valley. He said that he had sat on the hill for thirty years watching the antics of the whitemen. "Some of your ways", he said, "are good and have caused me to change my old ways, but some of your ways I do not understand at all. For instance,

your education. When our children finish with your school they emerge with one of their legs well developed, well muscled, in superb condition. But their other leg, their traditional leg, is spindly, nothing but skin and bone...and yet, you expect our children to run with such mismatched legs." Perhaps with a well-developed rural learning program which balances the modern and the traditional we will no longer produce cripples.

10.2 Criteria for selecting a group/group leadership:

- mature leader
- some business, organizational, and management expertise
- "social involvement" or "lineage strength" (Dalton, 1984) or "social currency (or capital)" (Wasilewski, 1980)

10.3 In the basic education organizational structure, it is best if decisions can be made by the people who are affected in relation to their own and national goals. These will be sufficiently small and sufficiently homogenous work groups or learning groups at the village level, groups most likely based on family/clan units which meet regularly.

This network of work groups needs to be part of a clear, transparent, open communication system in which policies and guidelines are clearly stated. However, the way a group works, the way a group arranges and organizes its work (see also Rogers, Coletta, Mbindyo, 1980, 272), including monitoring, evaluating and reporting procedures, is decided by the group itself based on the goals and direction of the total network.

This way of organizing things involves lots of discussion, a characteristic totally compatible with most PNG traditional decision-making processes. A community may decide to build a playing field for sports, even though an outside expert might think that the problem of malnutrition among young children was more pressing. However, the experience of building the playing field gives people confidence that they can accomplish tasks they set for themselves. And who knows, a concern for sports may become related to a concern for fitness which in turn may become connected to a concern for nutrition. This is where discussion allows the presentation of multiple perspectives.

Such successful learning groups already exist in Papua New Guinea: East Sepik Women's Network, Village School at Hauna Village, the girls at Maria Kwin and their extension work, and the Barai Nonformal Education Association, to name a few.

The East Sepik Women's Network has invented a book-keeping system that solves the usual Papua New Guinea difficulties surrounding money handling for a group. Money is publically collected and recorded, and the leaders of the group collectively go to the bank to deposit the money, and the bank gives a written affidavit that the money was so deposited. A similar system is used in the Barai Nonformal Education Association and at the Hauna Village School. At Hauna the school operates according to the sago-making/fishing/hunting/gardening rhythm of the students, who include everyone in the community, toddlers to elders, men and women, and the school operates 8:00 a.m. to 9:00 p.m. four days a week and

teaches just about anything anyone is interested in learning. The Maprik District Women's Association (part of the East Sepik Network) solved a problem of young boys bad mouthing their work by eliciting the support of the local big men by making the big men in their own clan network clothes, by cooking them delicious meals, by inviting them to their meetings and workshops. Boys are now fined for such talk. They also got the traditional haus tambouran painters to paint a design on their haus meri, a new K30,000 community center built through the women's own funding activity to house women's workshops, etc., for the whole area. The girls at Maria Kwin, on the other hand, got compensation for a stolen goat, "advertise" their gardening methods as they sell their excellent produce at the market on Saturdays and demonstrated in the community about women's security issues.

Eventually, the PNG nonformal education network will have a fluctuating configuration of work groups at family/ clan, village, customary cooperative unit, ward, district, provincial and national levels, governmental and non-governmental.

10.4 Evans (1983) details the work of Ghana's Public Education Association.

10.5 See Wright's (1985) paper presented at the Goroka NFE conference. Here is the possibility of a library sub-project for developing libraries as rural information centres with an active information officer in charge (not a passive librarian). These centres, open to everyone, would serve the information needs of illiterates as well as literates by dealing in non-



print as well as print media. The library could also be the site of a working radio (and eventually video) and the public telephone or radio phone.

10.6 Improving agriculture does not require that one be literate. However, literacy is important in order to reorganise economic and social life and exercise local capacities for management and self-control, i.e., the organization of markets, credit facilities, consumer cooperatives, etc., require literate competencies. The nature and level of locally directed activities and the intercommunication needs they create, determine literacy requirements. It must be remembered that Mesopotamia's writing system developed as a tool for organizing cities and irrigation projects (Easton, 1983, 63-86). The Penmas program in Indonesia (Coletta, Jones et al., 1983 and UNESCO, 1984) has developed 100 booklets, 80 of which enable a person to apply his/her literacy in gaining information useful to rural life, from filling out forms to making simple repairs. The ILO Curriculum Bank materials in multilingual editions could perform a similar function in PNG, as could an increase in the circulation of Wantok newspaper.

10.7 UNESCO, monograph #1, 1981 gives a complete guide for the development of literacy materials beginning with a local survey of learning needs. See also Appendices XVI and XXVII.

10.8 The idea of multilingual literacy is essential to the eradication of literacy in PNG. In the USSR, for example, literacy begins as much as possible in national languages but is not contained there. Knowing Russian is essential for

upward mobility in the Soviet Union, just as is knowing the languages of wider communication in PNG.

In Nigeria vernacular education in some provinces extends for the whole elementary cycle (Afolayan, 1978), but English is taken as a second language and secondary studies are in English.

10.9 Giddings (in press) put it very succinctly:

Programmes designed for youth without taking the community into account are not worth the paper they are printed on.

What is needed is "a coordinated attack on the problem of youth, unemployment, rural development and leadership" (Chan in Giddings, in press).

In PNG the whole community needs help in coping with rapid change, and not only the transition from tradition to modernity but the rapid changes within the modern sector itself.

Ten years ago success in the academic system equalled a white collar job upon graduation, usually in the public service. Today 40,000 students per year graduate and look for jobs, but each year there are only 4,000 new jobs available in the modern sector, and this is in a system in which 42.6% of the primary school aged children are not even in school and less than 14 of every 100 children entering the school system reaches grade nine. In addition, less than 14% of the youth eligible for vocational training actually receive any (Flikkema, 1983, ii-iii).

Parents, especially rural parents, have sacrificed to pay school fees and cannot understand that when their child is a grade six leaver, the system is basically at fault (because it is not big enough and because there is little employment in the modern sector), not the child:

...parents have aspirations too: they regard education primarily as an investment - a kind of social security for their old age. So when there is no employment in the formal economy at end of the system, the disillusionment reaches far deeper into the community than just the young people. Some young people claim that their parents will not accept the fact that there is no work in the town, and so they punish them by physically beating them, humiliating them before the community, and refusing to release land to them. This creates a situation where, with neither work in town, nor in the village, both sections of the community are pushing the youth down a one-way street to a life of crime (Giddings, in press).

Last year in the Western Highlands the father of a grade six leaver beat her up in front of the whole village because she had failed. At her rural school only two students went on to high school.

The voices of youth are eloquent in their expression of their plight:

When I was in grade 3 at Community School, my older brother passed his grade 6 examination and was given a place in high school. My parents could not afford both sets of fees, and as my brother had jumped the hurdle of entrance into high school, they removed my sister and myself from primary school. They decided to back the horse that was winning! I was so angry at being removed from school, I ran away to my uncle in another village and he adopted me as his son. I did not speak to my real parents for years. When my older brother got a good job in Port Moresby, he did not send very much money home, and so I decided to form a gang. We knew that the police would not chase

us into this mountainous area. It is only now, that we have our youth project, that I have returned home. You see my adoptive father would not give me access to land. I think my real father was sorry I had to suffer for my brother, so although I am not married yet, he has helped me to plant potatoes and have this goat project. Now at last our broken relationship has been healed, and I am tired of jail, and I don't want to get into future trouble (Giddings, in press).

### When Home Feels A World Away

My mother always cries when I go home. She cries when I come away.

Daddy and I cry too, at any arrival or departure. We are an emotional family. But where my father and I cry over our love for each other, mother's reasons are more philosophical and deeper felt. She told me this year.

'You are a stranger, Franz, (that's what my mum calls me). You are only a visitor here. Your permanent home is somewhere else and your folks are somewhere else.'

'I couldn't keep you and you wouldn't like it if I kept you. You are the white man's son. I always knew it.'

It was confessing a remorse she had carried around inside her for close to 16 years: I felt cold and realised the alien I was in my own parent's home. But it was the truth. And mother had been very kind to wait until she knew I could understand and accept it before she told me.

Last year I wrote a story of how mother felt when she came out of the village into a town - Madang - for my graduation last year.

That was my world she had come into. Going into her world, I began to realise how little I knew of it.

I watched with awe as village children clambered up pandanus nut trees with the agility and ease of a lizard.

Daddy and I did not chop wood the same way. He angled his axe so that it took the biggest chop while mine did not. The difference certainly wasn't muscles.

Mother walked through her garden leaving no sign that she had passed. I trampled everything underfoot. (Senge, Times, 1985).

### Bridges

And that is what the 'educated' of today are like. We are bridges that span 10,000-year-old river Time.

We just hang suspended waiting for tomorrow, not knowing fully what we are bridging. And when we have served our purpose, we just fall away into the torrents of dynamic Time.

The tip of the iceberg of each world and then bewilderment that follows is all we will ever get. My parents sacrificed me so I could master Western life and go back and make their lives easier.

But I cannot leave my place and go back. Tomorrow has yet to cross over.

So I have failed my parents in their wish and they know it. They do not complain; they just feel it.

For myself I want knowledge, ample knowledge of both the worlds I am bridging before I go.

If I cannot do that, then I can do nothing but cry, cry mother's tears.

Ah, but I am beginning to feel self pity. [5] (quoted in Olsson, in press).

### Possible Responses

Again Giddings (in press) puts it very succinctly:

People need help to analyse their problems and discover solutions. I do not believe that youth should be isolated from their communities and that awareness-building is only for the young: communities, as much as youth, need help to cope with the changing times. Parents need help to see that they have a responsibility to their young people beyond merely finding the school fees and educating them. Young people need to feel they belong. The tendency towards social

deviance in communities can be dramatically reduced by a sense of belonging. Nor do I believe that tradition is static. Traditions and customs have always been open to adjustments.

Long before the white man came, tradition coped with the introduction of pigs, dogs, sweet potato; today it is making adjustments to beer and the consumer society. Society can also adjust to the school-leaver problem by making land available to young people earlier than was traditionally the norm. While youth should maintain their communal obligations in the traditional economy, parents and leaders should not apply the same ethnic to the cash economy. If communities do not want their young people to become criminals, they must open up avenues for them to obtain money legitimately - through contract work, such as coffee-picking, or improving village roads.

To this end Giddings has been instrumental in developing a major pilot project in the Eastern Highlands vis a vis youth (rascals) caught in the justice system. The Eastern Highlands Provincial Rehabilitation Committee (Giddings, 1985) is in the midst of getting support for a pilot probation program for first time offenders. This project is being developed with a combination of volunteer, international and governmental inputs and donations. Other provinces have already come to look at the project. Over the course of five years it is hoped to develop a probation system appropriate to PNG, one feature of which will be the "repatriation" of youth to their villages with the help of a corps of trained volunteer probation officers.

Another feature of this program is that there are no hand outs involved. Positive activity is provided through a system of short contract work which in turn provides funds

for pocket money and income producing projects like growing potatoes. About 2500MT of potatoes are imported every year (WB, 1982). Potatoes grow very well in the Highlands. The government wants to stop importing potatoes, so potatoes can be a profitable activity. Except last year, when cheap imported potatoes were dumped on the market in the Highlands, making it difficult for local potatoe producers.

This underlines the importance of having the commitment and cooperation of policy-making bodies at the highest national and international levels (NFE Exchange 9/10, 1977, 5). PNG cannot afford having youth be a low priority, or PNG society will be consumed with law and order as a high priority (Giddings, in press).

The Hon. Sam Tulo, Minister of Education is developing an alternative youth education program in his home village which will include academic and practical work. A condition of a youth's acceptance to the program is a parental agreement that they will support their child when he gets out of the program with both land and financial assistance (Tulo, personal communication). Gipey, (1978) analyzed the simultaneous push-pull dynamics of both city and village life. Each both pushes youth away and draws them back. His classmates had circular migration patterns between rural and urban areas. As the road system improves, there will also an increasing amount of commuting, that is, being able to sleep in ones village but work in town.

However, the head of the Barai Nonformal Education Association, a grade 10 school leaver, was away from his

village thirteen years in pursuit of education. He only returned home six weeks a year during the long Christmas holiday. He had to become literate in Barai as an adult. When asked why he returned to his village rather than seeking his fortune in the city he said he did not make that decision. His parents did. They wanted him to come home to help with developing coffee cash cropping in the village. He in turn recruited other schooled villagers to return and help in different projects (Simon Savaeko, personal communication).

Thus, enabling youth of whatever educational status the opportunity of being an integrated member of his village community would seem to be a primary task of any youth strategy, as well as making income and prestige possible in rural areas, perhaps through the development of new rural enterprises, farm and nonfarm (see Appendix X: Income Earning Possibilities) made possible through employment centered learning groups in the Indonesian style (Coletta, Jones et. al., 1983; UNESCO, 1984).

The creation of such productivity oriented groups are a major strategy of the Department of Youth in meeting the needs of out-of-school youth. This is being combined with an intensive effort in leadership education (seven volumes of manuals for youth training). It is on the basis of these energetic efforts that the National Executive Council ruled that all nonformal education (including the vocational schools) should be moved to the Department of Youth. [See 2.3 above for discussion of pros and cons of this move, which although announced last November, has yet to be implemented.]



Another strategy suggested by Sir John Guise and others is the creation of a National Youth Service. This service would, among other things, do rural works projects. On the positive side the direct funding of such rural works (especially of roads, village water supplies, etc.) does much to enhance the quality of rural life (WB, 1982, 273) and organized at the district level such community service projects are small enough and easily managed. Such a scheme could be used in conjunction with the Eastern Highlands Provincial Rehabilitation Committee's short term contract idea, as a way to obtain funds to start a project. Such a scheme would have even more chance of success if the PNG elite and adults in the community worked alongside the youth in the accomplishment of their service work. Again, perhaps the most powerful motivator is to articulate the task in terms of benefit for the clan/lain.

In caring about youth and providing them with supplementary education services the Soviet system is doing an excellent job:

The Government recognizes that the formal education system cannot be all things to all students, for the costs would be astoundingly high. What the formal system can do, up to and including secondary level, is provide instruction in basic, preparatory exercises, giving youth a kind of "common denominator" intellectual bill of fare. The Pioneer Palace program, on the other hand, caters to specialized interests, both in exploratory ways and, for those who are able to benefit, in depth...volunteerism, i.e., the making available of opportunities to youth who are willing to spend their time freely and without compulsion to take advantage of them, becomes a workable form of rationing scarce resources (Blumenthal and Benson, 1978, 80-81).

One of the most well thought of youth programs in the developing world, one that combines education and employability, is the Botswana Youth Brigades program (Van Rensburg, 1974). Also, the NFE Exchange 9/10 (1977) is devoted to youth and development (See Appendix XXVI for a list of selected projects and bibliography).

The most salient aspect of all these successful youth projects is, however, the fact that in planning them we are moving far beyond the boundaries of conventional education, even of nonformal education. Beyond educational methods and training techniques is the necessity of developing support structures and support services to ensure that "employable" youth become employed. This requires educational planners to work closely with local businesses, community organizations and government agencies (NFE Exchange 9/10, 1977, 5).

10.10 Maria Kwin extension, East Sepik Women's Network, Gavier In-Service Center, Wau Ecology Institute, some ATDI workshops, Yangpela Didiman's new mobile training idea, Braun Health Centres training for Village Health Aides and Traditional Birth Attendants, Popondetta VDC, SAIP.

10.11 Village people are sensitive to changes of personnel and require a trust relationship with an extension worker in order to benefit from what the extension worker has to offer. Such relationships take time to establish.

10.12 One DPI extension agent planned a nutrition lecture in a village one day, announced well in advance, only to find that a five exchange feast was happening the next day so

everyone was in their gardens preparing. No one had time for the lecture. In another village health workers scheduled whooping cough inoculations for a few hour period on a particular day, but village people were occupied by traditional activities and could not get to the inoculation site in the time allowed. 23 children later died of whooping cough. Extension workers must adapt to the village, not vice versa.

10.13 The Foundation for the Peoples of the South Pacific maintains a Small Business Development Fund.

St. Joseph's Technical Training Centre works in a similar way through JOBS.

See Appendix III on Funding Individual Projects from Multiple Sources.

Skul Bilong Stuakipa

North Solomons Land Access Scheme.

Re: initiating such a revolving fund, the World Bank funds the Indonesia Revolving Learning Fund. Any learning fund here should be based on the social security aspects of the 'wantok' system - perhaps a haus lain credit association. In order to insure the efficient management of such a fund in PNG, it will be necessary for those who have successfully managed something similar to be involved in putting the scheme together (SPATF, St. Joseph's, IHAP, Commerce, Youth, the Eastern Highlands Provincial Rehabilitation Committee, etc.).

10.14 Successful projects enhance the prestige of individual extension workers and of the entire government (Burkins and

Krause, 1982, 45).

In one area in Papua New Guinea successful Village Development Center projects occurred most consistently under two conditions (Burkins and Krause, 1982, 40):

- a. the projects involved tasks which could be accomplished on a one-time basis, such as the installation of water tanks.

Such projects positively change village material resources without leading to changed behaviour based on new knowledge and ideas, and

- b. the projects involved regular and consistent contact and supervision by staff of local program participants.

The most successful projects at the Village Development Center in Muli studied by Burkins and Krause (1982) were demonstration projects for business and cash cropping. Such projects had the following characteristics,

- a. Extension agent - villager partnership.
- b. Agent as principle manager (papa of the project) through early period of the project, villager as investor and marked future owner (papa) (see also Kafaina imagery, Lee, 1985).
- c. Agent providing hands on demonstration and continuous supervision, physically demonstrating

techniques used which are not normal to the village routine, including making explicit the decision-making process and logic of managing a business.

- d. Project to last through a complete cycle of the business or growing period and into the start-up time of the second cycle with the weight of government involvement to assist villager in withstanding the onslaught of requests for credit and distribution of wealth and aide him in reinvesting an appropriate amount and see to it that money remains for distribution, thus, demonstrating that both business and status goals can be fulfilled through good financial management.
- e. Extension agent responsible for assessing that the necessary factors for success, including government support system, are available before start-up of project.
- f. Site of project in visible, central location.

Even after the villager takes over as papa the agent should be on hand to assist with problems, especially as regards marketing.

If a project fails in the cycle, while the agent is papa, it will be attributed to the government, sparing the villager the burden of shame, and thus, reducing the risk of participating in new projects. The villager's financial investment (if any) could even be refunded in case of project failure.

This partnership arrangement between government agents and villagers enhances recognition of their interdependent interests. The resultant spirit of cooperation will contribute to villagers' awareness of their position as participants in the development of their nation, Papua New Guinea,

Again and again in the documentation and in the project visitation and interview process it was reiterated that continuing support was needed for project success, that a slow, steady pace was needed with great continuity, high levels of participation and the gradual acceptance of responsibility for the project by the villagers themselves.

10.15 Follow-up for trainees is particularly difficult when students are from all over the country. Ideally, except for specialized training centres, students should come from the centre's immediate area. There also needs to be a separate staff person(s) to do this kind of extension. As an institution St. Joseph's does this best, building on the trainees own initiatives (see Appendix XXIII). The government centres do this least effectively, often not even having lists of names of their former trainees (Kerema, 1985). Maria Kwin and Fatima do this as well as they are able, the big difficulty being that their trainees come from all over the country. Yangpela Didiman has a system of follow-up which they are constantly revising. Again, these institutions and others which have tried but been frustrated might be called together to outline exactly what kinds of resources would be necessary to do trainee follow-up effectively.

10.16 Nongovernment agencies doing village skill training:  
-ATDI/SPATF ;  
-VIRTU  
-SAIP (Subsistence Agriculture Improvement Program)  
-Wau Ecology Institute  
-Skul Bilong Stuakipa

10.17 National basic education policy development should increasingly be guided by the following principles:

- a. Decentralize staff to close the physical and cognitive gap between villagers and those who propose to assist them.
- b. Staff with persons trained in the disaggregative and micro-disciplines like educational anthropology and socio-linguistics.
- c. Direct research and development efforts from a macro to a micro orientation in an attempt to understand villagers and the conditions necessary for village development to take place.
- d. Work through and facilitate the efforts of such small donors as nongovernmental organizations and volunteer agencies, emphasizing their role as knowledgeable brokers of rural education.
- e. Develop more long term, more flexible, and more locally responsive (user sensitive) modes of development assistance. Such programs should be implemented in small stages over longer time horizons with detailed built-in monitoring, feedback and corrective systems.
- f. Focus on self-sustaining maintenance, as well as developmental, aspects of program assistance. This will require the design of new cost recovery methods with users as co-producers of services and a shift in program responsibility, control, and accountability to the users.

(Adapted from Rogers, Coletta, and Mbindyo, 1980:296 & App. XIV)

10.18 Flikkema, 1983; Croft, 1985; Trommelen, personal communication; Weeks (collected news articles '80-'85); Taylor from Poini; Rooney, personal communication. If preschools become the norm, the age problem is solved.

10.19 St. Joseph's has an associates program where Grade 6 leavers who are part of CSE/School Leaver programs do courses in basic skills (hand tools etc.) 2 days/week at St. Josephs. Helps them decide what their specialty will be at St. Joseph's later.

10.20 Morobe's centre coordinating board headed by Brother Leo Trommelen does this.

APPENDIX I

LONG-TERM RECOMMENDATIONS

That the development of standardised spelling and terminology be encouraged for Tok Pisin and Hiri Motu along with the production of standardised materials important to skill training and learning experiences related to the socio-economic development of village communities.

That a revolving fund be created for establishing projects related to village skill training to be managed according to a design developed by those agencies in the country successfully operating such funds on a smaller scale.

That CSE Materials be updated and made available to those who have completed community school but are not going on to High School, but required for those going into Vocational Education.



APPENDIX II

OTHER COUNTRY PROJECTS

Kamehameha Schools	Hawaii
Penmas Project	Indonesia
Youth Brigades	Botswana
Rural Education	Tanzania
Sweaters Project	Ecuador
Maison Familiale	Senegal /Togo
Masai Project	Kenya
Nepal Small Farmers	Nepal
Silk Embroidery & Off-shoots	India
Development	Bolivia
Training for Transformation	Zimbabwe
Four Worlds Development Project	Canada
Volkschools	Denmark
Winter Schools	China
Instituto Linguistico Francisco Marroquin	Guatemala
Foxfire	USA
AIO (Americans for Indian Opportunity)	USA
Village Re-Awakening	Sri Lanka
Lesotho/Ecuador	Hoxeng Projects
SIL 1976	Ecuador
Media/Broadcasting/Video Consortium (Aborigines - Australia)	
Village Video Network	- Japan /New York UN University
Information Society	- Yoneji Masuda (Japan) (barefoot computer corps)

(See also Appendix XXXI: Project Summaries.)

APPENDIX III

FUNDING INDIVIDUAL PROJECTS FROM MULTIPLE SOURCES  
A NEW SKILL REQUIREMENT FOR VILLAGE ENTREPRENEURS

ATDI

Unesco  
German Appropriate Technology  
Foundation for People of South Pacific  
U.S.AID  
IHAP

Maprik District Women's Association

Australian Council of Churches  
IHAP (funds travel)  
Christian Aid  
ATDI/SPATE  
CUSO

Funding for ATDI Facilitated Village Hydro-electric Power Plant (Project review paper)

Villagers & relatives	K 1,000
Community Aid Abroad (Australia)	530
Episcopal Church of Scotland	670
Friends Service Committee (England)	680
New Zealand Aid	2,800
Zusker Service Council (Australia)	2,300
Scott Bader, Inc. (England)	1,840
Selwood Trust (England)	670
Anonymous Gift	400
	<hr/>
	K10,720

Barni Nonformal Education Association

MONTHLY BUDGET 1984

Literacy Department

Teachers (10xK4x4 weeks) 160  
Reading Club Ldrs (15x2.40x4) 144  
Supervisors (4xK7x4) 122  
Stationery, etc. 50

Translation Department

Translators (3) 100  
Stationery, etc. 10  
Training Courses 50

General Labourers

Support Projects and Grounds 60  
Casual 40

Pre-school

Teachers (2xK10x4 wks) 80  
(6xK8x4 wks) 192  
Paper and Materials 50

TOTAL MONTHLY EXPENSES K1560

Publications Department

Writers (4) Artist (1) Printer 163  
Paper, Stencils, etc. 50

Women's Education

Leaders (2) (2xK1.50x4 weeks) 12  
Supplies 5

Managers

Co-ordinator 40  
Business 40  
Literacy 40

Store

Salesman (2) 100

Christian Education

Leaders (7) 70

SOURCES OF INCOME

1. Nonformal Education and Literacy Training (U.S.AID)
2. Oro Provincial Government (thru N.F.E. Sectoral Fund)
3. Compassion (Australia)
4. BNEA Support projects (Store, etc.)
5. Independent Donors

APPENDIX IV

MAXIMISING SCHOOL-LEAVER INVOLVEMENT

The following is an estimate of the maximum number of school leavers that are likely to be involved in leadership roles coming through the development of rural learning opportunities. Many more will be involved as participants, of course, but the leadership roles are seen as the more critical factor in attracting youth to remain part of village community life.

The estimate is based on actual figures related to the Barai Nonformal Education Project in the Oro Province (calculated for 1000 of the population) and so is most applicable to remote areas of this kind.

1. potential group representatives	1-3
2. potential programme coordinators	1
3. potential project leaders	1-4
4. potential newsheet editors	1
5. potential literacy instructors/supervisors	3-10
6. potential translator/interpreters	1-2
7. potential materials producers	1-3
8. potential preschool instructors	3-5
	<hr/>
	12-29
	<hr/>

A total of 12-29 or an average of 20 per 1000 of the population.

APPENDIX V

TRAINING RESOURCE MATERIALS

(See also complete bibliography)

Training for Transformation by Hope and Timmel - 3 volumes

Running A Workshop for NFE Workers: A Manual (Draft) by Mathie  
and Cox

Any other articles/materials by Cox and/or Mathie

Yut Pioneers 3 Volume Manual covering leadership, national  
ideology and subsistence farming

Skul Bilong Stuakipa materials on bookkeeping and management

Lik Lik Buk Information Centre including Yumi Kirapim for  
appropriate technology and other information of interest  
to basic educators

Viles Woksop and other how-to materials by Kristen Pres

Chista Gerhardy's book, Gynecology for PNG

Martin Kaiser's Village Health Aide training materials (draft  
form) available from Sister Mamba Katur, Braun Health  
Centre, Finschhafen

Non-Euro-Centered History: The Golden Bough Be Broken by

Richard Critchfield

Villages by Richard Critchfield

Education and Identity: A Study of

A New Zealand Maori Graduate

by Thomas Fitzgerald

Europe and the People Without History

by Eric Wolf

The Clash of Cultures by Brian M. Faga

Flash of the Spirit by Robert Farris

Thompson

Publications on the new village by New Alchemy Institute, Scott  
Nearing, Yoneji Masuda, ATDI, Wau,  
SAIP, etc.

ERU, UPNG Education Research Reports

Melanesian Institute Seminar documents (for instance, on  
Melanesian marriage)

Father Heinemann's Homili on Storis (Kaindi Teacher's College,  
Wewak

Papua New Guinean autobiography: 10,000 Years In A Lifetime,  
Literature by Frank Senge, Michael Mel, Toby Kage,  
Ben Umba, August Kituai, and Ignatius Kilage

Non-Print: Tukana

Skul Bilong Wokim Piksa

Village Video Network

APPENDIX VI

POST LITERACY PRODUCTIVE SKILLS

Productivity Oriented

Improved subsistence methods (or how to create "a sustained yield agro-ecosystem with production surplus on occasion - Goodland, 1982)

Market gardening

Cash crops: rubber, oil palm, coconut/copra, tea, coffee, cocoa, cardamom, pyrethrum

Tropical root crops as biofuels, livestock feed, starch

Poultry, pigs, goats

Aqua culture

Talapia (as human food and as locally produced chicken feed)

Trout

Mariculture

Breeding giant clams

Butterfly farms

Crocodile farms

Beekeeping

Logging

Sawmills (VIRTU)

Charcoal

Okari nuts (Barai)

Food processing - banana chips

sago pops

sago cakes

coconut toddy

Baking business

Making a drum oven

Tradestores - men's

women's (see one at Hauna for second-hand  
clothes and newly sewn baby things, toys)

Viles Woksop - radio, motor coffee pulper, vehicle, coleman  
lantern, sewing machine, etc., repair

PMV's (barges, ferries...)

Tourism (guest houses run by women's groups on Manus)

Handicrafts - traditional and modern, from tapa cloth to  
sewing, printing T-shirts (see Bollard, 1980), cane  
products

## Health

Nutrition

Mother/infant health

Village Health Aides

Birth Attendants

## Quality of Life

Improved bush material houses

Improved rural water supplies (water tanks, ferrocement  
tanks)

Making playing fields, airstrips, roads

## General Education

Developing writing system for own language

Tok Ples Preskul teacher

Adult basic education for literacy/numeracy

Local materials development

Local newspaper

Leadership

Management

Resource management

Bookkeeping/accounting

Specialized Skills

Carpentry

Welding

Mechanics

Welding

See also notes to Appendix X: INCOME EARNING POSSIBILITIES



APPENDIX VII

WORKSHOP ISSUES FOR DIFFERENT GROUPS

National Staff:

Developing "bank" of resource persons to meet training requests coming from the field

Developing "bank" of resource materials

What is the best way to network among all the organizations who do nonformal/basic education in the country

Is a once weekly/once monthly/? informal lunch gathering possible for all those organizations having offices in Port Moresby?

Do we need a "shadow trainer" to get us started? Someone in-country to someone from abroad?

What do we think of John Croft's recommendations? Which of them can we act on?

What do we think of Olsson/Wasilewski/Apelis recommendations? Which of them can we act on?

What is our evaluation of the NFE Conference in Goroka?

What if next year's NFE conference were facilitated by the Department of Education - how would it be different?

If we could design the world, how would we organize basic and practical education for Papua New Guinea?

What can we do about our present lack of status in the Department of Education and our consequent low level of funding?

Etc., etc.

Provincial Nonformal Education Officers:

The feasibility of having a joint PNFEQ meeting for all officers in the country and should this meeting be a confidential meeting, or should we invite outside facilitators?

Could such a meeting be the beginning of a PNFEQ Network?

Or is it better to develop our provincial nonformal/basic education network first?

An exercise in role definition: Creating/revising a duty statement (based on an understanding of our task as one of supporting local groups in identifying, planning, implementing and evaluating their own learning activities by providing them information about resources with which to do this)

Developing basic skills: in leadership  
in networking with other basic education organizations  
in running consultative meetings  
in communicating with political decision-makers  
in public speaking

How to organize and conduct an Information Workshop for Community Group Representatives

Handling recurrent problems: in bookkeeping/accounting  
in handling multiple funding  
in transport (access to and

maintenance of)

New business: reviewing the Croft and Olsson/Wasilewski/  
Apelis recommendations for NFE

share experiences of the first NFE conference

consider creating a PNFE Manual (complete  
with alternative duty statements to fit  
the administrative structure of NFE in  
different provinces)

plan how to do the inventory of NFE activity  
in the province

Provincial concerns: handover-takeover vulnerability (as  
in the transfer of Gavien In-  
Service Center and Skul Bilong  
Stuakipa to East Sepik Province)

Local concerns: how to handle villagers' distrust of  
outsiders

how best to handle haus lain issues

Visions for the future

Centre Managers:

Leadership: the critical role of the centre manager in a  
quality centre

An exercise in role definition: Creating/revising a duty  
statement

Do we need a provincial/national centre managers' network?

Do we need a managers' handbook?

What exchanges between different centres should we plan to improve our skills? Any other field trips?

How can we best develop our economic, political and social links with our centres' environments?

Host the next series of Information Workshops for village learning group representatives

Pedagogical issues: Using volunteers as master teachers and counterpart trainers

How to use the new ILO materials

Experiments with different teaching/learning styles

How to do our inventory of our economic environment and its possibilities

How to do our inventory of other basic education efforts going on in our area

Same old problems: transport (access to and maintenance of)

maintaining centre equipment

keeping good student records

bookkeeping/accounting - suggestions

from Morobe's Vocational Training

Coordinating Committee

handling multiple funding

marketing centre products

Developing entrepreneurial skills

Visions for the future

How to conduct centre staff training for Participative  
Management

Centre Staff Training for Participative Management

The basic format will be that all the assembled participants will imagine themselves as being the elders in a Melanesian village. The elders have assembled to discuss and perhaps resolve certain issues which they will identify during the first period of the meeting. Some of the issues which might emerge are the following:

Management issues: staff activities

time

funds (lack of)

centre self-sufficient vs. training

conflict

facilities, esp. maintenance of

transport, esp. misuse & maintenance of

girls' security

the English language bias of all

paper work

How to improve extension work: use camping out itself as

extension, e.g. to demonstrate new cooking methods; regular visits are more effective than frequent visits (both are optimum); camping allowance issues; discuss the old kiap system where everyone bottom to top went on patrol a certain % of time; how to deal with sorcery worries.

What are the qualities of an effective extension officer; how can we develop those qualities?

How can we best teach project & enterprise development?

Our role as leaders of youth, our role of "parenting", of establishing youth in their communities, of creating for them a modern "initiation" period, of instilling in them attitudes resonant with helping to develop their country, of the importance of our demonstrating the kind of life we are teaching (what does this say about our maintaining our own gardens, maintaining our own centre?).

How can we liaise better with local government organizations, extension services, and NGO's, so that practical education will have high priority, lots of support, our realities will be well known and we will elicit cooperation from other divisions re literacy, health training, DPI, etc.?

How can we best go about doing the survey of our "economic ecology" and its possibilities and our survey of NGO/extension activity in our area (try and involve

students)? The former should be used for current planning and to identify further training opportunities for graduates via apprenticeships and on-the-job-training; the latter should identify areas where NGO's can help the centre and its students as well as identify activity for the national resource bank.

What do we need in the way of future training for ourselves?  
Sharing "solutions" amongst ourselves

Experiencing rural development in other countries:  
experientially, via film, via print, via lectures  
(see Appendix II)

Re-establishing UPNG Diploma in Educational Studies  
including planning for popular/practical education - only with a highly experiential curriculum

General education re the Melanesian experience in  
history, in autobiography  
in social science (Melanesian Institute)  
in education

the possibilities of village life and small enterprises

Design a pamphlet or other media for our centre which  
expresses the centre's vision and communicates it to  
parents, students, the community - do so in appropriate  
language(s) and/or visuals; cover

what the centre offers re courses and skill levels  
what the centre expects of students and families

what graduates can expect to be able to do upon  
graduation

what follow-up support services and obligations  
graduates can expect

testimonies from past graduates

Workshops for Community Group/Haus Lain Leaders:

Identifying learning needs

Identifying resources

Project design and development

How to prepare a submission/fill out a form

Implementation

Evaluation

Accessing multilateral aid

How to set up a legal trust

The ideal village learning center (as a satellite to the provincial/district centres (see Appendix VIII for the Hauna Village and Ambunti Skul class schedules, for the Barai Nonformal Education Association list of activities and see also the Western Highlands Community Resources Centre objectives as well as Kawage's Community Resource Center in Chimbu)

Absorbing school leavers back into the community, for example, by using them as Tok Ples Preskul teachers as the Barai have done, or by using them for technical



information/skill acquisition on behalf of communities  
as was done in Mali (Belloncle, 1983)

Visions for rural life (ATDI, VIRTU, Wau Ecology Institute,  
Yangpela Didiman, the Ancestors, Scott Nearing, The  
New Alchemy Institute, Mother Earth News, etc.)

Joint Information Workshop for all Group Representatives  
In A Given Area:

Facilitating the identification of learning needs

Identifying & Accessing information sources and resources

Project development

Participant Evaluation

Overcoming the community's distrust of the outside world

Meeting people at all levels society, in government and out

Recurrent problems:   transport  
                          bookkeeping/accounting  
                          handling multiple funding  
                          marketing  
                          the written English bias of project  
                          submission forms

Future training:   workshops  
                          joint meetings with other group represen-  
                          tatives  
                          visits/fieldtrips  
                          counterpart training

work/study

formal study

travel/study abroad

Learning Group Training:

Identifying learning needs

Identifying resources

Project design and development

How to prepare a submission/fill out a form

Implementation

Evaluation

APPENDIX VIII

VILLAGE/COMMUNITY LEARNING CENTRES

Olsson (in press) suggests that a fully functioning learning centre might offer learning opportunities in the following areas:

- Basic Skills:
- reading]
  - writing] multilingual
  - basic maths
  - basic scientific method in local environment
- Cultural Maintenance:
- community self-knowledge
  - cultural values
  - local language
  - art, music, folklore
  - local history
- Quality of Life:
- health
  - nutrition
  - family planning
  - homemaking
  - child care
  - home-improvements
  - sports, entertainment
- Civics:
- community spirit, involvement and service
  - workings of local government councils and agencies

- workings of provincial and national governments and their agencies
- workings of government programmes and services
- workings of international agencies in development
- leadership development

Productivity, Self-Employment and Income Generation:

- agriculture - subsistence & cash
- artisans
- repair maintenance
- management
- bookkeeping
- marketing (especially of women's produce)
- transportation

Two village learning centres visited by the consultancy demonstrate the kind of responsive educational program that is possible in rural Papua New Guinea; the Barai Nonformal Education Association and the Viles Skul at Hauna, ESP.

On the activity board in the bush material office of the Barai Nonformal Education Association is the following list of activities:

Administration

Translation (bible and secular)

Literacy (including preschool, adult, advanced classes, women, youth and reading clubs)

Christian Education - bible study course in August

Women's Education

Youth Education - the Port Moresby Show in November

Publications

Bank

Store and Secondhand Clothes

Groundsman

Preschools

Sawmill

Students at UPNG and time of return

NFE Show in Oro

The Hauna school has 200 students, 42 teachers (plus 58 workers from the village of various sorts) and teaches in Tok Ples, Tok Pisin and English. Only three young people have left Hauna Village. As part of their educational experience they have been taken on trips to Wewak to meet all the government officials, eat in a hotel, etc., so that they will be comfortable in the urban world but not necessarily want to live there.

At Hauna the hunter/gatherer, fishing/sago making people have very flexible schedules and so does their school. It closes for funerals, feasts and about every six months when everyone just gets tired. Something is always going on. The door is always open. There is a continuous coming and going, ebb and flow, no hard boundaries (and not much privacy), and the teaching style looks a little chaotic to those of a European bent. Agricultural projects have been disastrous. It is either too wet (except for sago and a few bananas) or the insects eat everything (even container gardens, in canoes no less, grown in sterilized soil with mosquito netting covers!). However,

the travelling store is a success (a houseboat store!) as is the women's store selling items of interest to women (second hand & newly sewn clothes, baby things and toys) which competes with the men's traditional tradestore (in volume of business, not merchandise sold), and these stores contribute to the support of the school as well as pay salaries to their employee/owners. Motor maintenance and repair is a success. A crocodile farm is anticipated. Women are the best math teachers', men like typing, and women have learned how to repair sewing machines. And the sewing class is particularly popular with the elderly ladies who hold their material with their feet, plus, Shell Oil has moved in, completely disrupting everything. (There are few men in the school at the moment. They are working on the oil exploration seven days a week, ten hours a day. By the end of the year everyone's canoe will have a motor. Then the big problems will be fuel and maintenance).

There are also a cluster of village schools around Ambunti with a central school, the Ambunti Academy.

Other community educational initiatives have taken place in North Solomons with the development of the Tok Ples Preskuls (Delpit and Kemelfield, 1985) and in the East Sepik with the development of the East Sepik Women's Network. In addition Cathie Jordan has done extensive work in combining traditional and modern learning styles at the Kamehameha Early Education Program in Hawaii. A complete list of technical reports and a film, Coming Home to School, is available upon request (see Alternative Learning Styles in the bibliography). There is also the work of Marlis Mann, Lucille Stilwell and Richard Van Dongen on Non-Western Learning Styles in the College of

Education, University of New Mexico, Albuquerque, New Mexico  
87131.

APPENDIX IX

AN EXPANDED NATIONAL NFE BULLETIN

The present NFE Bulletin could be expanded to become the "professional" newsletter of basic education workers. It could become the forum in which professional issues were discussed (in Hiri Motu and Tok Pisin, as well as in English), issues like the continuous problems with transport, adequate support, etc. There could be several standing columns in each issue, for example, one on funding (announcing the availability of UNESCO funds for literacy work, for instance), one on the results of consultants' reports with reviews of Croft's findings earlier this year and of the present consultancy, one on news from all the various organizations that do basic education in PNG, and one on the various organizations that one can belong to as a nonformal education professional: Asia-South Pacific Bureau of Adult Education, Society for Intercultural Education, Training and Research, the PNG Inter-agency Organization, the Wau Ecology Center Network, etc., etc. There could also be regular updates on resource persons and materials. There might also be special sections for PNFEO's and for Centre Managers, as well as for instructors/motivators in which mutual problems are discussed and strategies are shared. Each of these communication efforts will assist that group of persons to develop their own information/support network. The Bulletin would also announce the yearly achievement awards to various village leaders, group representatives, centre managers, PNFEO's etc. A special issue of the Bulletin might eventually be the NFE Manual. These manuals would constitute the base for standards in basic education.



To assist the present editor in expanding the Bulletin beyond its present framework of presenting vocational and village development centre news a CUSO, DED or other volunteer might take on this project and/or a journalism student, either from the University or from Wirui Press (the latter has an excellent practical journalism course), might take it on as a practicum

The Bulletin should also participate in the efforts to network with YUMI KIRAPIM, so that the official print communication organs for basic education become even more effective.

APPENDIX X

RURAL INCOME-EARNING OPPORTUNITIES/POSSIBILITIES

(based on data from Brazil, India, Kenya, Korea, Malaysia, Mexico, Nigeria, Papua New Guinea, Phillipines, Sierra Leone, Sri Lanka, Taiwan)  
(Aditjondro, no date; Baldwin, 1978; Koech, 1978; Nast, 1985; New, 1984; Paine, 1985; Ratu, 1983; WB, Jan. 1978; WB, Feb. 1978; WB, April 1978).

Categories of Employment (unskilled/semiskilled/skilled; casual/regular; small/medium/large; subsistence/commercial)

Professions, administrative, technical, clerical

Teachers

Medical personnel

Extension agents

Other gov't administrators

Agriculture, forestry, hunting, fishing (landless, customary land tenure, smallholders, sharecroppers, large farms, settlement schemes, plantations, estates, etc.)

Agriculture

Tropical rootcrops as biofuels, livestock feed, starch

Animal husbandry

Hunting

Trapping

Forestry

Okari nuts

Logging

Fishing

Aquaculture

Talapia

Trout farms

Mariculture

Breeding giant clams

Butterfly farms

Crocodile farms

Beekeeping

Agricultural processing

Rubber

Oil palm

Coconut, copra

Tea

Coffee

Cocoa

Cardamum

Pyrethrum

Livestock products

Estate labour contractors

Sawmilling

Making charcoal

Mining, quarrying, other extractive "enclave" industries

Coal mining

Crude petroleum & natural gas

Metal ore mining

Other mining (salt, chemicals, fertilizer, minerals  
& other nonmetal substances)

Stone quarrying, clay, sand and gravel pits

Commerce

Wholesale trade

Retail trade

Trade stores (Skul Bilong Stuakipa, Koech, 1978)

Market women

Banks & financial institutions (WB, Feb. 1978, 37)

Insurance

Real estate

Restaurants & hotels

Tourism (Ratu, 1983)

Local artisans

handicrafts

music

dance

food

lodging

Manufacturing

Food

Banana chips

Sago pops

Sago cakes ]

Coconut Tody ] Aditjondro, no date

Feed

Beverages

Tobacco

Textiles

Wearing apparel - Printing T-shirts (Bollard, 1980)

Wood, cork, bamboo, cane products

Furniture & fixtures

Paper & paper products

Printing, publishing

Leather, fur

Nonmetallic mineral products

Rubber & plastic

Chemicals

Petroleum and coal

Basic metals

Metal products

Machinery

Electrical machinery, appliances, apparatus

Transport equipment

## Construction

General contractors

Special trade contractors

Construction services

Construction materials manufacture

Electricity, gas, water, sanitary services

Electricity, gas, steam

Water systems

Sanitary systems

Transportation, storage, communications

Transport

PMV's

boats

Storage and warehousing

Communications

Radio (public service announcements, educational  
programs)

Telephone

Video

Newspapers

## Services

Government services

Firemen

Policemen

Postmen

Security officers

Other related workers

Business services

Machinery equipment (rental & leasing)

Community social and personal services

Public administration & defense

Garbage/trash/waste removal

Social and related community services

Recreational and cultural services

Sports teams

Music/singing/dancing groups

Personal and household services

Domestic workers

International and other extra territorial bodies

(???)

Trades & crafts

Tailors and seamstresses

Blacksmiths

Carpenters

Bricklayers and masons

Lime kilns

Charcoal makers

Motor mechanics (vehicle and outboard)

Bicycle repairers

Sewing machine repairers

Welders

Metal workers

Battery charges

Vulcanizers

Electricians

Radio repairers

Watch and clock repairers

Furniture makers

Wood workers

Shoemakers and repairers

Photographers

Launderers

Dry cleaners

Butchers

Millers

Bakers

Drum oven bakeries

Painters

Printers

Ornaments (wood, metal, cloth)

Carvers

Gold and silversmiths

Spinners

Weavers

Dyers

Potters

Rope makers

Hammoch makers

Basket makers

Mat makers

Sponge makers

Barbers and hairdressers

Workmen/handyman

Tinkers

Home processing of foods (most homes = 40% women's  
labour)

Sago

Palm oil

Etc.



NOTES:

Subsistence agriculture, which in PNG is mostly women's work, is the economic base on which all capital intensive development in PNG is based. Attention must be paid to increasing subsistence agricultural productivity so that the precontact subsistence agricultural system can emerge into "a sustained yield agro-ecosystem with production surpluses on occasion" (Goodland, 1982).

It is also useful to think about labor-abundant and land-abundant agricultural activity.

In developing rural contexts there is a category of industry termed "income effect" industries, i.e. industries that serve local demands that change with income levels

The origin and evolution of the demand for the above rural economic activities can be categorized as follows:

- (1) traditional services
- (2) traditional occupations
- (3) traditional catering to local markets and trade with other areas
- (4) traditional activities/products changing under the influence of modern fashions and techniques
- (5) new products and services catering to recently developed demands

In conducting a survey of the above rural employment opportunities/possibilities it is useful to assess

- (1) the number of enterprises in each category
- (2) the number of persons employed
- (3) the average annual income of a person so employed
- (4) the possibility of establishing such an enterprise in a given area in the future

Rural employment opportunities/possibilities equal one element of rural learning programs:

e.g., Applied literacy - improve productive capacity & economic skills

Applied numeracy - bookkeeping

Rudimentary merchandising

Etc.

Also needed:

Business Extension Services for artisans and informal

enterprises: logistical

technical

marketing

financial planning

Infrastructure

Financial institutions

What is the local capital acquisition system?

lottery? gambling? money-lenders? wantoks?  
how does it work? criteria for participation?  
Lending institutions could have a lottery feature  
for high demand purposes - house, transport  
vehicles - to create incentive for making  
deposits (WB, 1978, 37)

#### Communications

Radio

Tok save

Telephone

River transport

Roads

Air transport

Newspapers

Economic activity is a form of nonformal education all by itself even if it is not successful in any business sense. In the Southern Highlands "bisnis" is said "to occur frequently but sporadically" (Burkins & Krause, 1982, Abstract). In Oksapmin, West Sepik Province there were 150 tradestores in the late 1970's, many destined to be shortlived (Weeks, 1981). It is difficult at this point to tell all that is being learned in all this economic flurry. For instance, the incidental learning of men in Oksapmin who went away to work on plantations was literacy in Tok Pisin (Weeks, 1981).

Rural learning programs should be built around the existing and potential microeconomy of the area: subsistence agriculture/

fish  
oil/gold/lumber/copper  
river highway  
tourism  
etc.

See also S. McLaughlin, The Wayside Mechanic: An Analysis of Skill Acquisition in Ghana. Amherst, Massachusetts: University of Massachusetts, 1980.