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**FROM PROTOTYPE TO A MODEL :
ENTREPRENEURSHIP IN
SECONDARY SCHOOL TEACHER
EDUCATION
(ESSTE) IN PAPUA NEW GUINEA.**

**A Research Study presented to the
Department of Development Studies
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**In partial fulfilment for the
degree of
Master of Philosophy.**

by

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ABSTRACT

One purpose of this thesis is to challenge the current conventional curriculum in secondary school teacher education at Goroka teachers college in PNG and suggest that examples of more appropriate innovations are already present, which need to be given serious consideration.

The arguments presented are as follows, education in developing countries like Papua New Guinea still has a school curriculum that is largely academic, verbal, non-practical, and even non-vocational. Alienation from traditional village and community life is one major negative outcome of such curriculum practices. However, there are changes which could be introduced to orientate, at primary, secondary and tertiary level, towards a more appropriately balanced curriculum.

'Community education' has been widely trailed in PNG but 'enterprise education' approaches (a recent term for innovative curriculum under APEID) are discussed as a possible alternative which can be adopted by the PNG education system and in a particular Goroka Teachers College.

Goroka Teachers College has also developed a prototype programme in 1990 which encourages 'community' and especially 'enterprise education' as part of an informal education and training process of secondary school student teachers. This study attempts to consolidate on the positive experiences of that project with a view to reforming the ideals of that programme with a possibility to continue its trailing process.

The second purpose of this research study is to argue that local communities need assistance from resources both human and otherwise that especially higher education institutions like GTC could share with them. This could be done if not formally, then informally to create planned enterprising activities of a sustainable, and income generating nature. The spin off benefits are numerous as would be discussed in the study. One obvious one for GTC at least, was a vastly improved college-community relationship especially in 1990.

The Humilaveka Village Technology project which was undertaken at GTC as presented in this study and the arguments that support its case, was an example of such an initiative.

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CHAPTER ONE

INTRODUCTION : EDUCATION AND DEVELOPMENT

1.1 Introduction : Background to the Study

Like many developing countries, Papua New Guinea (PNG) views the formal system of education as essential to its development aspirations. However, as unemployment, poverty and related social problems escalate, the relevance of formal education is increasingly criticised in both developing countries like PNG and developed countries. The literature review highlights some of these dilemmas and some past attempts to address them, especially as they relate to PNG.

This study discusses one option to enhance the existing formal liberal-style education as provided to recipients of secondary school teacher education in PNG, a prototype to contribute positively to the PNG secondary school system of teacher education. Hopefully, such a prototype will contribute to making the secondary school teacher education curriculum more effective and efficient by equipping its recipients to adequately address some aspirations of the disadvantaged¹ in society. The prototype model produced by this study aims to contribute positively to the PNG secondary school system of teacher education. This would allow GTC to realise a wider role it can play in contributing to development goals of the communities around it and ultimately through its graduates the country.

¹ These are the poor people which in PNG standard amounts to the illiterate, school drop-outs, left-outs, and push-outs of the formal education system. Many of them based their lives on the generosity of friends, relatives and wantoks if they are living in or on the periphery of urban areas as is the case in this study.

Papua New Guinea (PNG) is a developing country of 3.7 million people, located in the South West Pacific. A map of the country appears in *appendix A* . After a history of colonialism, from Germany and Britain in the early 1900's to Australia after 1935 (as a league of nations then UN trust territory), it eventually gained its political independence from Australia in 1975. PNG has a parliamentary system of government with democratic elections held every four years (Rannells, 1990). It has a dual economy with about 80% of the people making a living in the traditional or subsistence sector of the economy. In 1987, the World Bank estimated PNG's GNP at US \$700 placing it as the 50 th poorest within a list of 120 countries. However, its educational status is considered one of the worst for a 'lower middle income' country. One major reason given was because it has one of the highest educational attrition rates amongst the developing countries (N.D.O.E.², 1991: 1). Yet, PNG stands between an advanced country Australia, and the fast growing ASEAN³ region (with Indonesia as a neighbour) with whom PNG shares a common border. Its geographical context and rich natural resources⁴ offers it good development prospects for the future.

This study was based in Eastern Highlands Province, one of 19 provinces of PNG. The institution concerned, Goroka Teacher's College (GTC) is a campus of the University of Papua New Guinea (UPNG) located in Goroka, the central town of the Province. It produces about 84 pre-service secondary school teachers annually for the country. Projections are that by the year 2000, it will graduate 132 pre-service teachers annually (Ibid,1991:110). Thus, educational innovations initiated there stand a better chance of being diffused throughout the entire secondary school system and its effects on development efforts of the country can be significant.

² National Department of Education of Papua New Guinea, Education Sector Review of 1991.

³ Association of South East Asian Nations, which includes countries like Singapore, Thailand, Philippines, and Indonesia .

⁴ For instance, Papua New Guinea has 2 big gold and copper mines (Pogera & Ok Tedi) and an oil extraction plant in full operation. Other discoveries of natural resources have also been made but are not exploited yet.

The 'Entrepreneurship in Secondary School Teacher Education' (ESSTE) is a term deemed appropriate by the author to stand for what the prototype model was striving to achieve. Basically it is/was an attempt to incorporate entrepreneurial skills, attitudes and knowledge together with a community education role for GTC. The source of the term is from the 1992 APEID⁵ conference on the '*Education for Nurturing Enterprise Abilities*' as an educational innovation in member countries to be discussed in chapter four. The specific initiative titled '*Humilaveka*⁶ *Village Technology Group*' (HVTG), was undertaken in 1990 and offered a qualitative portrayal of the potential of such an education institution appropriate to its role as defined by the Commission of Higher Education (C.H.E.⁷, 1990: i):

The activities teaching, research and community service of PNG's universities and colleges.

Unfortunately in reality, the term *community service*⁸ is a lax activity which the HVTG project at GTC strived to activate. Hence, educational opportunities prescribed under the banner of what is now 'enterprise education' were mutually provided and received by the participants who comprised members of the local community, student teachers and teaching staff of the college. The local community, in order to participate meaningfully was organised into a group called HVTG. The main focus of ESSTE was a Poultry project titled '*Haus Lain Kakaruk*'⁹ (HLK). It represents a prototype model from which this study looks forward.

⁵ Asia and the Pacific Programme of Educational Innovation for Development, is an umbrella educational organisation of United Nations.

⁶ Local name of the land area on which the project was situated.

⁷ The commission of Higher education of Papua New Guinea.

⁸ In this context it means extensive community involvement replicated through regular short visits. The activities would be enterprising in the sense that generation of income for the community is an objective.

⁹ A term which literally means in Pidgin the national language of PNG as 'Household Chicken'.

HVTG is made up of a community of households¹⁰. Most of them reside around the fringes of the GTC campus. Some members of these households work in low income earning jobs but most of them subsist on the land or rely on generous assistance from 'Wantoks'¹¹. Moreover, some of these households were comprised the original landowners of the GTC college site. The rest are squatter settlers¹² who come from other areas of the country or province but now reside on the same land area. They form the target group of HVTG, the entrepreneurship education programme initiated by GTC and community leaders (*See Chapter 4*). Some theoretical issues evident in such socioeconomic situation is discussed in chapter 3.2.

Finally an ideal type of relationship between education and development as existed in different systems of education would be presented in *Appendix B*. Papua New Guinea falls under category B type of society as a less developed capitalist society. Most countries whose experiences would be presented in this study also fits into this category. (Fagerlind & Saha, 1983 : 208)

1.2 An Overview of the Study

Chapter one starts with a background to the study. Following that, a brief introduction of general concepts of formal education from which this study draws its arguments is presented. Then development theories, particularly *Modernisation* and *Articulation of Modes of Production* which influence this study are discussed. A discussion on inappropriate attributes of the mentioned development paradigms will also be pursued. This will highlight some unique characteristics of PNG's situation in relation to them. The chapter will end with an explanation of the methodology employed in the study.

¹⁰ In PNG, a typical household would include the nuclear family plus some other members of the extended family .

¹¹ People who speak a similar language or come from the same village or traditional homeland.

¹² People who reside usually without legal approval on either government land or traditionally owned land as is the case in PNG.

Chapter two, touches upon some problems created by the formal education system which this study strives to address. It begins with third world countries then leads on to specific dilemmas of the PNG education system. This in turn leads to the central concern of this study, which is a lack of community involvement by GTC as a Secondary School Teacher's College in PNG. Entrepreneurship education is suggested as appropriate to address some of the problems highlighted already. It is offered as *an enhancement of the existing curricular activities rather than an alternative*.

Chapter three provides a descriptive analysis of entrepreneurship education and some of its characteristics. Following that, development paradigms which enlighten and justify the relevance of entrepreneurship education to the socioeconomic development of third world countries are given some attention. Actual practical experiences in enterprise education in other countries are examined for their relevance to the PNG situation. This study treats entrepreneurship education as an enrichment of liberal education incorporating elements of community and vocational education. Most examples are from developing countries but where necessary developed country experiences are also utilised after their attributes which are not appropriate to the PNG context have been explained.

Chapter four continues reviewing the literature on the subject of enterprise and community education but with a narrower focus on the PNG situation. Firstly, the relevance of ESSTE as it relates to major development and education policies of the country will be highlighted. Secondly, the relevance of entrepreneurship education particularly at the secondary school teacher education is discussed. Examples from community¹³ and secondary education are shown as appropriate and have close resemblance to the enterprise education initiative. The Secondary School Community Extension Project (SSCEP) is closest to the entrepreneurship

¹³ Community school refers to either elementary or primary education as generally known in developed countries.

models previously identified by UNESCO¹⁴ as expressed in chapter 3 (APEID¹⁵, 1992). This serves as one source on which the GTC model draws, to suggest its own model for Secondary School Teacher Education. It must also be appreciated at the outset that in order to be effective, entrepreneurship education at the teacher education level must have its *roots* in the lower levels of education. This means aspects of entrepreneurship education should also be pursued in the primary and secondary levels of education.

Chapter 5, aims to provide a descriptive analysis of the ESSTE study at GTC. Included is a Business Plan (BP), summarised in chapter 6, which concentrated on the poultry project titled '*Haus Lain Kakaruk*', (HLK)¹⁶ is meant to achieve two purposes. Firstly, the general outline of the business plan can be adapted and applied to other projects, like vegetables or piggery. Secondly, its organisational features portray the characteristics of the ESSTE Initiative which other higher or teacher education institutions could adopt, adapt and apply to their own specific situations, if such a model were contemplated. Thirdly, as a central feature to this study, this plan depicts a practical merger of aspirations and interests of both the community and the college into a productive-symbiotic collaborative endeavour. It would serve as the '*engine room*' which unleashes all the energies of both the college and the local communities' goals of enterprise, leaving in its wake a very productive entrepreneurship education process for all parties involved to capitalise on.

Finally, chapter 6 seeks to incorporate the major lessons from ESSTE with lessons from experiences previously discussed. These culminate into suggestions for a specific model which is considered most appropriate for GTC as a Secondary School Teacher Education Institution in PNG. It is argued that such a model can be adapted and utilised to meet

¹⁴ United Nations Educational Scientific and Cultural Organisation.

¹⁵ Asia and Pacific Programme of Educational Innovation for Development a UNESCO sponsored programme with members from the Asia and Pacific region.

¹⁶ HLK literally means in Pidgin the common language : House hold Chicken. It is named as such because the project is meant to be a house hold business venture involving in most cases a nuclear family and others who habitat with them.

educational and development goals of other tertiary education institutions and local communities who might require their assistance in PNG.

1.3 Methodology and Data Sources

Different modes and phases of inquiry were employed to produce this study. Firstly, primary data for the business plan was collected and collated in PNG in 1991, but was analysed and written up in New Zealand between 1992 and 1993, after consulting related secondary sources. The market research described in Chapter 6 (for the Business Plan), was carried out by 30 agriculture graduate students as one of their projects towards a diploma in teaching agriculture in secondary schools in PNG. The business plan that eventuated was undertaken as part of the author's research preparation for this thesis.

The HLK business plan should now be in the third phase of its operation (as referred to by the development plans of the business plan in *Appendix C*), but this study concerns its first phase, as the author has been removed from the situation since he left PNG. The intention of the present study is to offer a model of entrepreneurship in tertiary education based on the Haus Lain Kakaruk poultry project plan which is summarised in Chapter 5. It is mostly concerned with what actually took place and the likely positive outcomes, if the plan is pursued.

Secondly, the dominant mode of enquiry can basically be described as participant observation or field experience by the writer who was not only a key participant but also one of the initial instigators of the project. Most of this experience is recorded in the form of a business plan referred to and discussed in this thesis.

Thirdly, most secondary data had been identified through research of available literature at the Massey University Library and other related data and information sources. These

information include an examination of educational theories about community education, and entrepreneurship education as they relate conceptually to the project at GTC.

1.4 Development an elusive concept

In the context of world development, 'development' is best not confined by definition as it encompasses so many complex issues, dilemmas, and contradictions which can not easily be generalised. A group of graduate Massey University Development Studies students in attempting a definition whilst preparing a submission to a review committee, noted (Graduate Students of Development Studies Massey University, 1992) :

' ...we take the term to encompass at the very least concepts of equity, sustainability and quality of life and understand it to describe a process, an important part of which must realise the realisation of both individual and national potential'

Development is measured through socioeconomic indicators which portray wide ranges and some stark contrasts in the development achieved already in both developed and developing countries. They include the Gross National Product (GNP), the birth, literacy and numerary rates. In all these measurable comparisons, the Third World countries (TWCs) usually end up at the bottom of the scale. For example, the highest illiteracy rates are found amongst the African countries with 73.7 %, whilst in Europe percentages are around 2.5 % (Todaro, 1990 : 335). This does not mean that TWCs are worst off because some of them are rich in other ways, for instance the abundance of manpower or mineral resources. What is probably lacking which creates the above situations can be attributed (even if not exclusive) to lack of skilled labour and initial adequate financial capital to productively exploit what they already have. Hence, the process of development can be said to be a move in that direction.

A PNG politician expressed the concept of development in a different but in a qualitative rather than a quantitative way when he stated (Samana, 1988 : 9) ;

‘ We need to look at development from the point of view of the people, rather than building roads and bridges for an economy that does not meet the basic requirements of the majority of our people’

A relevant question to ask at this point is *‘Why do third world countries need to develop?’* The principle concept questioned which also limits the above definition, is the perception of Western concepts of development which are too often generalised as desirable. In fact what is development to some, is not to others. It is sometimes dressed as desirable in the short term but breeds undesirable complications in the long term. There are more questions than answers, portraying a need for more understanding of the ‘hydra-headed’¹⁷ concept of development. This leads to a need for formal education not only to create positive development as perceived by most people in a particular society, but also to open mindedly understand it as such. Regardless of how one perceives desirable development, it must be *by the people, for the people, and of the people* . This study adheres to this conception of development whenever it is mentioned.

1.4.1 Liberal education in the context of this study

Liberal education emerges as the common formal education as is currently pursued in classrooms in particularly PNG. Within the context of this study liberal education means educating someone with beliefs, values and knowledge but neglecting to give them adequate emphasis to educate them on how to put these ideas, beliefs and knowledge into appropriate and relevant practice. The problem as such is that increasingly it is regarded as not appropriate or relevant to the needs of a society like PNG. This is because it evidently seen as not capable of educating students to the needs of the informal or subsistence sector of the

¹⁷ A term based on a Greek myth where a snakes head upon being chopped off is replaced by another one. This refers to a situation where solving of one problem seems to create others not foreseen previously.

of the economy which encompasses the major activities of the majority of the population. Liberal education in the context of PNG mostly emphasise a drive towards providing manpower requirements of the formal market economy (Crossley and Vulliamy, 1986 : 3). Further discussions in the subsequent chapters will contrast against this concept as a basis against which educational innovation is seen as necessary.

1.4.2 Vocational education in the context of this study

However, despite the good intentions of liberal education, there are skeptics who feel that not only the specific skills but also the ethics and attitude of the work environment are not being adequately fostered. This has lead to a strong expression on Vocational education.

Vocational education refers to a type of education which places emphasis on practical experience and specific skills relevant to the labour market with or without incorporating it with the traditional liberal education. Hence, graduates produced would be expected either to be equipped with skills relevant to a particular trade, like plumbing carpentry or catering. They will then be expected to enter the labour market fully prepared to be employed or else to employ themselves (Sifuna, 1992 : 6 -7).

A limitation of vocational education becomes obvious when someone has the skills but not how to utilise it productively in the market place. This is especially if he/she wants to be self-employed as an entrepreneur. Enterprise education as argued by this study attempts to fill this gap in the education process, especially as it relates to TWCs. Enterprise education is arguably an attempt to balance the advantages of liberal education against those of vocational education.

1.4.3 Community education in the context of this study

Still other critics of liberal education have suggested that education must have a broader scope. This means that similar education that is provided in the formal system of education must be provided to a wider population base. Other advocates of community education see it as way of minimising the alienation process that formal schooling creates. Community education rose out of such concerns (Elsdon, 1989 : 160).

Community education that this study recognises as appropriate to the context of this study refers to education provided to people, usually adults outside of the formal school system. These people could be those who have never been to school or have been to school but never gained the full benefits of that education. In the urban centres they normally reside in squatter settlements but in the rural areas they generally reside in the local or village communities. Agents providing that type of education range from missionaries, government extension workers to teachers and students in formal education institutions. Such an education is provided in a flexible, less intensive at regular short intervals (1-2 hours a day), but on a consistent weekly basis.

A flexible approach allows positive change to evolve gradually but sustainably in the long term without disrupting too much the normal pattern of activities in the community concerned. This is based on the assumption that too much too soon would tend to discourage rather than encourage those involved to achieve the aims of the initiative concerned.

1.4.4 Traditional Education in PNG

Anthropologists like Margaret Mead had observed and recorded intricate systems of education within the various cultures of PNG (Beeby, 1963: 43). Dr. Naomi Martin¹⁸ who is an expert on indigenous education in PNG, made the following observations ;

Indigenous education takes meaning from the way people rationalise their existence. The people's way of life revolves around their cosmic or holistic view of the world.

It is within this holistic sense that indigenous education must be understood. It is an integral part of everyday life amongst the indigence, in that it is seen not only as a way of socialising the young but life itself.

The central assumption is that children will perform tasks well once they reach a certain level of confidence. This partly explains why actual lived experience is fundamental in the socialisation of the young. By simply living and participating in the daily life of the society, children learn and become educated(D.A.D.¹⁹, 22-23).

As such it can be acknowledged that indigenous education²⁰ in PNG was meaningful and relevant to the survival aspirations of the indigenous people within their tribal or village communities. However, Western formal education is increasingly recognised for its role in creating gaps between traditional education which still provides for about 80 % of PNG's population who survive on subsistence agriculture, and the survival expectations of modern society. Unfortunately, as many people not only in PNG but also other developing countries began to value Western formal education, they are caught in an 'education trap'²¹, when they fail to achieve competence in survival skills for either society. This study examines that

¹⁸ One of the few PNG women who had gained a Phd... in curriculum studies from the university of Alberta in Canada. She is now the chairperson of the commission of higher education, but presented the quotes when she was the Dean of education at the University of PNG.

¹⁹ Development Assistance Division of New Zealand.

²⁰ Traditional and indigenous education are used interchangeably, but in the context of this study indigenous education stands for the positive attributes of traditional education which are still useful and need to be preserved for the good of society.

²¹ This is a term used here to relate to someone not adequately educated to be able to live either in the modern urban society or the mostly rural village society.

trap'²¹, when they fail to achieve competence in survival skills for either society. This study examines that situation and looks forward in efforts to educate secondary school teachers that address in a small way, such a challenge. Enterprise education seeks to make its recipients more competent to face the challenges of modern society whether in the rural or urban environment.

1.5 Development Theories fundamentally related to this Study

This study highlights one important aspect of development which is formal education. It is considered as necessary for modern development, as it is perceived to be enjoyed by the affluent Western societies. Such notions of development which many Third World countries have pursued are actually based on particular development theories. An understanding of such theories is necessary as they are signposts towards achieving the best possible development goals of a nation.

One such theory is the 'modernisation theory', as presented by Lewis and Rostow. To them the process of development is a distinct break from the constraints of traditionalism. Rostow for instance identified five stages of development which a developing society progresses through. For instance according to his theory most developing countries are moving towards stage 3, which is 'take off' stage where the economy would escalate to new heights of production and consumption never experienced by them before. Rather than being involved in theoretical arguments, this study strives to highlight in a practical sense, entrepreneurship education as a process towards enhancing modernist development aspirations (Hunt, 1989 : 94-97).

Another approach is based on the fundamental economic principle of the '*invisible hand*' by economic theorist Adam Smith. Such a system contends that a free market system

²¹ This is a term used here to relate to someone not adequately educated to be able to live either in the modern urban society or the mostly rural village society.

invisibly regulates itself into optimum utilisation of resources and socially desirable and effective uses. The price mechanism is crucial towards determining the profitability and effectiveness of such a system. Competition is regraded as a desirable social attitude. In a dual economic setting which is the case in most TWCs like PNG, adherence to such a theory increases the potential for generation of income amongst the low income group of people or those in the traditional or informal economy (Lipsey & Harbury, 1988 : 27).

It is however, not in total compliance with the above theory in the sense that the 'profit motive' is not the central issue especially in PNG. Such a view is not unique, as Professor Remenyi in his study on credit-based income-generation programmes amongst the poor in developing countries has revealed. For instance, he discovered the following (Remenyi,1991) :

The investment record of many thousands of able but poor 'microentrepreneurs' reveals that the poor are able to save, do have investment opportunities, are trustworthy, are well motivated and do help themselves to overcome poverty- when they are given the opportunity. The poor do want right and fair dealings, access to resources and freedom to pursue their own way, they do not want or need charity.

Moreover, empirical evidence had shown that 'invisible hand' alone is not adequate for economic growth. Appropriate intervention by governments is also necessary. For instance, good policy initiatives by a government can result in an efficiently regulated creating a productive economic situation. Therefore what is required is a balanced approach between the two (Lipsey & Harbury, 1988 : 27 -28).

This leads to another theory of development, the '*Articulation of the Modes of Production.*' The social infrastructure in most Third World countries reflects differing modes of production. However, the modern dominant mode of production which had influenced the traditional/subsistence economy is capitalist in nature. Increasingly, resources from the other modes of production like labour is drawn in to fuel its growth at the expense of the

others (Worsley, 1984). What this study is proposing is that the difference between the dominant mode of production and the traditional economy must be recognised but limited to avoiding social conflicts and unjust practices. The practical suggestion it offers, is to empower through entrepreneurship education those caught in the 'limbo' of other modes of production to benefit from the dominant mode of production as well (Remenyi, 1991: 22-23).

Politically, the capitalist economic system normally operates under a particular kind of democratic system of government. PNG as reflected in some of its policies in education and development (as noted in chapter 4), operates under such a system. PNG has to make the best of the capitalist economic system that it has adopted, but adapt it to its own unique context to meet its development goals. The argument of this study is that entrepreneurship education can provide a good base for such a process to take root and grow from the bottom up.

This study recognises a need for an alternative model which the dominant theories described already does not adequately address. For instance, how could a poor household attempting to survive through a simple income generating entrepreneurial or microentrepreneurial activity (as described by Remenyi) be considered as representative of the capitalist mode of production.

In Chapter 3.4, specific alternative paradigms of development relevant to entrepreneurship education, utilising a bottom up approach will be discussed. A proposed alternative model of an economic system by Friedmann, based on the household will be discussed as relevant to the concerns of this thesis (*Appendix D*) (Freidmann, 1992 :50-51). Remenyi also recognises such an economic system but calls it 'economics of survival' where it is arguably seen as an appropriate alternative within the context of developing countries like PNG (Remenyi, 1991 : 22).

1.6 Entrepreneurship Education : What does it mean and How can it be Useful for Third World Countries (TWCs) ?

It seems obvious from the concepts presented already that, there is a need for a broader but richer *substance* of education incorporating the best attributes of the above forms of education. '*Entrepreneurship Education*' is a relatively new term in Third World education context. It was developed by APEID²² which PNG is a member. Entrepreneurship education had been referred to as producing a specific type of individual (APEID, 1992 : 22) :

'An enterprising individual has a positive, flexible and adaptable disposition towards change, seeing it as normal, and as an opportunity rather than a problem. To see changes in this way, an enterprising individual has a security borne of self confidence, and is at ease with dealing with risks, difficulty and the unknown. An enterprising individual has the capacity to initiate creative ideas, develop them and see them through into action in a determined manner. An enterprising individual is able, even anxious, to take responsibility and is an effective communicator, negotiator, influencer, planner, and organiser. An enterprising individual is active, confident, and purposeful, not passive, uncertain and dependent'

What developing countries who adopted the APEID model of enterprise education are pursuing is at the 'heart' of Western capitalism. Many developed Western countries had arguably defused this spirit of enterprise with a welfare system of economics²³. Scase and Goffee in arguing for small business and self employment in a capitalist economy, as a basis for social transformation offered the following argument :

'this same entrepreneurship would contribute to a culture emphasising self-reliance and personal responsibility such that governments could increasingly withdraw from economic management and the provision of a wide range of social and welfare services. For many of them the example set

²² Asia and the Pacific Programme of Educational Innovation for Development is an organisation formed by United Nations through UNESCO. In its 1992 meeting a report on 'Education for Nurturing Enterprise Abilities' was released which has proved useful for this study.

²³ An example being the unemployment benefits given to those who are unemployed in countries like New Zealand and Australia.

and cultural ills of present-day Western societies. Thus, it is necessary to return to the core values of Western capitalism, represented by those people.' (Scase & Goffee, 1980 : 11, quoted from Brown & Lauder, 1992: 123)

Hence, enterprise education strives to create attitudes which are desirable for economic productivity and survival especially in developing countries, as argued by Remenyi. A major concern of enterprise education is wealth *creation* which underlies the market economy notion of economic development in many developing countries. Remenyi describes such a situation (Remenyi, 1991 : 12) :

Typically the systemic poor are not active members of the highly visible, formal, or public sectors in developing countries. Neither are they the beneficiaries of government welfare largess or public sector employees. The poor can be found in the private-enterprise dominated 'poor economy', often referred to as the informal sector at the edge of the modern monetised economy, in both the rural and urban sectors in developing countries.

This study, as will be discussed in Chapter 3.5, supports such a view because it sees '*wealth creation*' as necessary to meet basic needs, not so much for capital accumulation. Individualised mass capital accumulation beyond the realm of basic needs is not considered as appropriate for the purposes of equitable distribution and sharing which is an '*economic culture*' still prevalent in PNG and many other developing countries. It is true in the case of PNG that the expectations of traditional economy is very much against individual capital accumulation but supports collective or community accumulation for the purposes of eventual equitable sharing.

This basic notion of income generation amongst the poor in developing countries which this thesis will be arguing for is also shared by studies done amongst the poor in several developing countries by Professor Joe Remenyi. In the discussions on his findings he sees private enterprise as a means of allowing the poor to help themselves. His argument was for credit facilities to be made available for the benefit of the poor (Remenyi, 1991 : 12-13).

The argument of this study supports his ideas because one of its aims involves setting up a credit facility also. However, it deviates in that it contends that amongst a lot of households in PNG what is also lacking are the skills and expertise needed to *kick-start* the initial efforts of the poor or educationally trapped²⁴, to help themselves sustainably in the long term. This is the basic justification for the entrepreneurship education initiative to be pursued by this study.

²⁴ This term taken in the context of this study refers to people who through their formal education find themselves misplaced from their rural village society but in moving to the urban society also find themselves misplaced also because they could not get a job or make an acceptable living there. They in other words are psychologically caught between the socio economic settings of the two societies. The central assumption in the case of PNG at least is that most of these poor could easily if they so decide more back to their villages to make a living off the subsistence economy. However, most of them as described by Remenyi end up fending for themselves in the so called informal sector of the economy.

CHAPTER TWO

FORMAL EDUCATION DILEMMAS AND DEVELOPMENT IN THIRD WORLD COUNTRIES (TWCs).

2.1 Introduction : The Role of Formal Education in Developing Countries

Modern formal education is generally accepted by both developing and developed countries as necessary for their social, economic, and political development. Professor Harbison of Princeton University highlights this role of modern formal education in the following statement (Todaro,1989 : 330) :

‘Human resources...constitutes the ultimate basis for the wealth of nations. Capital and natural resources are passive factors of production, human beings are the active agents who accumulate capital, exploit natural resources, build social economic and political organisations, and carry forward national development. Clearly a country which is unable to develop the skills and knowledge of its people and to utilise them effectively in the national economy will be unable to develop anything else ’.

Underlying such a justification of a conventional Western-style education system are its numerous benefits, which are very often either too obvious to mention or are taken for granted. For instance, most Third World countries only managed to gain their political independence after some of their leaders gained sufficient formal Western-style education to be able to reproduce the political, bureaucratic,technical and industrial infrastructures of a Western-type state. However, the concern of this exercise is to concentrate on the problems in order to sustain and improve on the numerous benefits not mentioned.

To begin with the role of teacher education in development which is a primary concern of this study is vital as highlighted by an eminent Nigerian commentator Babs Fafunwa in

1967, but there is no denying its validity even today (Dove,1986 : 99) :

‘..the services of the teachers are indispensable to a nation, for they ... influence in no small measure the lives of the nations’ youth and the nations future’

Furthermore, several writers like Bown, Nairn, and Vulliamy who contributed thoughts to a book Titled ‘School and Community in Less Developed Areas’ agree that the role of teachers in School - Community relations as crucial. In many of their studies the following appears to be the case (Lillis, 1985 : 18-19) :

...a consciousness of the need for new role models interacting with the structures of the community to create a genuine community base upon which education and community programmes may flourish. In Bown’s concept, education may then become the ‘engine of mediation’ between the knowledge of the classroom and the knowledge of the community .

Take the previous two statements one step back and the role of teacher education becomes obvious. The better prepared and motivated these teachers are, the better the chances of developing a nation towards a desirable end. Liberal style education had been the norm especially in developing countries. This study simply wish to highlight one possibility to break from the norm and grab at this opportunity through enterprise education in teacher education as a means to a more desirable community-college relationship.

2.2 Some Major Third World Formal Education Dilemmas.

One of the worst scenarios of formal western-style education which many Third World Countries have adopted is described in the following statement by a former African education minister, Joseph Kizerbo (Todaro, 1989 : 330) :

The schooling in many underdeveloped countries is a reflection and a fruit of the surrounding underdevelopment, from which rises its deficiency, its quantitative and qualitative poverty. But little by little, there lies the really serious risks, the schools in these underdeveloped countries risk becoming in turn a factor of underdevelopment.

This dilemma relates to a vicious cycle of underdevelopment which breeds more underdevelopment. Adam Curle also describes such a situation (Curle, 1963 : 157) :

‘A poor country can not pay for education on a scale which is necessary if it is to break through the vicious cycle of poverty. Even if it could, it would not have the staff, without enormous importations from overseas, to teach in the schools and colleges. And if it obtained the staff, the economy would not be able to absorb the large numbers of new graduates.’

Such a vicious cycle is also manifested in the following account. In the early 1960s, most Third World government Ministers from Africa, Asia and Latin America adopted policies and programmes towards liberating their people from ignorance. Higher education was given high priority, with incentives and resources to train highly skilled manpower. The assumption was, it can lead to liberating people from ignorance by unleashing in the process, positive, economic, social and political development. Unfortunately, the very success of that process is a major dilemma TWCs are confronted with two to three decades later in the 1990s (Salmi, 1992 : 21).

Some countries like Sri Lanka, Egypt, Philippines, India and Pakistan have already faced the actual cost of producing a huge quantity of highly skilled manpower whose productive capacity can not be fully absorbed into the formal economy. For instance, it costs 17.6 units to educate one New Zealand tertiary student, whilst the same student could be educated in India for 87.9 units. Unfortunately, the social returns from the New Zealand student would also exceed the Indian student. Hence, the investments are not being repaid adequately but the wastage continues in the case of TWCs. Except for the newly industrialised countries of Asia like Singapore, Korea and Taiwan, the dilemma remains prevalent in many other developing countries including PNG, as will be discussed later (Todaro, 1989: 335 & Salmi, 1992 : 21).

A second deep-seated problem is the dual economy in many slowly developing countries. The formal or dominant economy squeezes out the ‘*economic juice*’ from the informal or traditional sector which comprise the majority of the population and leaves it dry and

wasted. Often, very little is productively returned whether they be capital goods like land or human resources like skilled manpower. The formal education system that encourages this process has been branded by critics as neo-colonial, elitist, unjust, culturally insensitive, and self-centred. All these terms, underlie the problems which surface in such forms as law and order problems, urban poverty, underemployment, and unemployment. In this context, formal education is increasingly seen as a negative factor in the development of many developing countries (Bray and Smith, 1985).

A third major dilemma is reflected in the scarcity of resources to make formal education available to everyone in society, especially at the primary and secondary levels in TWCs. In developed countries formal education is compulsory and considered as a 'human right.' Educational resources are sufficient to meet the educational aspirations of almost every single child. In contrast, TWCs agree in principle that formal education is a 'human right' but do not have the resources to make it available to every single person who needs it. In TWCs it is normal to observe policies like "free" government education but in reality only those who are in a position to gain access to that opportunity or can afford alternative private education can utilise its benefits. Formal education becomes for a country an expensive 'privilege' open to a minority. For instance in PNG only about 75% of school age children attend formal education at Grade one level in 1990. Many drop out too early to achieve this full potential. The rest can not afford attendance for various social reasons, ranging from lack of accessibility, to need for child labour by the parents (NDOE, 1991 : 44).

A fourth major problem is the "*educational displacement phenomenon*", as referred to by Todaro. This is a prevalent situation in developing countries, whereby only the most academically capable would proceed and get more education whilst the rest fall by the way side as drop outs. As more and more of these people become displaced, the availability of jobs in the formal sector of the economy that was available to them becomes saturated. The education system had in effect up-rooted them from the traditional socialisation process and economy, moulded them to be productive in a modern economy which can not absorb their

services or skills. Many of these drop outs, left outs and push outs¹, turn their energy to fighting the system that created their situation. Some by turning into social misfits and criminals who are filling up jails in TWCs (Todaro, 1989 : 341). It is a problem of structural and social injustice, which Joseph Kizerbo referred to above and can be attributed to the formal liberal education system as a major source of the dilemma.

In the specific situation of teacher education a dilemma which Lynch (1979) as quoted by Dove, labelled as a 'close circuit system'. Beeby also recognises the existence of such a situation when he mentioned that "Teachers are the product of the system". Thus, it can be reasonably assumed that perpetuation of any deficiency in the system can occur quite naturally (Beeby, 1963: 43). Dove mentions the following about such a situation which she contends exist in many developing countries.

'Trainees were recruited from elementary schools, confined in monotonic, usually residential institutions and taught by those who themselves were the products of the school-college system. Teacher training was thus cut off from the outside academic or vocational influences. It led to in-breeding professional myopia and lack of academic stimulus for innovation.' (Dove, 1986 : 184)

Teacher education can be strategic if children were taught by a range of teachers, who advance the future but pay heed to the skills and virtues of tradition, who recognise the values of the communities from which they themselves probably came. Their urgings of young minds towards the future doesn't alienate them from the present and its continuing realities.

In many ways that is the challenge for projects like the one described later in the study. Many teacher educators may choose to ignore the dilemma, implying for themselves and their students that it is safer to conform with the existing norms of the system. GTC as

¹ Left - out refers to those who never got involved in the formal system of education at all, whilst Push- outs refers to those who were forced to leave for whatever reason. Drop -outs refer to those who could not pass the necessary exams.

observed by the author also displays such a characteristics of such a situation², especially amongst the teacher educators (Lecturers) themselves. However, if such a constraining cycle exists in teacher education institutions in TWCs, then we must seek an effective way to end it, to allow positive change to break the cycle for the better. This can in turn be a step forward in the process of breaking the larger vicious cycle of underdevelopment referred to by Curle and Kizerbo already.

2.3 Some Major Dilemmas of Papua New Guinea Formal Education.

PNG, like most other Third World countries, shares many of the educational dilemmas of the basically liberal form of education, as discussed already. One such dilemma, certainly true for PNG, is the emergence of formal education as an agent of alienation of its recipients from their local communities. This is one major issue this study attempts to address especially at the secondary school teacher education level. The problem is to avoid compounding the alienating process that began at the lower levels of education, and to which the trainee teachers had subjected.

Specifically, primary education in PNG is afforded to only 70 to 80 percent of school age children. Nevertheless, those who attend have a high chance of dropping out. PNG has one of the worst attrition rates in the developing world. For instance, attrition rate from grade six to seven (Community to High School) has deteriorated from 37% in 1987 to 44% in 1989. In real figures PNG faces a massive task of dealing with 50,000 drop-outs a year from all levels of its education system (NDOE, 1991 : 6).

At the tertiary level of education other problems emerge, some measurable whilst others are not. One that is measurable is the cost of educating a tertiary student. This is so high that resources are drained from other levels of education, striving to serve less advantaged

² An indication being most of the lecturers of the college were former students. As such any changes to the one they were used to, tend to meet a lot of resistance. The HVTG case which this study is based on also met some resistance. One example being a lack of cooperation from some academic departments.

members of the society. For instance, Higher Education consumed 30% of the PNG education budget in 1989 benefiting only less than 1% of the 99 % who can not have the tertiary level education. It is becoming increasingly difficult to justify the existence of such a costly system, whose returns to society is also being questioned by educationists and politicians alike (ibid, 1991: 94).

This is one dilemma unlike many of the others, that is not impossible to minimise with a bit of 'political will' and ingenuity. This study presents a model which represents a practical suggestion to address some of these issues. After all, PNG is paying so much for tertiary education, it is justifiable that tertiary students give some immediate returns to society. A secondary school teacher education institution as a diffusion centre, is an ideal starting point towards attacking this cycle of underdevelopment which PNG (like many other third world countries) is challenged with.

2.4 The Specific Problem (s) to be addressed by this study

This study focuses, for a practical example in PNG of how some issues general to Third World countries, on a particular project at Goroka Teachers College. A statement of what that project undertakes, run as follows ;

PNG Secondary School Teachers educated at GTC are being given the opportunity to utilise the local communities as essential learning environments to contain the problem of alienation within the process of their education. At the same time they are given an opportunity to contribute economically and socially to the appropriate needs of the local community through an entrepreneurship education model. At the same time, the local community is given an opportunity to benefit enterprisingly from the resources both human and otherwise that the college encompasses and is able to afford to them.

A lack of such a programme merely makes the student teacher educated at GTC an agent of the conventional modern sector of employment, neglecting the fact that a lot of students who will be recipients of their knowledge, skills and attitudes later, can not immediately be absorbed by that sector. Therefore, there is a need for an enrichment of the current teacher education programme at GTC to address such a lack of foresight. This hopefully will equip the student teacher with certain skills, knowledge and attitudes to prepare those who can not gain formal employment to fend for themselves. One of the major spin off benefits of such a programme is the creation of potential income generating activities in the local communities like the HLK project detailed in this study.

Entrepreneurship education with all its positive characteristics (as discussed in subsequent chapters) is the best, presumed to be one of the better modes for achieving change through the curriculum. This is because, those who are involved, both the student teachers and the various community households will stand to gain economically, socially and educationally. Such a mutually beneficial system as would be presented by the model in Chapter five and six stands a better chance of being sustainable also. Moreover, income generation will stimulate and sustain the continued existence of such projects.

As a general notion of this study, it is ably backed by studies like the one by Bown in 1975 on the two Universities³ in Papua New Guinea. In that study the following observation was made (Lillis, 1985 : 62):

‘...in Papua New Guinea I was struck by the fact that many of the people I interviewed and consulted had simply not thought of Universities as agencies with whom they might collaborate or from whom they might learn something...What are some of the ways in which universities can and do engage with the communities ?

Well, it seems this study is one small way in which Goroka Teachers College as a campus of University of Papua New Guinea, is attempting to contribute to some of the needs of the

³ University of PNG in Port Moresby with two external campuses, one of which is Goroka Teachers College, and the University of Technology in Lae.

local communities on its periphery.

Furthermore, the PNG official Philosophy of Education clearly highlights this deficiency by offering a possible solution through the following statement (Matane, 1986 : 15) :

“The majority of young teachers lack the maturity to take the initiative in involving the community in the education process. Intelligent, resourceful individuals who are prepared to meet the challenges should be identified in the colleges and trained in the development of social skills to enable them to establish the necessary links with the community”

The fact that there had been no serious effort in that direction prior to this study, indicates an earlier disregard for the value of such an undertaking at GTC. So it too could have been regarded as an agent of the formal employment sector. This is less so since the HLK project. Community development, is a crucial role, but there is a need for a balanced approach. Hence, the responsibility to educate teachers to be capable in responding to the needs of the informal or subsistence sector of the economy, which many of their future students will come from and go back to, must be given adequate priority as well.

This study does not merely criticise, but offers a practical and workable prototype model which has a reasonable potential to minimise this deficiency in the curriculum of GTC. Thus, the Entrepreneurship in Secondary School Teacher Education (ESSTE) prototype model will be presented as a planned, realistic and sustainable model. Community involvement must not merely be a public relations exercise to create student learning opportunities at the time and expense of the members of the households or communities who are involved.

On the other hand it must be balanced against the exploitation of student teachers' and college staff labour and expertise. Other shortcomings will be highlighted in chapter 5, but Dove, Lauglo, Martin, and Bude in their study of teachers as community development agents, expressed that such a task is difficult but not impossible if the conditions are right

(Dove, 1986 : 78). This study will highlight in chapter 6.2 conditions which should be in place, to give the ESSTE prototype model a strong possibility of success.

2.5 Summary : An Appropriate Curriculum for Secondary School Teacher Education in PNG.

Various attempts had been made not only in developing countries like PNG, but also developed countries to reform, transform, or diversify education into being more practical or qualitatively productive. Three specific examples or common variations from the traditional liberal education are vocational, community and lately 'entrepreneurship' education (Contextual definitions are given in the introduction). The third variation, entrepreneurship education, incorporating aspects of community and vocational education where appropriate, is the focus of this study.

Beeby's argument as far back as 1966 is still valid today in relation to the 'education' and 'training' of teachers. According to him there are four categories of education systems where teachers were (quoted from Adams and Chen, 1981 : 18-19) ;

- (i) ill-educated, untrained
- (ii) ill-educated, trained
- (iii) better educated, trained
- (iv) well educated, well trained.

In the case of PNG and secondary school teacher education in particular two such situations exist. In GTC, teachers are not adequately educated but professionally trained which is similar to condition (ii). At the University of PNG's main campus in Port Moresby, teachers are better educated which is similar to condition (iii) but vary in the sense that they are not adequately trained. The recent decision to amalgamate the faculty of education at UPNG with the GTC campus suggests a movement to condition (iv) which hopefully will prove beneficial (Post Courier, January 6, 1993).

This study argues that teachers educated and trained at GTC should not only be better educated and trained in the formal sense which Beeby might be referring to, but also in terms of appropriateness to contemporary local economic conditions. For instance, even if the University of PNG graduates at Waigani⁴ are better educated, the arguments of this study would contend that they are not appropriately educated nor trained. As such the concern of this study is about appropriateness and relevance of curriculum of GTC in particular. Its suggestion to address that involves a mixture of entrepreneurship education and community education emphasising concrete benefits and a win-win situation for all those involved.

⁴ That is the name of the University of Papua New Guinea campus at Port Moresby the capital city of the country.

CHAPTER THREE

ENTREPRENEURSHIP EDUCATION : A DISCUSSION ON ITS POSSIBLE CONTRIBUTION TO IMPROVEMENT OF FORMAL EDUCATION IN PAPUA NEW GUINEA (PNG).

3.1 Introduction : Background to Entrepreneurship Education

An 'entrepreneur' is the person who conducts the affairs of an enterprise. The term 'enterprise' refers to an undertaking that is difficult or requires courage (Cowie, 1989 : 401). Thus, any activity that requires courage can be referred to as being 'enterprising'. However, within the context of the free-market economy and the concerns of this thesis Bridge's reference is a useful working definition (Bailey, 1992 : 102) ;

'...primarily what is involved in the successful running and development of an organisation which has to attract income, market its products or services and take responsibility for its own financial health. Such organisations include manufacturing and trading companies, small businesses, theatres, orchestras, charities, and public service organisations...'

An 'entrepreneur' is the person who conducts the affairs of an enterprise as described above. The APEID definition of an entrepreneur which this study adheres to is described in chapter 1.6. An entrepreneur is basically regarded as a person who is not only 'responsible' but also 'takes responsibility' whether in income generation or useful activities of life. It is quite evident therefore that entrepreneurship education denotes a special kind of education which strives to impart through pedagogical¹ and experiential means, the skills attitudes and knowledge which can make a person a competent entrepreneur or at least responsive to someone else's enterprise. The spirit of such a system

¹ It is not the major concern of this study to discuss the science of imparting entrepreneurship education to its clients. It is rather concerned with its organisation and socioeconomic justification.

of education is conveyed by a definition from a Cologne based social research agency, IFAPLANN, which is involved in the European Commission's efforts to establish programmes of action on the transition from Education to Adult life :

'Enterprise education is a collective term for educational or training provisions aiming at influencing youngsters' attitudes and behaviour in such a way that they show more initiative and play a more active and independent role in mastering their future' (Brown & Lauder, 1992 : 131).

In this study our concern is with students in transition from schooling to teaching. In the context of TWCs, being enterprising means having the educated courage to face the usually daunting task of combating all aspects of underdevelopment. This study targets income generation which is a strong motivating factor towards achieving these desired attitudes, skills and knowledge to the recipients of enterprise education at GTC. It is a means to an end, which is to be productive in activities that contribute to the community's welfare and subsequently the country's development.

A report of a finalisation meeting on the APEID² joint innovative project on 'Education for Promoting the Enterprise Competencies of Children and Youth', noted why entrepreneurship education is important for economic and social development (APEID, 1992 : 13) :

The virtual explosion of entrepreneurship training programmes in the affluent as well as in developing world, the incorporation of entrepreneurship as a fourth factor of production, together with natural resources, human resources, capital goods, in the recent framework of the joint council of economic education, USA, further stress the importance of this area. The inclusion of entrepreneurship in economic theory, such as in the concept of the establishment of market equilibria, has given it academic respectability too.

In a practical economic sense, an entrepreneur is expected to contribute constructively to development by being able to :

² APEID : is a UNESCO acronym for Asia and the Pacific Programme of Educational Innovation for Development . It released a report on Entrepreneurship education in 1992.

- introduce a new product or service into the market place where none existed before.
- invent or develop a pioneering technology or perfect an older technology making it more efficient and effective in terms of costs, time and money.
- discover an alternative resource to replace an existing one which had become scarce or perfects methods of exploiting a resource which had been costly to exploit previously.
- create a management initiative which improves the productive capacity of an existing firm or organisation (ibid).

The above is not a complete list, but a central assumption of this study is that whatever the entrepreneurial activity is, it must meet the ethical requirements of the society in question. If that can not be met then it can hardly be considered as a positive development for that society (APEID, 13 - 14). For instance, if technology is created enabling forests to be destroyed at a cheaper and faster pace, then that entrepreneurial act, can threaten life form on this planet. Particular issues of this nature are on - going and important but are not central to the purpose of this study.

3.2 What does Entrepreneurship Education Incorporate in ?

Entrepreneurship in Secondary School Teacher Education (ESSTE), which this study is focused on, involves three main dimensions. The first one is to do with producing an enterprising individual as defined previously in Chapter 1.6, or alternatively for this case a well trained and educated student teacher should be (Bridges, 1992 : 93) ;

‘creative, adventurous and ready to take initiative...responsible, forward looking, pro-active, dynamic and effective communicators of ideas and achievements’ .

Secondly, a curriculum should be developed which will allow the characteristics and traits of being enterprising to be transferred effectively to the recipients of what can be constituted as enterprise education. In England for instance, the Training Agency/Employment Department outlines objectives for enterprise education especially at higher education level as attempts to

- secure curriculum development and change so as to enhance personal effectiveness and achievement at work,
- offer students the opportunity to develop and apply skills including those of communication, team work, leadership, decision making, problem solving, task management and risk taking,
- develop student's initiative. (Training Agency, 1989, Appendix 2 quoted from, *ibid* : 93)

In arguing why the enterprise dimension must be introduced into teacher education curriculum in Britain which can also be related to TWCs, Bridges had this to say (Bridges, 1992 : 97) ;

"It would be naive to imagine that all such calamity could have been avoided if teachers had previously been visited with the magic enterprise ingredient, but it is almost certainly the case if teachers, teacher trainers and, more especially in this context, the liberal educators among them wish to regain the educational initiative, then they will need to rediscover their creativity, adventure and dynamism, to rethink the application of the principles of a liberal education in terms of the social and economic context of the twenty first century, and take much more seriously the task of communicating their ideas and their achievements to a widespread, popular and politically influential audience.'

In a developing country context, an enterprise education curriculum as argued by APEID should create certain sets of characteristics and competencies in an individual (in this case a student teacher, or a community participant) which has been summarised as follows ;

- a) The person shows independence and self-confidence, and is prepared to break with tradition or routine. The person is willing to discard dependence. In this spirit, the person seizes opportunities in the context of a strong motivation to achieve. The thinking is positive, even optimistic, and future oriented, but goes beyond merely thinking, into taking initiative, making decisions, and accepting responsibility for those decisions.

organises, evaluates performance, makes in course corrections, and has learned how to learn.

c) The person shows flexibility and perseverance, willingness to take risks, ability to work in a team, communicate effectively, negotiate and deal with power and authority, which means being able to resolve conflict and take stress, and have strong interpersonal skills (APEID, 1992 : 15).

This study recognises the value of these various characteristics and competencies. The APEID description has the closest relevance to this cause, but contends that the starting point for such an innovative approach should begin at the teacher education level as expressed by the previous quotations.

The last, but not the least, dimension is that the implementing organisation or agency should be enterprising also. For instance, GTC as a formal organisation require certain changes in its organisational environment to ensure effective interactions with the community. On its part GTC should be flexible and non-imposive. As would be evident in the operations of the HVTG-HLK project in chapter 5, such a situation did exist through the cooperation from the office of the Principal of GTC. Bridges describes such organisations which he contends should be enterprising, as ;

‘...ones which are capable of creating and responding creatively to new demands (albeit within the principled framework set by their own aims or missions), and sustaining and supporting the energy and initiative of all their staff. They will characteristically have found ways of reducing burdensome bureaucracy ; opening information up so that members of the organisation are not acting on the basis of partial information or misinformation; reducing hierarchy (so that the capacity to generate creative proposals is not licensed exclusively to those in senior management); and ensuring intrinsic and not just extrinsic motivation (e.g. in job satisfaction and satisfying collegial relations) for people to devote their energies and talents to the purposes of the organisation’ (Bridges, 1992 : 93).

What has emerged nevertheless, is a situation whereby a cycle is evident. This is indicative of the interdependence of the three dimensions of the individual enterprise competencies, curriculum through practical activities to promote that, and a conducive organisational environment which can be regarded as enterprising also. Thus, the prototype programme

GTC which this thesis is based on, and the other practical examples which will be discussed, incorporate aspects of the above three dimensions which are implicated in their goals and activities whether directly or indirectly.

There are other aspects of an education system not discussed, like the question of pedagogy, assessment and recruitment of teachers (ibid). However, they have not been discussed here because the ESSTE prototype model has not developed to a stage where they can be given serious consideration. More than that, the ESSTE model's strength is in its simplicity and flexibility, due to the assumption that once it becomes otherwise, more problems can arise hindering its operations and progress. For instance, in PNG many development initiatives have met with 'silent resistance'³ because the local people reject having ideas and projects imposed on them (D.A.D. , 13 - 14).

3.3 Some Major Constraints of Entrepreneurship Education

One major criticism of entrepreneurship education concerns the scientific measurement of its claims. To this effect the qualitative output of student teachers or any other individuals as expressed in chapter 1, can not be convincingly measured yet. At this initial stage the expressed reasonings are based mostly on assumptions which are loosely attributed as desired characteristics of an 'enterprising teacher' or any person who can benefit from the *substance* of this education type. This, it is also presumed can be an added 'bonus' to the general liberal education which they are already being subjected to. Unfortunately, with no long term study done yet to back its claims, entrepreneurship education still need to be substantiated as a viable consideration (Bailey 1992: 101 & Bridges 93).

³ Usually displayed as lack of cooperation or laziness even after a verbal compliance has been established with the project implementors. Usually they are not being lazy or non - cooperative but simply detest an imposing attitude. In other words they don't always communicate their thoughts in words.

This is especially true for developing countries as indicated by the recently published report on '*Education for Nurturing Enterprise Abilities*' which has proved very useful for this study . Most results of the programmes presented were preliminary in nature with indications of long term studies to follow in the near future (APEID, 1992 : 6).

A second constraint relates to a false illusion that, so long as one acquires the basic ingredients of being enterprising, then survival in the market economy is guaranteed. And if success is not forthcoming due to market failures for instance, then one is not enterprising enough. However, in reality there might be social, economic and political forces outside the realm of the enterprising capability of the individual or community concerned (Bailey, 1992 : 105).

A third constraint of enterprise education is the emphasis on '*wealth creation*', making it seem like a capitalist indoctrination process as labelled by critics. As such the positive aspects of command or subsistence economy are assumed to be inferior or irrelevant. Individual right to wealth takes precedence over collective right to wealth. In TWCs, where culture and tradition dictates the later, it might not be a popular model of education. This is especially because if wealth creation as described by writers from developed countries like Bridges, assumed a central role, then that might prove unworkable (ibid : 102). Furthermore, arguments presented by Remenyi in chapter 1.6 has also highlighted some positive aspects of income generation, or to a limited extent wealth creation as a desirable attribute in the economy of the poor.

For instance in most parts of contemporary PNG, a person who is a successful entrepreneur but does not share his wealth with others in his tribe or clan faces a danger of being an outcast in his own society. Traditionally, a person who is enterprising is someone who after accumulating his wealth shares it with his neighbours. Hence, wealth is seen in the number of people obligated to the entrepreneur (normally a village elder who accumulates wealth) and he only needs to make his intentions known when he wants those

obligations repaid. Thus, community accumulation of wealth rather than individual wealth creation normally take precedence. Traditional education as described in Chapter 1.4.4, teaches such ideals in most PNG societies⁴. This study and the project it reports recognises such a principle of community accumulation of wealth through the household rather than traditionally through the village elder.

Finally but not the least, this leaves the TWCs who need to be enterprising if not in income generation, investment or resource management, then in activities that can at least try to break the cycle of poverty rather than perpetuate it (Curle, 1963 : 157). Hence, due to a very low purchasing power prevalent in these countries, any income generating activity will assist in meeting basic needs. One aim of this study is to sustain such activities, through resources available in institutions like GTC. This will then create other positive multiplier effects like minimising social problem (Remenyi, 1991:10).

3.4 Development Paradigms of Entrepreneurship Education

Development theorists like Rostow had argued that in settled (rather than newly settled) societies which encompass most developing countries, the following appears to be the case:

We start with a reasonably stable and traditional society containing an economy mainly agricultural, using more or less unchanging production methods, saving and investing productively little more than is required to meet depreciation. Usually from outside the society, but sometimes out of its own dynamics, comes the idea that economic progress is possible : and this idea spreads with the established elite or, more usually, in some disadvantaged group whose lack of status does not prevent the exercise of some economic initiative... Education, for some at least, broadens and changes to suit the needs of modern activity (quoted from Hunt, 1989 :97).

⁴ PNG has about 800 indigenous languages and thus each language group have their own societal expectations through their specific cultures and customs. In rural villages most of these cultural ideals are still practised alongside the modern ones.

Such scenarios as presented of the developing countries, by Rostow are debatable but this study is more concerned about the practical outcomes of the 'economic initiatives of the disadvantaged' as he had identified. Hence 'education' as Rostow rightly (according to this study) mentions should broaden and change to suit the needs of the modern economy. Formal liberal education has taken up such a role but this study presents a preliminary case at least for PNG, that further broadening is still required. Thus entrepreneurial education is the suggested type of education (Ibid).

From the perspective where family or household units still compose the basic labour unit, as is the case in this study any income generation activity should be aware of what had been identified by Schmoller ;

'entrepreneurial activity became, first a secondary function of clans, families, and other organs of community life and later, the sole functions of independent associations. These new social units, after having become autonomous, increased in size and developed according to their own laws. Economic enterprises wedged themselves gradually between individuals and families, on the one hand and associations, municipalities, states, corporate bodies, and churches, on the other hand' (as quoted from, Lane & Riemersma, 1953 : 6).

This study is more concerned with the first stage of an entrepreneurial activity as it recognises that as firms grow larger, capital accumulation begins to disproportionately benefit the owners at the expense of the majority if not directly then indirectly. Enterprise is still the *backbone* of the economic system, but it is the question of the distribution of what has been acquired that is at the root of much frustration and debate lately. Thus, the ensuing argument for an education system which imparts the *substance* of what it takes to be enterprising to its recipients has its merits (ibid, 1953 : 131). For instance, someone could be taught how a business operates, but not how to operate one himself. The former involves the form where he/she is made aware of it , but the later involves the doing or the actual *lived experience* like in the context of traditional education (Chapter 1.4.4) which is the *substance* of the process of education .

Moreover, enterprise education is also concerned with a bottom up basic needs approach. Basic needs acquired prominence in 1976, after the publication of the ILO World Employment Conference publication titled *Employment Growth and Basic Needs* stimulated much literary work. That document defined basic needs as;

‘...the minimum standard of living which a society should set for the poorest group of its people and should cover, the minimum requirement of a family for personal consumption: food, shelter, clothing, access to essential services, such as safe drinking water, sanitation, transport, health and education, and an adequately remunerated job for everyone wishing to work.’ (Ramirez-Faria, 1991 : 239)

In the context of PNG and the concerns of this study, education and an adequately remunerated jobs are probably the only essential service not available to most people in the country. This is arguably the case because PNG is abounded with plentiful resources like fertile land to grow food and fresh water to drink. What is absent, due to the demands of the modern economy is an educated approach to exploiting such resources adequately, fairly and sustainably.

Hence, to meet such basic needs this study argues for a wider but appropriate scope of education to include the community. Those who have received education at considerable cost to society already should be motivated to share what they have acquired with those who need it most. The spin off, if enterprise education is utilised adequately and appropriately, will create employment and generate income as a basic catalyst for economic and social growth from the bottom up.

An enterprise education then has goals that go beyond normal individualistic liberal education, as described by Rees ;

‘Enterprise education has the pedagogic goals of engaging pupils in activities which will release skills and talents that are broader than a narrow emphasis on academic attainment allows’ (quoted from Brown & Lauder, 1992 : 131)

The paradigm this study adheres to is not merely educating for self employment or

engaging in small business, and thus the profit motive. It is equally concerned about community development and income generation from poor households. These in PNG terms could hardly amount to great wealth. It is also steers away from individualisation and re-emphasises 'cooperatisation' as opposed to 'corporatisation' (ibid, 1992 : 136-137).

Such paradigms have surfaced in the writings of John Friedman. They support the arguments of this study and presents a simplistic alternative theoretical model of an economy. *Appendix D* shows such a model, which has its base around the household. The argument alongside such a model is that especially relevant to developing countries where big firms and businesses (according to Western standards are rare). This model also recognises the presence of a subsistence economy alongside a dominant formal one. One major aim of this exercise is about 'empowering' the household to become a stronger economic base in order to sustain a better standard of living, for those who need it most (Friedmann, 1992 : 50-51).

Remenyi in consolidating Friedmann's views argued for the recognition of the informal, household economy which he termed 'economics of survival' describing such economic activities in the following manner (Remenyi, 1991 : 23) :

The mosaic of activity in the poverty economy is not bland and uneventful. Its rich tapestry rings with the cry of traders haggling, the clash of hammers banging, ...just as it does in the modern formal economy, to which it abuts cheek by jowl and with which it interacts in various ways. The poverty economy is not isolated from the formal economy. It is merely starved of the life-blood that is essential to the prosperity of any monetised economy-liquidity.

The HVTG-HLK project which is a catalyst for the ESSTE prototype model utilises two key strategies. These are :

1. Provide the necessary expertise⁵ to *kick - start* the stagnant local economy

⁵ In this case it was the staff and student teachers at Goroka Teachers College who were involved in the HVTG project.

and,

2. Organises and pool community or household liquidity in order to compete and draw both physical and monetary resources from the formal sector of the economy to strengthen the so called informal one.

3.5 Practical Examples of Entrepreneurship Education

Appendix E portrays in a diagram the APEID experience with Enterprise education in several TWCs. The initiative titled '*Innovative Education for promoting the Enterprise Competencies of children and Youth*' was undertaken by China, Philippines, Indonesia, Thailand and Malaysia. However, only some of the examples would be chosen and discussed. The aim of the programme was to create persons who were enterprising as expressed previously, and not only competent in 'wealth creation' but also in desirable social skills, knowledge and attitudes. Even if the common goal of providing entrepreneurship education was shared by all the countries involved, their specific approaches or strategies towards that goal varied. The underlying notion is not just to make money but to use such entrepreneurial activities to create a dynamic positive real life learning situation for the learners (APEID, 1992 : 7).

3.5.1 China : A General Model of Entrepreneurship Education

The Chinese experience is similar to the concerns of this thesis, whereby they embarked on both in-school (formal) and out-of school (informal) entrepreneurial activities. Their particular model is also attached as *Appendix F* and the objectives of their efforts are (APEID, 1992 : 45) ;

1. In general education, to train the target population to have enterprise consciousness, to develop personality characteristics, capability, to counter the disadvantaged characteristics of the disadvantaged population, and to prevent creating new disadvantaged groups in society.
2. In NFE (continuing education), to raise enterprise consciousness of the target population, to master practical know-how, and become enterprising individuals.

Their major achievements had been (ibid : 43) ;

- a) An organisational structure of the project had been established, beginning with a national coordinating group. Other personnel like administrators, educationists, and research personnel are gradually educating themselves into their specific responsibilities.
- b) Teaching teams of teachers, technical experts, and people with enterprising experience had been coerced into workable units.
- c) Teaching and learning materials together with projects like Fish pond, food processing centres, farms had been developed and utilised for its intended purposes.
- d) More than 4,601 persons had been trained in Non Formal Education (NFE), whilst in general education 5,304 participants had been trained.
- e) Research had been carried out to ascertain a representation of its operations.

Some of the major concerns of the project (Ibid, 44) :

- 1. Social value and relevance of enterprise education needs to be ascertained further.
- 2. Utilisation of the media effectively as a means of disseminating information.
- 3. Quantitative expansion which can allow a wider audience to benefit from the system.
- 4. More theoretical and scientific research needed to be done.
- 5. Further development of learning materials.

In its proposed plan for 1992-1996, the Chinese are intending to do what is similar to what this study is proposing. Hence, they are attempt to undertake in experimental terms, the following actions :

- 1. Introduce enterprising experiences into the formal education system;
- 2. Non Formal Education (NFE) is to be combined with community and rural

development reforms (Ibid, 1992 : 4-7 & 43-46).

As indicated in *Appendix B*, China is a socialist developing country, employing both formal and non formal community education. Nevertheless, in involving income generation even on a limited basis⁶ as a stimulant, has produced some notable results for them, mentioned already. Skills and knowledge are more noticeable as having been learnt once projects like in this case, the successful building of fish ponds or food processing centres. Enterprise competencies as positive attitudes can only be interpreted through behaviour patterns as being fostered also. Moreover, they are also not so easy to measure directly. In any case positive attitude changes conducive to desirable development are not usually achievable in a short period of time like within the time it takes to start and complete a fish pond project. This has also been stressed in the above case.

3.5.2 Indonesia : A Secondary School Model

Indonesia's entrepreneurship education programme was coordinated nationally by the directorate for community school education (Dikmas). That project titled 'Innovative Project on Income Generating Education for Women in Rural and Coastal Areas' began in June 1991. The aims of the project was to (Ibid, 1992 : 8) ;

1. Educate out of school participants employing two pre-prepared curriculum packages. Package A was intended to educate participants to the community school standard whilst B to the secondary level.
2. Upon successful completion of either of the education programmes participants were eligible for a small loan to be utilised for an income generation activity. Thus, it would seem that both programmes would support each other.

Major successes of that programme were (Ibid) ;

1. increases in income were recorded from the income generation groups that were given loans to operate their own activities.

⁶ Not too much emphasis was placed on it as interpreted from the literature.

2. Indirectly as a means of preparing people to work in these income generating groups, their basic general level of education had been upgraded to either the primary or secondary education level.

Some of the major constraints which the project would like to see improvements in include (Ibid, 1992 : 46-49) ;

1. Better trained facilitators of the programme, who have proper understanding of entrepreneurship education.
2. enterprise competencies must be emphasised also within the process of income generation.
3. learning materials need to be more effective in terms of being further simplified and made appropriate to impart enterprise competencies.

Indonesia is a capitalist developing country as indicated in *Appendix B*, and thus income generation is presented as a major stimulating factor in the quest for enterprise-type education. In the Indonesian case the general education level of the participants had also been increased as a carrot to obtaining loan for the entrepreneurial activity. Again technical skills are easily observed as being taught or learnt and some of the entrepreneurial activities undertaken quite successfully. As the understanding of this thesis and the APEID project goes entrepreneurship education is not merely vocational, technical or community education. It was also meant to achieve entrepreneurial attitudinal changes. Thus, it can be implied that such a goal is a long term objective of such projects. Hence, sustainability of the projects over a longer period of time is necessary to enable the achievement of such goals, which is why the ESSTE model also stressed sustainability as crucial if the benefits of an entrepreneurship-type education is to be fully realised.

3.5.3 Philippines : A Higher Education Model

The Philippines programme was a six month national pilot project involving eight out of school youths. This Philippines study is actually an example of Entrepreneurship at the

Higher Education level because the implementing agency was the University of Philippines-Institute for Small Scale Industries. Many of its characteristics are compatible with the ESSTE initiative at GTC. It had divided its goals into both long term and short term goals (Ibid 50-51) ;

1. In the long term it is hoped that the project was meant to create in the young people enterprise abilities and competencies necessary for the creation of self employment and development of the country.

2. In the short term the following objectives were noted (Ibid) ;

- to impart enterprise competencies to secondary/vocational and technical school students.
- to educate the teachers of the other education institutions like the secondary and vocational schools, on the entrepreneurship approach to education.
- materials most appropriate and suitable for the teaching and learning activities of this process of education need to be developed and tested before implementation.
- The enterprise training institute needs to prepare its own manpower with the entrepreneurship education in order to ensure the spread of entrepreneurship education and its principles.

In implementing its goals the UP⁷ - Institute for Small Scale Industries trained eight technically skilled individuals to become enterprising, using the skills they already possessed. To do that they were educated in the process of researching and preparing a business plan, such as the one discussed in chapter 5.3. They were also taught the management aspect of a small business with the intention of imparting skills like *'doing mathematics, understanding market forces, determining the products' selling price, production capacity at a level they could comprehend.'* One practical outcome of the project involved the participants producing business plans. However, the longer term impact of the programme is as yet unknown (Ibid,1992 : 9-10).

⁷ University of Philippines

In recognition of the limitations of the initial pilot project, the following were proposed as national action plans (ibid, 1992 : 51) ;

1. incorporate into the curriculum content of the not only 'profit motivation' but also enterprise education.
2. adapt and develop learning and teaching materials appropriate for the imparting of enterprise education,
3. create and foster a linkage between the needs of the individual, community and industry
4. continue research and development (R&D) and enrich the capacity of the Institute to impart such an entrepreneurial education package for the nation,
5. develop organisational mechanisms that would effectively monitor, evaluate and implement the goals and objectives of entrepreneurship education in the Philippines.

The Philippines as a developing capitalist economy is very much market- driven. Thus, the philippines case even if a pilot one stresses the ' profit motive' . However, it is most limited in its impact on a wider but poor population base, whose motive might be to generate income to live or survive rather than for profit. The targeted recipients are skilled technicians who lack other necessary entrepreneurial skills like financial management and marketing skills to be successful in the modern business world. However, without a strong community orientation and a commitment to help the poor or educationally misplaced it seems to be an extension of a regular formal business school. The ESSTE model which this study is based on is only similar to this one in that it involves a higher education institution and a planned approach like producing business plans. However, the ESSTE approach as would be discussed later in Chapter 5, is more similar to a Kenyan case involving Reading University as described below :

Within the category of conscious services provided by a university are certain types of research project. Research in health, agriculture, construction, may have spin offs which affect and it is hoped, benefit a group of individuals or a community. A relevant example is the Isoya Rural

Development Project conducted by the University of Reading. It was a pilot project involving nine villages with a total population of just under 2,000 people and was designed as a model for the improvement of economic and social conditions in village societies. Together with the villagers the university team tackled increased crop yield, better maize marketing, formation of co-operatives, improved child nutrition and an adult literacy programme. This type of research in collaboration with the villagers is useful to all parties involved; it enables university researchers to learn from a community what its problems are, technical and economic, and as the researches solve the problems, so the community benefits (the Isoya villagers' maize and cowpea yield improved 200 percent). As it was a small-scale project, it might have particular interests as a mode for rural secondary schools, which could copy some elements of it (Illis, 1985 : 63).

The problem with the Kenyan model is the lack of commitment to improve it further so more communities will benefit rather than 'passing the buck' to secondary schools. It is nevertheless, evident that similar ideas which the ESSTE prototype model is trying to promote is possible. In the case of GTC, it is hoped that the secondary school trainee teachers will transfer on such ideas after they qualify to teach in high schools in the country. What is needed though are incentives to encourage the blossoming of such ideas. An example being the availability of finance for such activities to be implemented adequately.

3.4 Summary : Major Lessons for ESSTE Model

What this chapter had provided is a preliminary but practical case for 'enterprise education' as an innovation that has been and should continue to be trailed at GTC. Firstly, there is no denying that 'enterprise' is at the backbone of the free market economy. Too often it is the bigger corporate enterprises that are recognised as enterprising, but the smaller enterprises' cumulative effects can be just as productive especially for those at the bottom end of the economic scale of particularly TWCs. Thus, the case scenarios presented was that many small enterprise households could also make the overall economy just as strong or even stronger and more sustainable. Education institutions with the expertise and resources available to them can adopt a wider community (out-of School) role to assist the educationally disadvantaged and poor in the wider community.

The practical examples especially from the selected TWCs indicate the following. Firstly, it goes to show that all the theoretical arguments are not mere rhetoric and that serious attempts organised by APEID (UNESCO funded) are being made to utilise what Entrepreneurship education incorporates especially as discussed in chapter 3.1. Secondly, they provide various models which this study can contrast its own model against to produce a workable ESSTE model for PNG. However, there is still much research work to be done to determine the viability of the enterprise model of education in TWCs, so there is a limit to supporting its case in the meantime. The only way to find out is to trial it and carry out adequate but appropriate research. This is what this thesis is suggesting, which the APEID innovations presented above are already doing. In the specific case of universities or higher education institutions like GTC, the whole idea is not totally alien, as the previous APEID account of a Philippines case and more appropriately a 1976 Nigerian example indicated.

In a nut shell, what the previous presentations and discussions have highlighted is the fact that in practice, enterprise education-type education from various levels of education exist in various TWCs. However, what is lacking is the fact that theoretical explanations have not really caught up with explaining *how* and *why* it has happened. This is because only then, can the good fruits of what has occurred be fully realised and repeated confidently, on a larger scale. Nevertheless, the ESSTE prototype model can take comfort in the fact that its efforts are not isolated, and in time its ideals will take root and grow as more is learnt about enterprise education, for the good of recipients of formal liberal education in PNG. What this study is suggesting is that secondary school teacher education should take the lead in planting the seeds of such ideals in the case of PNG. The ESSTE prototype model is a ripple hopefully contributing to this wave of education innovation called 'enterprise education,' in particularly developing countries.

CHAPTER FOUR

PNG EXPERIENCES WITH ENTREPRENEURSHIP - TYPE EDUCATION

4.1 Introduction : PNG Development and Education Policy

PNG in pursuit of national development within the global economy has the following five goals and directives as its guiding principles (NDOE, 1991 : 15) :

1. Integral human development.

We declare our first national goal to be for every person to be dynamically involved in the process of freeing himself or herself from every form of domination or oppression so that each man or woman will have the opportunity to develop as a whole person in relationship with others.

This included a call for education to be based on mutual respect and dialogue, and to promote awareness of our human potential and motivation to achieve our national goals through self-reliant effort.

2. Equality and participation.

We declare our second goal to be for all citizens to have an equal opportunity to participate in and benefit from, the development of our country.

3. National sovereignty and self reliance.

We declare our third goal to be for Papua New Guinea to be politically and economically independent, and our economy basically self reliant.

4. Natural resources and environment.

We declare our fourth goal to be for Papua New Guinea's natural resources and environment to be conserved and used for collective benefit of us all, and be replenished for future generation.

5. Papua New Guinean ways.

We declare our fifth goal to be to achieve development primarily through the use of Papua New Guineans forms of social, political and economic organisations.

In many ways the goals and objectives of this study together attempt to meet these five goals. It however, moves beyond the realm of rhetoric and strives through the guidance of the above goals to put into practice some of their implications through the medium of entrepreneurship in secondary school teacher education. How this is so, will be projected in the ensuing paragraphs.

Thus, to move into the sphere of education, the PNG philosophy of education (1986) is primarily based on the national goals and directive principles. Its main theme is specifically related to the first goal which is for every person to receive an education which results in integral human development. The arguments of this study is for entrepreneurship education, incorporating community education to meet such an expressed challenge. An example of such an undertaking which this study involves is clearly expressed in that document (Matane, 1986 : 20) :

‘The curriculum extension approach is to identify activities and projects which can be taught in the school environment and later applied, with minor modifications, in the community. At the primary level these activities may be to develop a nutritional garden, build a latrine or make and sell a bilum. At the lower secondary level these activities may be to make and sell furniture, set up and run a trade store or grow and sell vegetables. The teaching materials incorporates the academic, commercial and practical knowledge and skills required for all stages of these operations, from initial planning to the final product. Particular emphasis is placed on decision making, problem solving, social skills and the development of natural resources. The curriculum extension approach promotes community involvement both during school time and after completion of grades six and ten, and at the same time lays a sufficiently firm foundation for further study. Such innovation should be actively encouraged and the curriculum extended further to meet the specific needs of different communities’

This thesis is arguably a practical response to such a call. *Appendix G* expresses diagrammatically this model of integral human development, which the PNG philosophy of education sees as a total education of an individual. This study sees this as not complete as portrayed arguably in a more diagrammatically complete form in *Appendix N*.

At the lower levels of education, community involvement is much more developed. *Appendix H* shows a map which indicates the existence of 'curriculum extension schools' in PNG. It can be noted that there are no higher education institutions included. For instance, secondary schools unlike the higher education sector have community integration programmes. The most successful in terms of being extensively trailed and researched is the Secondary School Community Extension Project (SSCEP).

At the community (Primary) school level an initiative by the community schools to get involved in community activities, is the Community school Agriculture Pilot Project (CSAPP). The aim of such projects are to develop nutritional gardens. This it is hoped would educate both the pupils and their parents on the need to eat the right kinds of food. Hopefully, it can and be extended further into an enterprise for generating income as well, for the various reasons expounded on already (Matane, 1986 : 20).

4.2 A Community School example in Enga Province.

The Enga province had come up with such a variation, with the idea originating from the division of Primary Industry in the province. Titled, 'The Community School Agriculture Programme' (CSAP) is similar to the above initiative, but it has it has taken up more fully the challenge of the pilot projects. It has been operating for four years since 1985. This programme was based on the following situation (D.A.D¹.,1989 : Appendix K : 1-10) :

1. These isolated schools had become centres of diffusion of knowledge, skills and attitudes necessary for positive development and growth, not only for pupils but also the parents who get involved in their weekly parents and citizen's (P&C) days.
2. CSAP had the backing of all those concerned, the pupils, parents, and funding and logistical support from Education, the Health and Agriculture departments of the provincial government.

¹ Development Assistance Division of the Ministry of External Relations and Trade of the New Zealand Government.

Some of CSAP's major aims include the following ;

1. To teach and demonstrate better agriculture skills :
 - a) to improve subsistence agriculture,
 - b) by using local resources, to teach parents, teachers and children new ways to earn an income from their land (Ibid)

Some of the following have been major achievements of the project ;

1. Thirty schools were reported to be involved and increasing.
2. A networking system between the appropriate departments of the provincial government, have ensured that the aims of the project were pursued effectively.
3. An increasing awareness of what the school was all about living productively in the community and not 'outside of it' as presupposed before (ibid).

The major lessons of the project had been ;

1. To adopt an appropriate philosophy of giving advice according to the principle of "Why should I accept advice of those who do not have to live by the consequences of that advice"
2. Regular visits and positive encouragement by the coordinators of the project together with village elders had helped meet the above principle.
3. The following account sums up what had been gained in terms of making the programme work in practice (ibid, pg.7) ;

The CSAP in its efforts to bring real development to the people of Enga and foster self reliance, focuses its efforts on the individual small holders.

Enga people are not cooperative by their nature. Enga tradition encourages individual achievement and family activity. Enga has thrived on individual efforts or small family unit enterprises and rarely have large scale projects succeeded in the past. This is because jealousy, mistrust, tribal conflicts and lack of management hinder such enterprises.

The CSAP encourages through the schools, small scale businesses as the base for economic development at the village level. These businesses include, livestock, cash cropping, vegetable production or small scale industry such as wool making and its uses .

The ESSTE model will seek to initiate similar activities not through the assistance of schools but through Goroka Teacher's College. It also recognises (like in the Enga case) that the best basic economic organisation to work with is the household and through it the community.

4.3 The Secondary School Community Extension Programme (SSCEP)

The secondary level had had programmes most similar to the enterprise educations' practical experiences discussed in the previous chapter. The in-school activities of China and Sri Lanka expressed in the previous chapter had striking resemblance to this PNG case. In PNG, it is known as the Secondary School Community Extension Project (SSCEP). A copy of the model of the project can be noted in the *Appendix H*. Initiated in 1977, its aims had also been refined over a period of time. After 1979, Currin's classification of the aims of SSCEP were most explicit and expressed a strong shift towards entrepreneurship type-education normally referred to as relevant education. Four of these major aims are as follows (Crossley and Vulliamy, 1986 : 23) ;

- a) academic : SSCEP seeks to maintain, if not to improve, the present level of academic performance in its pilot schools.
- b) vocational : SSCEP seeks to introduce students to practical skills which are useful in village development (although it does not attempt to produce high levels of vocational skills)
- c) community involvement : SSCEP seeks to relate education to community development by stressing the application of learning to situations which involve students in their communities.
- d) attitudinal : SSCEP seeks to provide learning situations which encourage the development of leadership, initiative and willingness to apply skills in solving practical problems.

Appendix J shows the implementation model of the SSCEP model indicating how it was implemented. Even if not mentioned explicitly SSCEP schools have evolved from a desire to provide 'relevant education' to its students². Hence, if the above goals are compared to

² Lower secondary school students, in the PNG school system are the Grades 7-10. Goroka Teachers college which this study is concentrated on trains most of the teachers at that level of education.

goals of entrepreneurship education expressed in the cases studied already, the similarities are obvious. The models are very similar to the entrepreneurship education models of the APEID account as shown in *Appendix E & F*.

Ironically, despite a strong resemblance to entrepreneurship education, no actual mention of that term could be noted in the literature researched so far. However, if this could be verified, advocates of 'entrepreneurship education' will be applauding some of the achievements of PNG relevance education (as it is called) if scrutinised in the context of entrepreneurship education. For instance, one of the strongest indicators relates to the improvement in the academic performance of the students from the SSCEP schools when compared to others offering normal liberal education in their curriculum (Crossley & Vulliamy, 1986).

SSCEP unfortunately had faced major constraints leading to a phasing out of the programme. Some of the major lessons as described by Crossley and Vulliamy include (Crossley & Vulliamy : 1986 : 88) ;

'...the importance of maintaining a non-dualistic approach to educational innovations; the strengths of a structured school-based approach to implementation, the importance of educational, as opposed to economic and social justifications for such an innovation, and the impact of cultural context, both at the micro-level of the school and the macro level of Papua New Guinean society, on the development of educational policy.'

In determining some of the reasons for the expressed lessons, Crossley and Vulliamy reiterated that some of the goals set were over ambitious. This probably can be implied as an attempt by SSCEP to do 'too much too soon', and ended up frustrating the efforts of those who were responsible for it. SSCEP despite its obvious good intentions was not realistic and flexible enough to accomodate for the realities of a typical high school environmental context in PNG (ibid : 81).

One such overlooked situation, involves the role of teachers in the school and the training and preparation they had received for an innovation like SSCEP. This study which focuses at the teacher education level, uncovers one such taken for granted factor. Teachers when they were being educated and trained at especially Goroka Teachers College, had not been exposed to the practical realities of similar situations like the one advocated by SSCEP (ibid).

Furthermore, bearing in mind that most secondary school teachers had been trained and educated at GTC, and the lack of sufficient concern (as indicated by the lack of literature) of teacher training to accompany or even precede the process of developing SSCEP leaves much to be desired. Even if the argument was for in-service training, the doubt that old practice can easily be replaced by the new, has some validity. For instance, the lack of motivation by many teachers in SSCEP schools had been a noticed problem. What can help is the restructuring of curriculum of teacher training at GTC, to be more conducive to the goals and aspirations of SCCEP (Crossley & Vulliamy).

The ESSTE prototype model is an attempt to meet such a gap in relevance education or in this case enterprise education which share a lot of common elements for the high schools in PNG. It is as expressed previously (Chapter 3.2) driving towards producing a more enterprising teacher.

Another factor worth mentioning here is consideration given to the organisation itself, which as mentioned by Bridges in chapter 3.2, should be enterprising also in the case of enterprise education. For the SSCEP experience, it should have been flexible or in SCCEP's terms be 'relevant' also. For instance, many schools which were organisations meant to serve the conventional formal education system, lacked what Skilbeck (1976) refers to as situational analysis. Thus, a more promising move would have been to put senior teachers and particularly headmasters of such schools through a training programme to manage such an organisation effectively. (ibid)

Enterprise education if it was to be transferred as an innovation to the high school situation should take heed of the experiences of SSCEP. In the mean time, unlike the approach taken by SSCEP, such an innovation should begin where it matters the most, teacher training.

4.4 Tertiary Education Level : Tertiary Students Scheme for Participation in Community Development (TSSPCD)

As the interpretation of policies narrow down to the higher education vision statement the picture or the purpose for this study becomes more focused. Based on the National goals and the Philosophy of Education, the direction of the development of higher education can be noted in the following account :

Graduates- Melanesian men and women well-educated and striving for excellence in all they do ;responsible and accountable citizens abiding by the traditional and Christian values of Papua New Guinea; contributing meaningfully to the development of their people and to the growth of new knowledge and skills ; and competently facing the challenges of a daily life in a rapidly changing society.

Institutions- contributing to the understanding and achievement of national goals ; operating upon a clearly defined of their identity and purpose; manifesting a climate of tolerance, understanding, responsibility and accountability; and open to the needs of the community (CHE³. 1990 : 4) .

As this study would be trying to portray, with enough imagination and initiative, time taken out for community service could be incorporated into curricular activities of Higher Education institutions like GTC. At the same time, if properly planned the immediate economic returns to disadvantaged households in the communities can be a significant contribution to the economic and social development of the community.

Apart from the GTC experience and the activities of the activities of the few agricultural colleges of PNG, entrepreneurship education or similar activities were rare in higher

³ Commission of Higher Education of Papua New Guinea.

been mentioned as a positive aspect of GTC's curricular activities by the latest (1991) PNG Education Sector Review :

'Recently, Goroka Teacher's College has begun the kinds of community outreach which complement and strengthen the philosophy of community development required by vocational development.' (NDOE, 1991: 103)

Concerns which this study expressed are not unique but practical attempts to address them are. However, at least one attempt had already been trailed by the previous Education Minister (Mr. Utula Samana). The initiative titled '*Tertiary Students Scheme for Participation in Community Development*', (a full original text of which can be noted in *Appendix K*), indicated or acknowledged probably for the first time as a practical means to meet the concern for community participation by Higher Education institutions in PNG. Thus, this proposal created the incentive for such activities to evolve as revealed by its aims (Ngabung, unpublished, 1991) :

1. Establishing student community links as part of their general application of skills and/or knowledge in practical terms ;
2. establishing links between youths in the formal education system with the youths outside the formal education system;
3. developing a sense of responsibility, national duty and pride.

As stated in *Appendix K, Pg. 3*, the initiative was backed up with K20,000⁴ for immediate implementation and if successful it was to have continued as an on going programme. Unfortunately, the latest information on the outcome of that initiative is not available.

However, the criteria for eligibility of applicant(s) for funding actually implies similar concerns which had prompted the ESSTE initiative at GTC initially. Some of these could be noted in page 5 & 6 of *Appendix K*. As a measure of the worthiness of the ESSTE initiative at GTC, it would have met most of these criteria.

⁴ Equivalent to about N.Z \$ 36,000, as one Kina (PNG currency) is equivalent to approximately one dollar seventy cents (New Zealand currency).

One difference with the ESSTE initiative as opposed to the TSSPCD, was the fact that the institution itself was involved with the backing of the concerned lecturers and the administration in the capacity of the Principal. This allowed for more coordination and incorporation into curricular activities where necessary. Furthermore, it had allowed for better preparation and planning among lecturers, other staff members and concerned members of the community. The actual plan of the project which could also be considered as a study of the existing situation will be presented in the ESSTE model in the following chapters .

The second major difference to the ESSTE project was the fact that TSSPCD did not specify entrepreneurship education as the main thrust of the community involvement exercise. One of the major argument of this study is to show that entrepreneurship education as the desired approach. The substance of community development was not specified adequately. The ESSTE model is more explicit about the type of community development it would promote.

Apart from these differences the proposal was in line with the aims and objectives of the ESSTE project as will be highlighted by the model to be presented and discussed in the following chapters.

4.5 Summary

It is fair to say that entrepreneurship education in the ways specified already had already been pursued in a limited sense in PNG. What is needed though is more emphasis on income generation which will realistically motivate the community. Thus, one major difference between the suggested model of this thesis and the previous attempts of community involvement programmes is a lack of will to admit that the 'profit motive' is healthy if seen in its right context. This study is attempts to utilise the positive aspects of income generation to allow the community to develop itself in its own way, time and to its

own desired standards and aspirations. The alternative is to rely on *handouts* either by the government, private agencies or individuals.

The Samana discussion paper on TSSPCD is the closest to the aims of ESSTE but it does not specify how the monies allocated should be used. Nevertheless, it is an indication that initiatives like ESSTE at GTC have a chance of being formally recognised for what they had been striving to achieve. This hopefully would result in resource support which is needed by prototype models like ESSTE to be adequately funded and trailed.

CHAPTER FIVE

THE ESSTE PROTOTYPE MODEL IN PNG : DEPICTED THROUGH THE HAUS LAIN KAKARUK (HLK) PROJECT AT GTC .

5.1.1 Background of HVTG and HLK

Entrepreneurship and community education as expressed already has been lacking in PNG Secondary School Teacher Education Institutions. Goroka Teachers College with the prime objective of educating secondary teachers for PNG, shares such a constraint. This was because it needed to be more involved in the process of educating secondary teachers to be better informed of the needs and aspirations of people who inhabit particularly low income communities, in both rural and urban areas. Moreover, they are given an opportunity to acquire entrepreneurial skills, knowledge and attitudes to enable them to assist such communities productively in the form of income generating activities.

This report provides a record of activities which occurred between April 1990 and December 1990. It also projects an argument for GTC as a higher education institution to become dynamically involved in entrepreneurial community activities. This study also presents another dimension to the kind of assistance that needs to be provided. It presents a realistic and viable money making venture rather than mere income generating interests for the sake of providing learning opportunities for students, but are not backed by realistic planning with long term sustainability as a major objective.

From the perspective of the college, for too long its various curricula had been classroom oriented, neglecting opportunities for real life experiences outside the confines of the

classroom. This leads to the questions of relevance, standards and quality of education of secondary school educators. The effects then spiral on, but at this stage, one major argument of this exercise is to relate appropriate college curriculum to the relevant community activities. Such a programme is expected to be very flexible initially, and examples of what had occurred already would be deliberated on. Ultimately though, the benefits are expected to be mutual, and some which were experienced already will be discussed.

The Humilaveka Village Technology Group (HVTG) is a reported case of how GTC established community links with low income households in neighbouring village communities. Firstly, the resources employed were either local or cheaply acquired from elsewhere. GTC's involvement provided other essential support services which the community lacked. One such resource is the pool of management and technical expertise in the form of lecturers and students, whose services, the concerned members of the community consulted in the process of establishing their entrepreneurial activities. These activities range from sewing and baking for women to piggery and poultry by the men as will be indicated by deliberations on the ESSTE model. The Plan provided is a detailed example of how to plan and operate one such project, which in this case is poultry.

Secondly, the case study provides a practical example of a planned approach to profitably operate a poultry project. It also goes to show that a planned approach can cut down the chances of failure and increase its chances of success and sustainability in the long term. The members of the community would also be made to feel that they are not being exploited, for the sake of providing learning opportunities to the students who would be involved in the project either directly or indirectly.

Thirdly, chapter two and three had illustrated lessons learned from similar cases and research studies embarked on in the past. Furthermore, it had also highlighted some of the major aims and goals which relate to official government policies, and encourages activities that HVTG had encompassed. In the case of GTC as a higher education institution, HVTG

activities that HVTG had encompassed. In the case of GTC as a higher education institution, HVTG was a unique opportunity to establish meaningful community relations which had been lacking previously.

Finally, but not the least some recommendations based on the authors's experiences with the project will be also be highlighted. Hence, deliberations on how the students were actually involved, as well as can be involved in future will be suggested. Essentially, the whole approach is meant to be informal and flexible, relying very much on personal initiative and commitment of those concerned. In the case of GTC though, a lot of encouragement and commitment was also forthcoming from the administration.

In a nutshell, HVTG was a learning experiment for all participants and if sustained further had a real potential to be a success. It was an entrepreneurship education project for the students and the community concerned. Essentially, this meant that through a series of meetings the community identified the activities that needed technical or administrative assistance. After providing most of the basic resources including labour and land, GTC provided the expertise and realistically researched and critiqued plans. The rest of the processes resulted in the symbiotic learning, teaching and work experiences that both parties exploited to their advantage. Hence, the term Entrepreneurship in Secondary School Teacher Education (ESSTE) depicts an attempt to provide education of entrepreneurial nature to both in-school and out-of school audience depending on which side of the coin one looks at it.

5.1.2 Specific Concerns of GTC

This reported case, fulfils two purposes simultaneously. The first one relates to GTC's efforts to employ its resources to assist people in low income earning communities to sustainably and profitably engage in income earning activities. During this process, trainee secondary school teachers who lack the initiative in involving the community in the education process would be given the opportunity to do so. Moreover, they would be able

education process would be given the opportunity to do so. Moreover, they would be able to gain in social and entrepreneurial skills enabling them to sustain similar community links in their future career. The end result pertains to creating and maintaining a harmonious but mutually experienced spiral of beneficial effects for both parties involved, which is meant to out-weigh the opportunity costs of not establishing such a situation.

5.2 Specific Aims of the ESSTE model

Some of the major objectives of ESSTE study encompass the following ;

1. Present the trainee student teachers with real life problem solving situations and develop in them, the morals and ethics of social responsibility.
2. The local community would be given the opportunity to capitalise on the skills knowledge and attitudes they need to develop viable social and economic activities to initiate desirable changes to their way of life.
3. Goroka Teachers College as an education institution would be given an opportunity to serve the needs of the educationally disadvantaged within the vicinity of its physical environment before affording its services to more advantaged groups.
4. Potential for social harmony between GTC and the local community would be greatly enhanced, thereby minimising conflicts between them, like the regular landowner related disputes.
5. Lecturers and trainee teachers would be given an opportunity to disseminate their knowledge, skills, and values to a wider audience rather being restricted to the classroom.
6. Lecturers and trainee teachers would also be presented with an important opportunity to learn informally from those from the community they come into contact with.

5.3.1 ESSTE Prototype Model in Action : A Summary of the Operations of HLK

Hauslain Kakaruk (HLK) is a chicken meat production venture that has a promising future in the Highlands region of Papua New Guinea (PNG). It is an attempt to assist small holder producers to have more established markets and thus a regular income. This business plan would hopefully convince potential investors, of the worthiness of the project and Educationists of the strategic role and benefits to Goroka Teacher's College. Thus, any assistance that can be given by any financier will be on the understanding that all possible measures have been taken to ensure that the idea can be implemented successfully.

Moreover, the HLK plan had the support of the necessary expertise available at Goroka Teacher's College (GTC) acting as an incubation centre to promote its initial development. This plan would show how such an initiative can be made possible. Mechanisms such as a workable structure and appropriate compensation would act as motivating factors for a cohesive effort to eventuate and foster its progress.

The cash flow analysis and the financial projections will indicate the level of profitability of the project. This should show that the people who matter the most and provided the most labour, gain the most benefits. These are the small holders and returns to them will obviously increase as they increase their production capacity. The administrative aspects of the venture can also receive a fair share, enough to enable it to meet its operational costs. The small amount of profit made will be for the HLK to invest in order to meet contingency requirements and enable it to meet its expansion plans in future.

One major goal of the HLK is to create self employment amongst those who are not employed at the moment. In households where income levels are very minimal it was an attempt to increase the income levels and thus the standard of living of the participants. Hopefully, this can also mean a drop in crimes related to poor income levels of those

people. It is also an initiative to foster good relations between the landowners and Goroka Teacher's College.

Another major aim is to encourage college students with assistance from their lecturers to relate some of their learned skills, knowledge and attitudes to the wider community's development. A favoured outcome is to create a more appreciative attitude to the needs and aspirations of people in local communities. Benefits and costs are intended to be balanced and mutual between the parties concerned even if some are easily measurable whilst others are not.

5.3.2 Market Analysis

The target market for the venture will be the local Goroka town area in the first instance. The organisations will include the supermarkets, boarding schools, and the GTC's dining hall as the initial market. As the reputation of the venture and its marketing capacity becomes well established, it could vie for a share of the larger market in the highlands region. This will include shops and schools in other towns as well as schools and colleges. One of the most lucrative market that would be the prime target of the venture is the giant Porgera Gold Mining Project in neighbouring Enga Province. That project employs thousands of workers and the business of supplying them with poultry meat is as yet not fully localised. The geographical areas that HLK would endeavour to market its products beginning with a smaller area in the short term and expanding to larger areas in the long term. *Appendix B* explains the planned approach to achieve such an expansion in future.

The main competition comes from the Zenag and New Guinea Table Birds (NGTB)¹ on the coast in Lae, 800 km away. They also operate on the same principle of small holder ownership and at the moment dominate most of the available higher income markets in the country. However, their products are relatively expensive and are usually beyond the means

¹ Zenag and NGTB are the two of the three largest Poultry rearing and processing companies in PNG.

means of the low income earners. These low income earners would be the target group of the venture and should provide the competitive edge for the project as opposed to the established firms. Moreover, the HLK's products would be fresher and more appealing to customers, unlike the frozen products supplied by its competitors. Its competitive edge over other smaller smallholder producers operating individually, would be HLK's ability to do high quality slaughtering and packaging aside from a more secure market for those operating under its auspices.

5.3.3 Marketing and Sales Activities

The marketing strategy is one that attempts to supply the meat requirements of the various organisations or individuals at the times when the need is there. For instance schools need chicken meat for their end of the year party and so contractual obligations would be confirmed with the schools in advance. This also allows HLK to have time to increase its sales capacity amongst the small holders to meet these requirements adequately.

The other more common markets would be secured on contractual basis initially on a monthly but later as production levels increase, more regularly. This involves the business houses in the town at the earlier stages whom bulk sales would be made directly to consistently. Later on, other larger markets will be included.

Finally, the last segment of the market are consumers who prefer to buy straight from the farm. They can be individuals or bulk buyers. They are the ones who are prepared to dress the chicken themselves, hence they can buy the products live and cheaper also.

The sales strategy will mean sending out sales persons to potential customers to negotiate sales on behalf of the firm. Hence, a charismatic sales person like the manager of the venture now, will take the lead to make the initial contact with potential customers. This is also an attempt to portray a very positive image of the firm earlier on and gain the

confidence of the customers with total fulfilment of the original obligations.

Later on as the operations expand, the services of other sales persons would be used whether directly or indirectly. Indirectly, sales persons would be volunteers like student teachers visiting schools and acting on behalf of the firm.

The key to the success in making sales would lie in the more personal contact that can be established between the firm and its customers. Hence, a good rapport and relationship with the customers would be the crucial factors here. This should also be cemented on the fact that customers must be made aware of the benefits to the community when doing business with HLK as well as to GTC its supporting agency.

5.3.4 Research and Development

In broiler meat production industry the huge advantage is that the national government undertakes most of the research and breeding programmes for the small holders. Hence the breed of meat birds that can be reared has been scientifically proven to be most appropriate for the climatic conditions in the country, and more specifically in higher altitude areas of PNG. In any case the local veterinary officer is always available, when needed.

Hence, the effort of the project would be directed towards the education of the small holders to be more effective and efficient in the utilisation of their skills as chicken farmers. The students and college staff of departments like PVTCS agriculture, commerce, and Design and Technology would be involved in transferring those skills knowledge and attitudes. Mostly that will be done informally through field assistance programmes. The first stage of such a programme would involve sending the manager and an assistant on a study tour of similar projects in Lae on the coast. Later on other farmers can be trained both formally and informally through the expertise available at the college in the necessary aspects of the project related to their input into it, and if finance permits, more study tours to

to Lae can be arranged .

5.3.5 Organisation and Personnel

The manager does not have most of the skills to take full control of the project but he does have the foresight and the ability to seek help when the need arises. This is an advantage as the more he learns the more able he is, to take full charge of the project in the near future. As a former teacher that also gives him a huge advantage to be susceptible to learning and is more effective and efficient in disseminate the knowledge, skills and attitudes to the small holders who look up to him. This is because as a community leader people respond to him better than to an outsider. Hence, he and his assistant (s) would be the medium of communication that is essential to educate those involved and ensure the sustainability of the project.

However, the pool of knowledge on the various aspects of the business operations is immense and is readily available. These are the various GTC lecturers who have offered their services on a voluntary basis. Michael Kapari as an expert on rearing poultry and Felix Babilis assisting in management matters have, enabled the project to have progressed to stage 2 in 1991 (*Appendix B*). Then, there are others who have volunteered to help in the absence of the two gentlemen for studies overseas. They are just as qualified if not more than the two who have left. Others like Jerry Semos from the Social Science department have occasionally assisted the group in seeking Non Government Organisation (NGO) assistance financial or otherwise both internally and externally.

The organisational structure of the venture involves various people in the community whose services will be most fruitful when required by the venture. It is one that needs to be revised but it has been proven to be workable. This is evident in the steady but sure progress of the project. (see *Appendix L*)

5.3.6 Financial Resources

A major financial achievement of HLK has been the recognition and financial assistance allocated to the venture by the Eastern Highlands Provincial government. The total amount given was K7,000.00 (NZ\$12,000.00) which the group was supposed to utilise to expand the self help project to involve more people in the immediate community.

The financial projections have indicated that the project is viable especially when the production level reaches 500 plus meat birds. Profit levels are not that high but small holders would receive 80 % of that profit. Other benefits of the project are not easily measurable as stated in it's mission statement .

5.3.7 Diagram of the model (Noted in Appendix M)

The diagram as shown indicates the operations of ESSTE in 1990. It displays an overall indication of how ESSTE is organised. HVTG specifically refers to the local community's organisation of their own people to take advantage of what GTC can offer. It should also be understood that HLK described already is only one of the Projects of the ESSTE model. The academic departments of GTC involved also vary depending on the appropriateness of the project . It can also be assumed that these departments will produce specific Business Plans like the HLK project .

5.4 Accomplishment of the HVTG Projects

From the perspective of the community involved the following was accomplished ;

1. Two poultry projects were started generating income earning opportunities for the families involved. A lot of assistance leading to that was provided by the GTC agriculture education department staff and students, as indicated in the plans.

2. A desk construction venture began producing desks for community schools. In 1990 they had produced and sold about 120 desks. This was made possible when GTC offered its work shop facilities for use by the local group as well as technical assistance from the Design and Technology staff and students.
3. Trainee health educators conducted clinics and taught community hygiene to the members of the village community. They also initiated a plan to construct a water pump for use by the community.
4. The Home Economics department staff and students educated the moment on various aspects of home care. With such assistance, the womens' group was able to create money making ventures like baking scones and sewing and selling clothes.
5. Social Science Department which the author was a staff member, provided administrative support to HVTG. And this plan if it is to prove useful then it would be another achievement.
6. Positive productive relations with the college was also achieved. This was evident when the administration of the college through the discretion of the principal (Mark Solon), held an open gift and goods sharing with the community. On that occasion (November 2, 1990) food was given to representatives of the various local community leaders around the campus. This was given as a token of the college's appreciation of their cooperation through out that year (1990).
7. Within the course of the other activities, entrepreneurial skills, knowledge and attitudes were imparted to the participants of the projects. The two leaders of the village, who were involved especially acquired entrepreneurial traits as described by APEID.

5.5 Accomplishments of GTC

From GTC's perspective, the following are its accomplishments ;

1. Students from the various academic departments mentioned above, undertook

various research and field exercises in the village communities. Through such exercises students developed community relations skills. Those who were involved with the money making ventures also acquired entrepreneurial skills. For instance the students from the agriculture education department, who were involved with the poultry projects evaluated the various difficulties the farmers were experiencing. They then provided them the necessary advise which assisted in the viable operation of the project.

2. Members of the village community on certain occasions had been brought into the classrooms to deliver speeches relevant to the topics studied by the students. For instance, Social Science students had the benefit of George Sari (Village elder) coming in to talk about traditional religion which used to be practised by the local tribe.

3. Local youths get to respect and cooperate with the students on a social basis whereby the local rugby league competition composed of teams from both groups.

4. Those who had lived and worked at GTC for many years noticed a significant drop in crime rate at the college campus. For instance, there was less stealing, burglary, and assault cases involving college students and the local youths.

5. The college administration at that period of time, (1990) did not have to put up with the regular land claim disputes.

5.6 Serious Shortcomings of the ESSTE Model

The following are some shortcomings of the ESSTE model especially as experienced after its first stage of operations :

1. The landowners had reservations about the projects because once the settlers start making money from the land they had been allowed to squat on they feel the compensation for that land should increase also. The way around that could be some sort of rental system to satisfy the landowners.

2. A lot of patience and flexibility is needed, as people in the local community need to be patiently but appropriately motivated. Any imposition of ideals and values would not secure cooperation in the long term.
3. Related to that is the fact that landowners would rather see themselves benefiting the most from the project rather than other squatting on their land.
4. It would help the project's progress if some sort of official recognition is accorded to the operations of the project from the appropriate authorities.
5. Subsequently the teaching staff of the college and students who are involved must also be given some official recognition of their efforts (if not remuneration if the projects prove successful as suggested in The BP) to ensure their continued participation.

5.7 Summary : Some Implications of ESSTE on GTC Teacher Education Programme.

1. ESSTE is a practical example of the type of resources available at GTC, which can be used both formally and informally but flexibly in the process of assisting other local communities to develop.
2. The case of the poultry project (HLK) illustrates and highlights the need for adequate planning in conjunction with the community in order to ensure sustainability and profitability.
3. The involvement of staff and students afforded a learning environment, which addressed the question of relevance and appropriate education for the nation's secondary school teachers.
4. The students teachers would then be in a position to acquire some social, economic and entrepreneurial skills, knowledge and attitudes which classroom learning alone could not provide.
5. In the long term it is hoped the whole process could diffuse and reproduce itself many times over in the secondary schools in the country through the student

teachers involved.

6. In time, it is hoped that the mutual benefits of HVTG would be fully realised when in a nut shell, the whole process produces enterprising individuals both prospective secondary school teachers and villagers, who would be able to be more productive than if they had not been a part of this entrepreneurial education process.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS : THE FUTURE OF ESSTE PROTOTYPE MODEL IN PNG .

6.1 Introduction : Why a PNG model of ESSTE ?

In a fast changing world, both developed and developing countries have to continuously combat new challenges. The educative process of producing productive human resources is one challenge that is usually given high priority. The costs though are not always compatible with other resource inputs into the system. Developing countries seem to be bigger losers as the fruits of education begin to turn sour. This dilemma is not new and has been around as long as the formal education system when adopted by TWCs, as referred to by Chandler Morse :

‘...schools in developing countries represent modern elements in society. They tend to teach modern rather than traditional values, and teachers tend to represent “city” rather than “rural” modes of behaviour. For this reason the schools are frequently mediators of the culture, the intersection point between the traditional and the modern. Much depends upon how well the schools play this role. At worst they may alienate the child from his traditional culture and help to thrust him unprepared into the modern world where he takes on the form but not the substance of modernity.’ (quoted from, Hanson & Buembeck , 1956 : 178)

The worst case is where students especially in secondary schools, in pursuing the promise of a modern education end up as its victims. Ironically in the case of PNG, their teachers had been educated and trained to perpetuate such a situation. As Morse rightfully puts it, they take on the *form*, or value for what is modern but *not* the *substance*, or what it takes to be productive in the modern world. Every year millions of students in TWCs and thousands in PNG become such psychological casualties of attempts to develop a modern system of education. That is one of the great dilemmas of the formal education system as opposed to traditional education as expressed in Chapter 1.4.4, as an ‘education trap’. Student teachers can be trained and educated to minimise

such an end product in particularly the secondary school system of education in PNG, which this thesis is most concerned with.

In light of such arguments Richard Jolly, Deputy Director General, UNICEF admitted that (Todaro, 1989: 330) ;

‘ Virtually every serious commentator agrees that major reform within Third World education is long overdue’

One such change is arguably Entrepreneurship education, which the previous chapters had presented a preliminary case and argument for. The skills, attitudes and values of being enterprising is already being considered as a fourth factor of production and this study is merely projecting a practical case of how such an idea can be utilised in PNG (Ibid & APEID , 1992 : 13).

6.2 Conditions for ESSTE model to operate sustainably

In the course of this study the following observations had been made towards making entrepreneurship education a reality in the context of Goroka Teacher’s College ;

1. Motivated community leaders must first be identified before initiating the process of involving the community in entrepreneurship education.
2. The community themselves must see the need and thus initiate the idea of any entrepreneurial activity.
3. The Institution must have staff members motivated enough to move education outside the traditional confines of liberal classroom-type education to enterprise education.
4. The administration of the college or school must itself be enterprising enough to create a flexible environment which will allow such educational innovations to prosper.
5. Goals of projects must not be over ambitious as whatever achievements can not be seen in its proper context.
6. Innovations require patience and flexibility and the same is true for this one.

7. Students who are not members of that community must be oriented towards the nature of such a programme before becoming involved to appreciate that social and cultural environment.

8. Land use and ownership must be verified from the very beginning to avoid conflicts later on.

6.3 Summary : What does the Future hold for ESSTE in PNG ?

Finally, this study had been a search for education enrichment rather than reform. The aim of this exercise will have been achieved if in its own simple way it had created some awareness of the need for entrepreneurship education not as a substitute but a complimentary aspect of formal liberal education. However, there is no denying that enterprise remains at the heart of economic development which developing countries have for decades been striving to achieve. What this study had presented is a variation from the norm of formal liberal education.

Entrepreneurship education in the context of this study addresses various dilemmas which exist in developing countries, which formal liberal education had created as casualties of its achievements. One such dilemma is appropriately expressed by Mali Voi a former Provincial Secretary in PNG. (Matane,1986 : i)

‘The Department of education has dynamically created its own embarrassment where the products of the formal education system have far outstripped the urban employment sector’

Entrepreneurship education as presented strives to utilise available resources in higher education institutions like GTC to contribute to the process of creating self employment amongst the disadvantaged in the community and thus, contribute back to society investments made in their education. At the same time it is meant to educate (and motivate) future secondary school teachers to be capable at assisting in community development if they choose to be involved in such activities.

Furthermore, this study highlights a need for appropriate and relevant education directed at the development aspirations of a TWC. A lot of this is also evident in the less developed areas of a TWC. In most cases like in PNG, it is the local village community where 80 % of the people live. The present system had also been a process of alienation from the needs of such environments.

The case of HVTG as projected through the HLK project, is an example of how GTC as a Secondary School Teacher Education institution strived to refocus attention on the needs of the local community and in the process enriching its own curriculum. This is not only to meet the goals of integral human development as presented by the Paulias Matane model but to enrich and add some missing dimensions as recognised by enterprise education arguments of this thesis. *Appendix N* , adapted from the Matane model of education for PNG and the APEID model depicts such a situation.

The cases of the community and Secondary schools discussed in Chapter 4, have indicated attempts in this direction from the lower levels of education in PNG. The Utula Samana proposal (*Appendix K*) hopefully, signals a need for more higher education institutions to become involved in this process also. Beyond that the calls for such an educational process to eventuate remain rhetorical.

As such Bown in her studies on the formal education system's links with the community in several African countries and PNG had this to say (Lillis, 1985 :59) ;

The Skills of the teacher represent perhaps the most obvious area in which a university can help or hinder school - community relationships, since universities generally represent the apex of the teacher training system, either through direct teaching of faculties or institutes of education or through the validation of training elsewhere. If teachers are not prepared in the skills of adult and community education or alerted to ways in which knowledge of the community can be brought into the classroom, then efforts to promote the school as an engine of mediation between the knowledge of the community and the knowledge of the classroom will inevitably flounder.

The arguments presented in this study merely presents a preliminary case for entrepreneurship education in Secondary School Teacher Education in PNG. This is

because other related issues, like how formal should it become, or should student labour be compensated and how can some of its successes be measured, still remain unresolved. However, if it can open a few tracks, enabling better chances of survival in this modern economic jungle of PNG, it would have been a worthwhile exercise.

6.4 Recommendations

The following are the recommendations of this preliminary study :

- 1. The ESSTE prototype model be pursued more purposefully than previously, taking into account the discussions and arguments in this preliminary study.*
- 2. Communication on the subject with the Commission of Higher Education is advisable. For instance, the Samana proposal on Tertiary Students Scheme for Participation in Community Development (TSSPCD) never came to the attention of those involved in the HVTG project at GTC.*
- 3. The conditions needed to be in place must be given the consideration and practical attention it deserves before ESSTE is pursued any further.*
- 4. Since this is only a preliminary study, more detailed study of the ESSTE model should be initiated and the findings made available to those concerned.*
- 5. It is important that the goals of such a project be realistic and not over -stated because that can lead to frustrations and loss of motivation by those involved.*
- 6. The central idea is to 'work with the needy' from the needy in community households rather than 'for them'.*
- 7. Those who really need help are not as easy to identify and more effort need to be made to identify and motivate them to get involved.*

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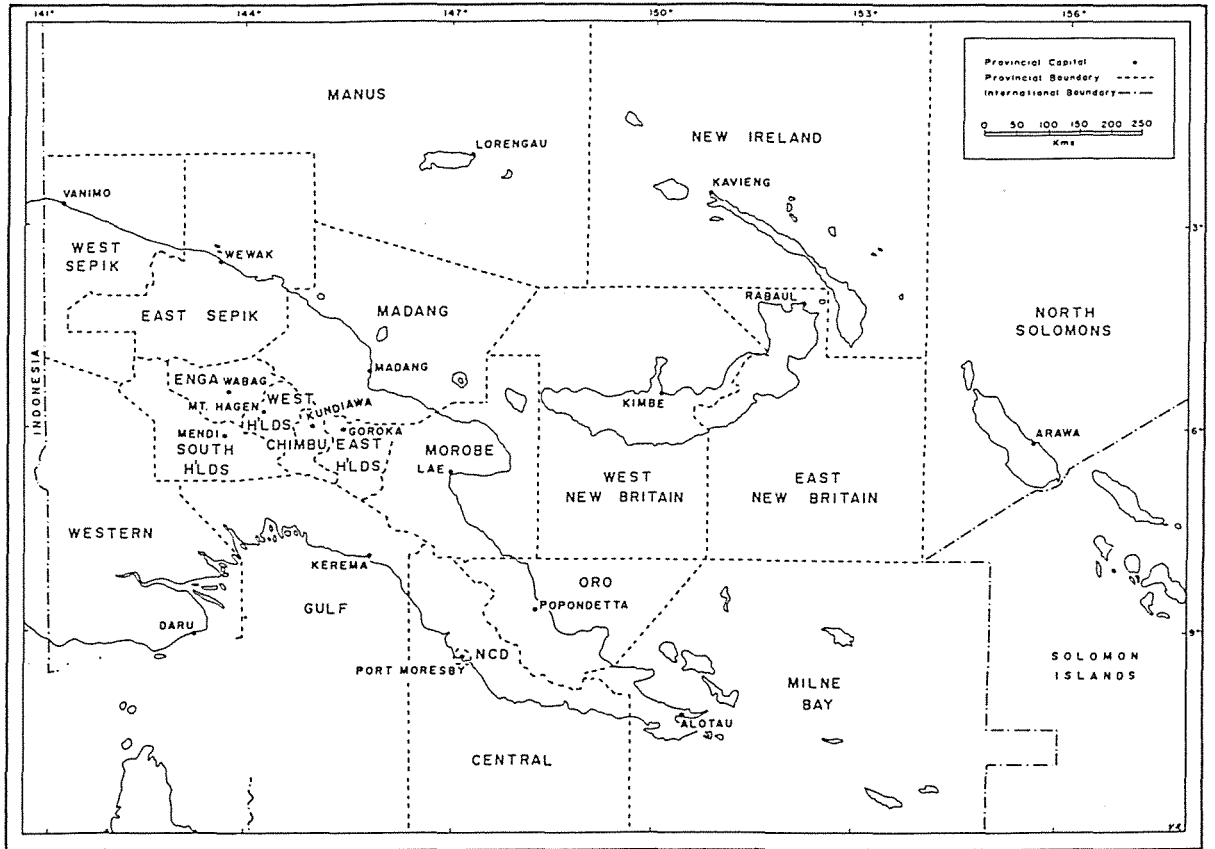
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Appendices

Appendix A

A Map of Papua New Guinea Showing Provincial Boundaries



Provincial Boundaries in Papua New Guinea

GEOG DEPT UPNG 28 P 455 PNG 10 83

Source : Bray & Smith (ed), 1985, pg. (iii)

Appendix B

Education and National Development

Ideal Types of Education and Development

Type of society	Type of development history	Relationship between education and development
A. Developed capitalist (United States, United Kingdom, Federal Republic of Germany, etc.)	<ol style="list-style-type: none"> 1. Free market accumulation of capital 2. Historically developed industrialization 3. Capital intensive technology 4. Priority of growth over equity 5. Export-market oriented 	<ol style="list-style-type: none"> 1. High participation in education 2. Education for individual achievement 3. Emphasis on high intrinsic value of education 4. Hidden ideology in education (the "hidden curriculum") 5. Open recruitment and selection system
B. Less-developed capitalist (Brazil, Nigeria, Kenya, etc.)	<ol style="list-style-type: none"> 1. Integrated with world capitalist system; free-market economy 2. Dual economy; small industrial base 3. Intermediate technology; oriented to capital-intensive technology 4. Priority of growth over equity 5. Export-market oriented 	<ol style="list-style-type: none"> 1. Expansion of educational system at all levels 2. Education for individual achievement 3. High value on academic curriculum; high orientation to public service sector 4. Hidden ideology in education ("hidden curriculum") 5. Elite (less open) recruitment and selection system
C. Developed socialist (Soviet Union, Poland, Czechoslovakia, German Democratic Republic, etc.)	<ol style="list-style-type: none"> 1. Planned accumulation of capital 2. Planned rapid industrialization 3. Moderate labor-intensive technology 4. Priority of equity over growth 5. Domestic-market oriented 	<ol style="list-style-type: none"> 1. High participation in education 2. Education for collective achievement 3. Emphasis on high instrumental value of education 4. Overt ideology of education (the "new socialist man") 5. Planned recruitment and selection system
D. Less-developed socialist (People's Republic of China, Cuba, Angola, Tanzania, etc.)	<ol style="list-style-type: none"> 1. Break with world capitalist system; planned economy 2. Dual economy; small industrial base 3. Intermediate technology; oriented to labor-intensive technology 4. Priority of equity over growth 5. Domestic-market oriented 	<ol style="list-style-type: none"> 1. Expansion of educational system with literacy and universal primary high priority 2. Education for collective achievement; education for self-reliance 3. High value on vocational curriculum; high agricultural orientation 4. Overt ideology of education (the "new socialist man"); formation of new state identity 5. Planned recruitment and selection system

Appendix C

The Five Year Plan- HAUSLAIN KAKARUK

(This plan is now in it's second year of operation)

STAGE 1 (1 YEAR) 1990

PLANNING & CONSTRUCTION

- Activities involve
- a) forming a mangement commitee
 - b) Carrying out Market Reaserch
 - c) Applying for contracts with potential customers
 - d) Applying for funds from various funding sources
 - e) developing infrastructure using local resources
eg. poultry sheds using bush materials.

STAGE 2 (2 YEARS) 1991-1992

IMPLEMENTATION

- Activities involve
- a) Selling products in various market situations
 - b) Using the "resource fund" to be established by now, to further develop and expand what has been established already.
 - c) Continue seeking financial assistance from variuos sources like the N G O's funding agencies and the National and Provincial Governments. (Evidence thatthe group is committed to it's goals & is well organised will carry alot of weight in this regard)

STAGE 3 (1 YEAR) 1993

EVALUATION

- Activities involve
- a) an assessment of the project is done systematically and it's weaknesses and sucesses are highlighted.
 - b) From that recomendations of further improvement and adjustments to maximise the chances of achieving the aims of the group's goals are also verified and operationalised.

STAGE 4 (1 YEAR) 1994

CONSOLIDATION

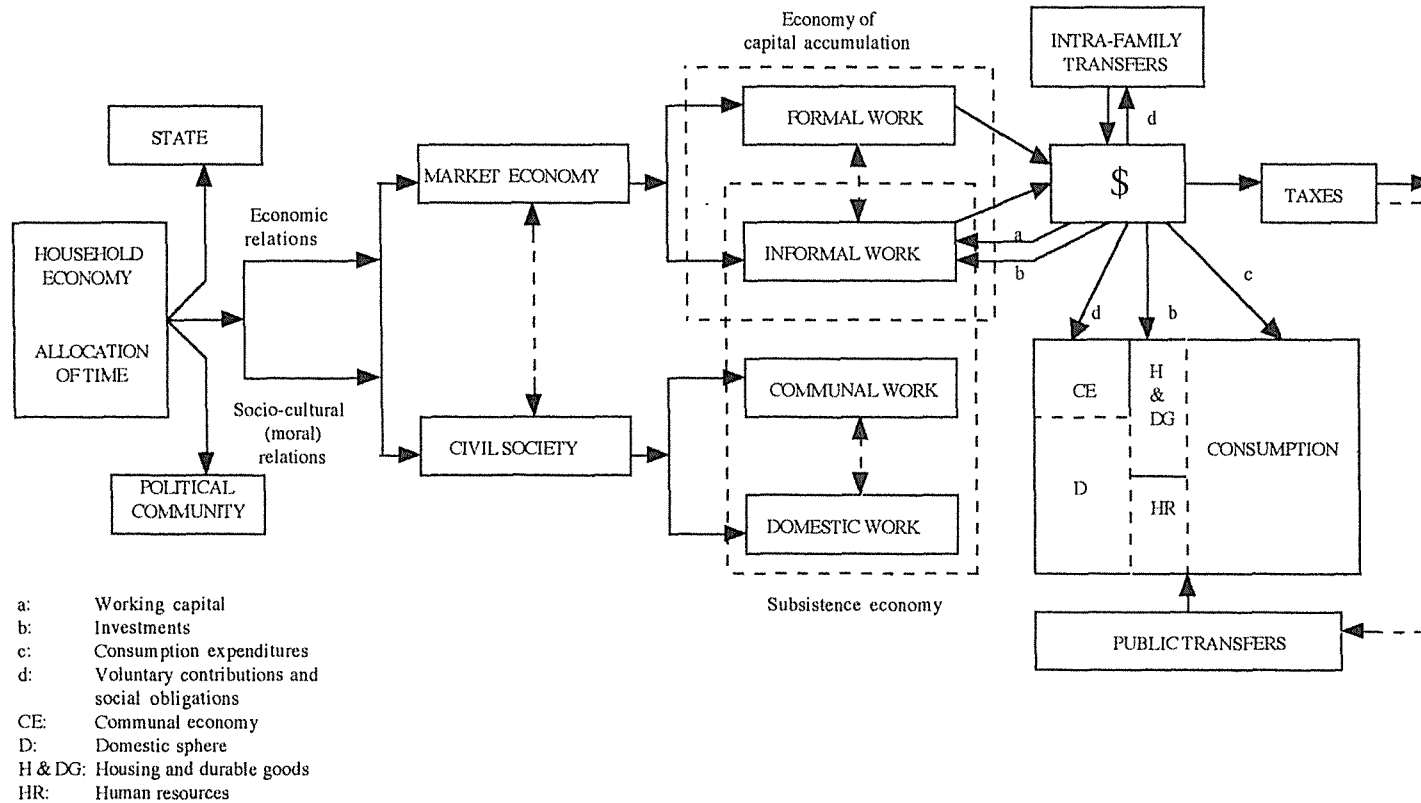
- Activities involve
- a) Tightening up or capitalising on the successes.
 - b) Making changes and readjustments where there is a need as highlighted in the assessment stage to minimize the negative effects of the failures and optimise the utilisation of resources available to the group to enhance the vigorous pursuit of it's goals.

After the fifth year, this cycle can be repeated again starting from stage one but this time in a much bigger way involving more capital as expressed in the goals at the begining of the Business Plan, than the previous stage one..

Thankyou... By Mr. Felix G Babilis

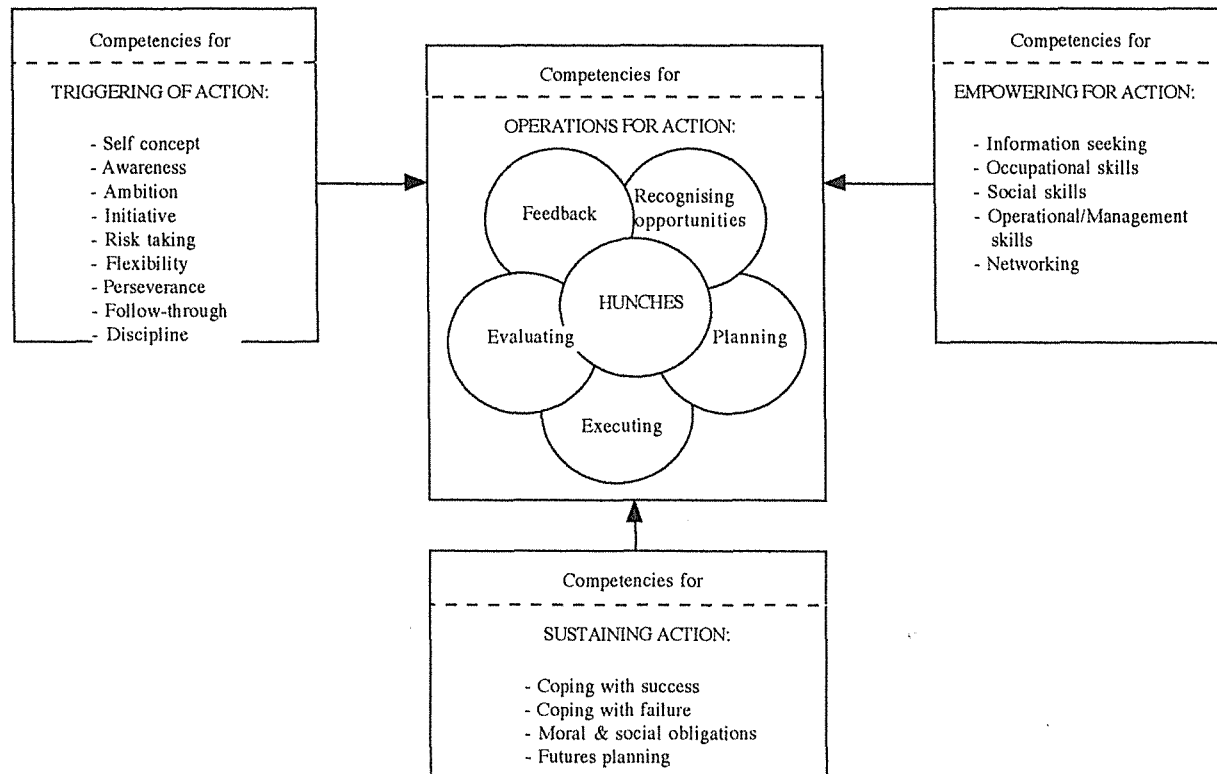
Appendix D

THE SUGGESTED HOUSEHOLD ECONOMY MODEL



Appendix E

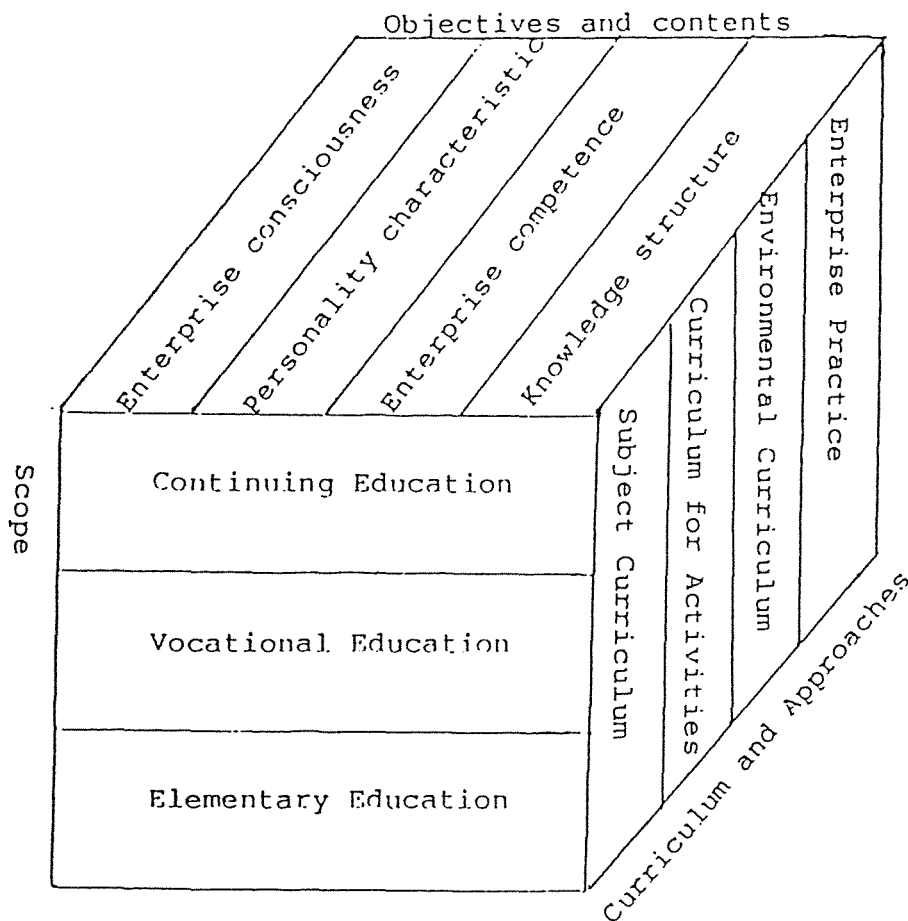
Innovative Education for Promoting the Enterprise Competencies of Children and Youth



APEID's Enterprise Education Learning Model

The theoretical model for enterprise education

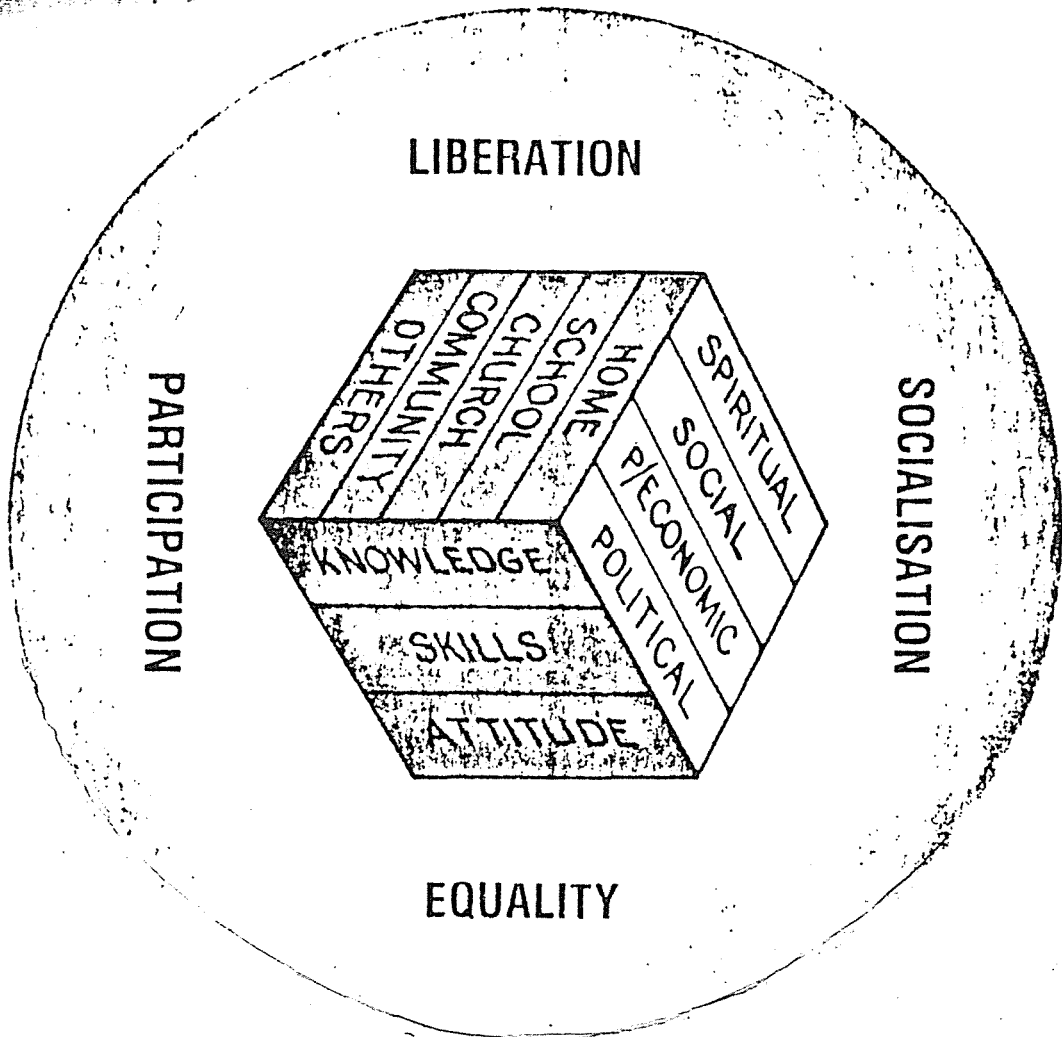
In the light of the scope, objectives and contents, curriculum and approaches of enterprise education, the theoretical model for it can be shown in the following dimensional chart:



- (1) Scope : The short-term plan is to implement the programme in the field of continuing education; the long-term plan is within the field of elementary and vocational education.
- (2) Objectives and contents : On the basis of the subjective qualities required by enterprising activities, the emphasis may diversify in the field of elementary education, continuing education and vocational education.
- (3) Curriculum and approaches : In the field of general education, the implementation may be undertaken through the forms of subjects curriculum, curriculum for activities and environmental curriculum. The approaches may be permeation and linkage. In continuing education, it may be carried out by enterprise practice.

Appendix : G

A Model for Integral Human Development



Taken from : Matane,1986, pg. 29

Appendix H

SECONDARY

Starting Dates
as SSCEP
schools:

1978: Cameron
Manggai

1979: Kagua
Karkar
Mainohana

1984: Hoskins
Kupiano

1985: Benabena
George Brown
St. Joseph's, Rigu

PRIMARY

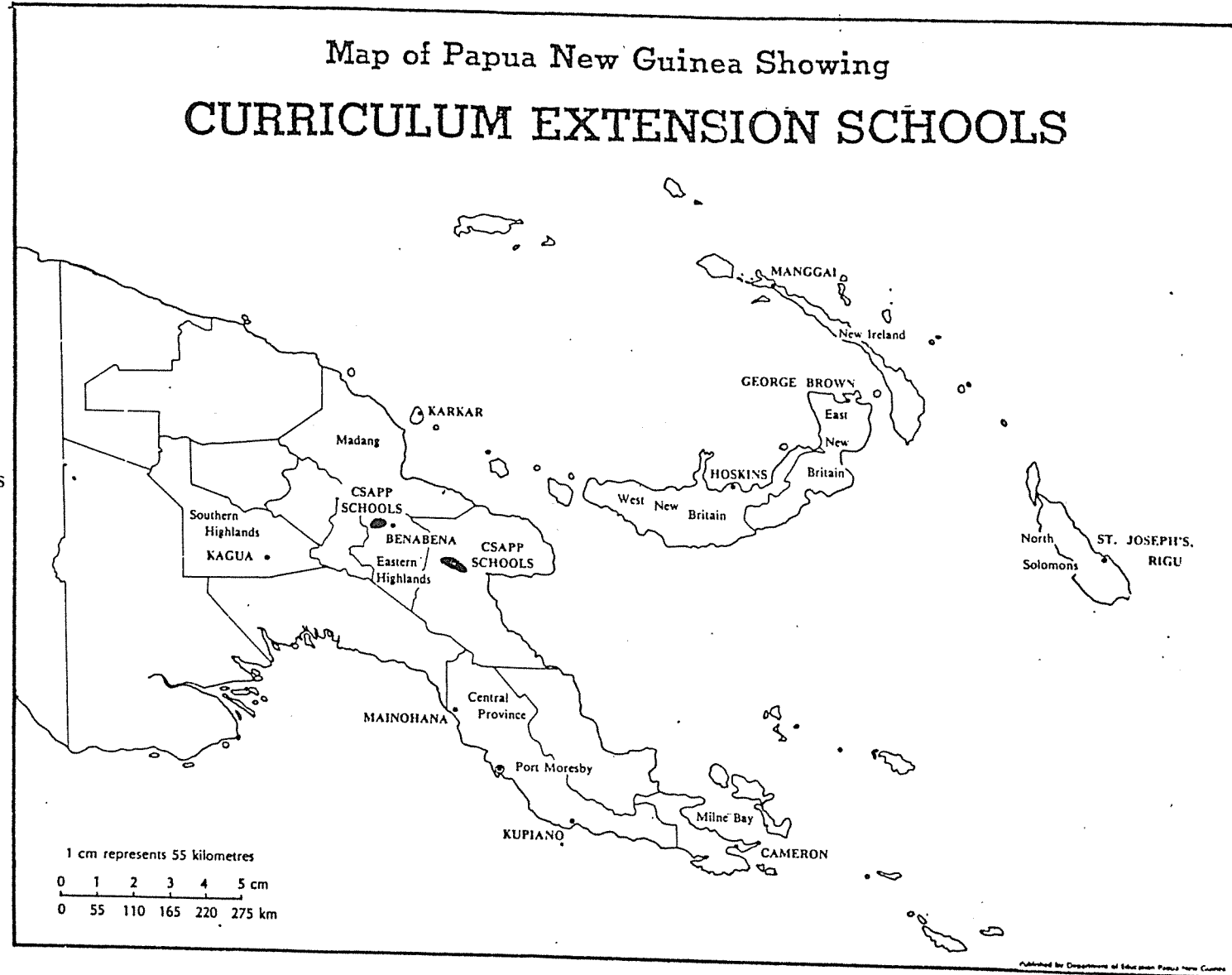
CSAPP PILOT SCHOOLS

EASTERN HIGHLANDS

UFETO
TAFETO
AKAMEKU
ASARO
ASAROKA
ONBOROA
MANDO
WAIEREPO

MOROBE

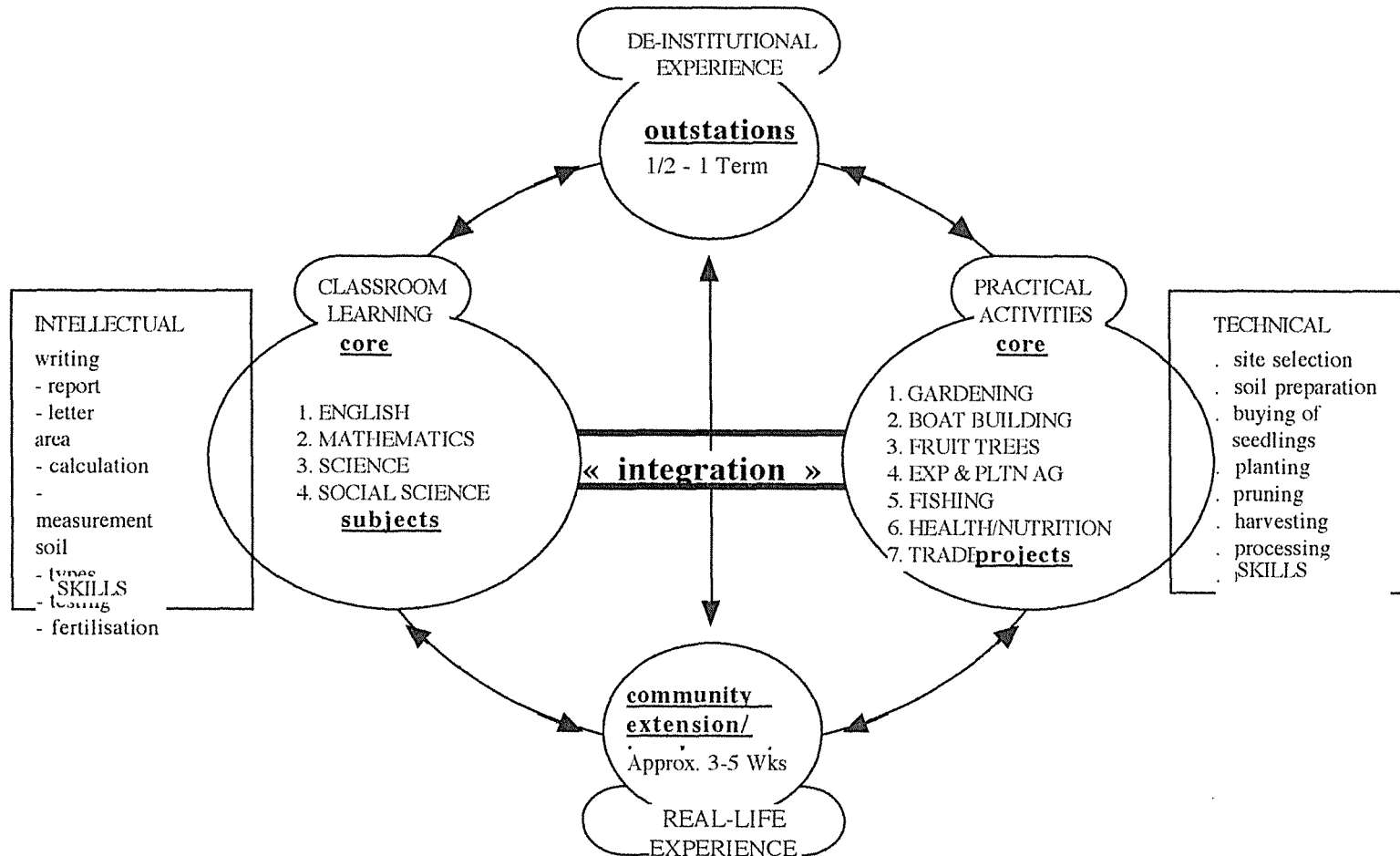
SANGAN
ARIFIRAN
RANGIAMPUN
WARITSIAN
MUTZING
WATARAIS
WANKUN
ZUMIN



Taken from : Crossley & Vulliamy, 1986, pg. 71

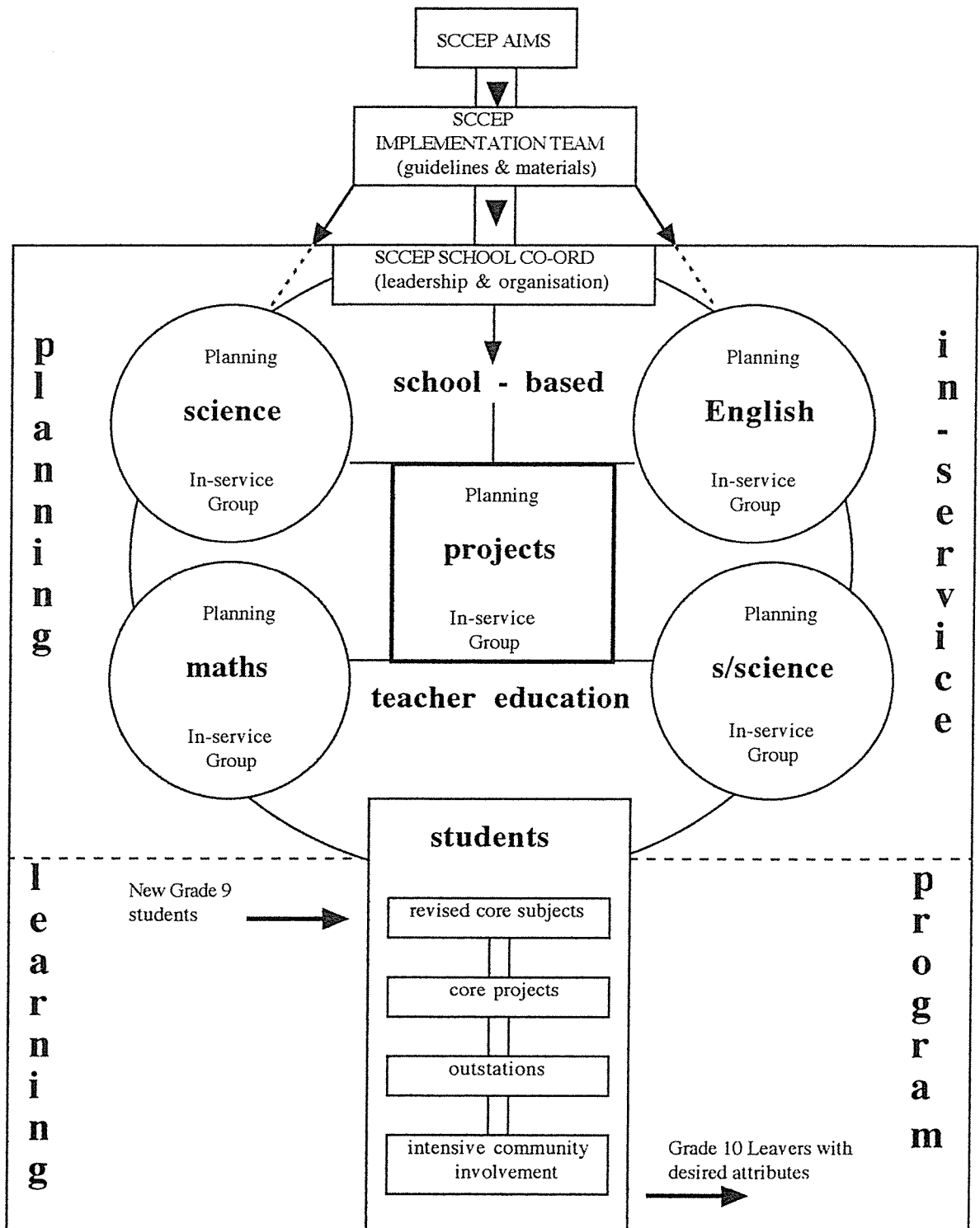
Appendix I

THE LEARNING MODEL OF SSCEP



Appendix J

IMPLEMENTATION MODEL of SSCEP



Appendix K

PROPOSED

**TERTIARY STUDENTS
SCHEME FOR
PARTICIPATION IN
COMMUNITY
DEVELOPMENT
(TSSPCD)**

FOR DISCUSSION

COMMISSION FOR HIGHER EDUCATION

JANUARY 1991

TERTIARY STUDENTS SCHEME FOR PARTICIPATION IN COMMUNITY DEVELOPMENT.

Introduction

This proposed scheme is an initiative of the Minister for Education Honourable Utula Samana, MP, to support students' participation in community based development. He intended this to aim at:-

- (a) establishing student-community links as part of their general application of skills and/or knowledge in practical terms;
- (b) establishing links between youths in formal education with youths outside the formal education system - so as to develop a sense of common purpose and respect for one another;
- (c) developing a sense of responsibility and national duty and pride.

Rationale:

The above aims provide the purpose of this scheme. Besides, this initiative is in line with one of the strategies of the National Higher Education Plan for colleges and students to be more involved in community activities. Apart from this being a token of students' appreciation for the education they receive, this also addresses the question of relevance and standards.

The proposed scheme should enhance the relationships between the colleges, students and the community. This in turn, should attract community support for the colleges for example, in reducing vandalism of college property.

Advantages and Disadvantages:

The scheme should benefit all concern for the following reasons:-

to the students:

- (1) Students would be seen to be actively participating in and making practical contribution to the development of PNG society;
- (2) Students would be provided the opportunity to initiate projects and participate in activities that should contribute to their learning experiences;
- (3) Students would be given the chance to account for the resources they would receive by providing

reports that could be assessed towards academic credits, etc....;

to the communities:

- (4) Communities would be able to get assistance at minimum cost;
- (5) Interaction between the students and communities should assist in establishing a good rapport among students, their colleges and the communities;
- (6) Community projects would be assessed by an independent observer;
- (7) The operation of community projects would be given a chance to improve;

to the organizations:

- (8) The responsible organizations would get some help from tertiary students;
- (9) Monitoring and evaluation capability of organizations could be enhanced;
- (10) Well researched base-data could be developed and maintained by organizations, etc...

There could be disadvantages that may become apparent if the scheme gets going, such as:

- (1) This may take the attention away from the majority of youths not in any formal education;
- (2) This may lead to more wasteful use of funds if it is not properly administered and monitored, and the purposes of the scheme are not strictly followed;
- (3) Assessment for the purpose of academic credits may be difficult if college programmes and student projects are not properly planned and designed ;
- (4) Students may be distracted from their academic work;
- (5) College staff may be overloaded with supervisory responsibilities outside of the classroom and the college;

Funding for the Scheme:

An amount of K20,000 has been provided to facilitate student participation in the development of their communities. The Minister has decided that this amount be budgetted in the following broad areas:-

- (a) NUS Executive grant K 5,000
- (b) NUS sponsored inter-vasity

sports carnival	K 5,000
(c) Community project grants	K10,000
TOTAL	<u>K20,000</u>

Funds for the first two categories would remain static over the next five (5) years and would be reviewed from then on. NUS would raise its own additional funds to meet its administrative expenses.

Category (c) forms a very important aspect of the policy of linking students from tertiary institutions to their communities. Therefore, funding for this category would be reviewed annually with a view to increasing this depending on merits of its implementation.

Linkages:

This scheme, should relate to the National Youth Movement Programme (NYMP) coordinated by a Division in the Department of Home Affairs and Youth. It is understood that while the NYMP involves the youths who are not in any formal education, the Minister intends that students who have the potential to assist because of their knowledge and the responsibility they should demonstrate due to their privileged positions as students, can also contribute back to society, even as students. The scheme should also be linked with activities of the literacy programmes. The Provinces should also have some input to this through the Provincial Youth Councils to the National Youth Council. Other non-government organizations (NGO's) are also involved with youth and literacy activities and the scheme should also be linked to these. Colleges will also have some input where projects are designed as part of the formal learning process. Local communities within the vicinity of the colleges will have some input if the colleges develop some projects or activities to involve the local communities.

The funding to NUS for the next 5 years should allow a more active role of NUS in relation to the student bodies (SRC's and various students' associations, societies or groups). NUS should represent the total body of tertiary students at a higher level committee approving or otherwise, applications from tertiary students and colleges for project funding.

Basis for Developing Criteria

Initial discussions were held with officers of the Home Affairs and Youth Department (Youth Division and Women Literacy Branch) on the 7th November 1990. The specific purpose of this discussion was to obtain information on the:-

- (a) procedures they have in accepting youth group proposals for assistance;

- (b) criteria used in selection of projects for funding;
- (c) list of projects approved for funding;
- (d) areas of involvement in which tertiary students' assistance would be most effective.

All of these information would assist the Commission for Higher Education, (charged with the responsibility of establishing this scheme), to:-

- (a) develop criteria for applying the scheme;
- (b) develop procedures for operating the scheme;
- (c) provide a check-list of projects that tertiary students proposals may be related to;
- (d) better relate this scheme to the efforts already being done by other people in government and non-government organizations.

Other Considerations

The following questions should also be taken into account when deciding how the scheme should operate.

- (a) What is the nature of the project (involvement);
- (b) When/where should this take place;
- (c) Who will be involved;
- (d) How they should be involved.

Information provided by the Department of Home Affairs and Youth have indicated Provincial priorities in both "economic" and "community service" projects. This should form some bases for application of the tertiary students scheme for participation in community development, thereby relating this scheme to existing community interest areas in various projects (see attached schedule).

Broadly though, the areas of involvement in these priority areas that may be useful for students as well as the communities where the projects are located are in:-

- (a) Evaluation of the operation of existing projects with a view to providing a report of the success, deficiencies, and perhaps suggested remedies for any deficiencies;
- (b) Undertaking research to establish base-data on, for example, literacy rate in communities, levels of community awareness about issues that should affect them, conducting needs analysis of the communities, etc...; and

- (c) conducting feasibility study of new minor project developments for communities.

It is suggested that this programme should take place throughout the year while students are at the colleges as well as during their vacation.

While at the college, the groups involved may depend on the needs of the local area (communities) for assistance relevant to the training/education programmes conducted in the college. This may involve groups of students based perhaps on class projects. Some of this might have already been taking place.

While on vacation, groups involved may depend on the projects being undertaken by people from the area where the tertiary students belong. This should keep to a minimum the need for special support allowances for students. It is suggested also that voluntary assistance outside of the scheme be encouraged.

Criteria

These should now lead to the development of criteria for applying this scheme. The following may be considered among the list of criteria to apply the scheme.

A: Eligibility of Applicant(s):

- (1) One must be a full-time student in a tertiary college in Papua New Guinea and be part of a college related field trip or community initiated and related project;
- (2) One should return to the local area of his origin;
- (3) One must provide the required details (e.g. about family, village, or community or group he represents);

B: Eligibility of Project Proposals:

Projects that would be supported should fall within the following general guidelines:-

- (1) those related to existing NYDP or other community based projects which have been initiated by the community;
- (2) those that would contribute to learning experiences of students;
- (3) those which would promote good relations between communities in a local area;

- (4) those which would encourage literacy and numeracy skills among the grassroots;
- (5) those that would further the knowledge of outside bodies and attract their assistance to the communities;

Administration of the Scheme:

- . As indicated earlier, the scheme should be administered by the Commission for Higher Education (Human Resources Division) in consultation and collaboration with DHY (& Provincial Youth Councils), Student Representative Councils (SRC's) (and college administrators) and NGO's where appropriate.
- . The funding should be administered under a trust account held at the Commission for Higher Education.
- . A standard application form should be given to all tertiary institutions (SRC's and College Principals) at the beginning of each year to be returned to CHE by end of March.
- . A special committee should be established to include CHE, DHY, Dept of Provincial Affairs and NUS or its equivalent. This committee would be responsible for vetting and approving applications.
- . Notification of success or otherwise of applications will be sent out to applicants by the end of April. (Those applicants for vacation involvement will be notified by October).
- . Release of funding should be made at least two weeks before the project commences.
- . A report including financial account should be submitted to CHE no more than two weeks after the intended end of involvement.
- . CHE should verify reports through consultation with various bodies and communities wherever possible.
- . Reports which suggest follow up action should be passed on to relevant authorities concern.

Conclusion

This initiative is a step in the right direction. There are many versions to this in other parts of the world and some aspects may be considered also for adaptation in our situation in Papua New Guinea. What we need is something that will help the overall development of Papua New Guineans at the least cost possible. We believe that if

properly applied, the scheme on its own will meet this criterion.

If this is successful in its initial year of implementation it should become an on-going programme.

This should now be given to the students (their SRC's), the higher education institutions and other organizations for their reactions.

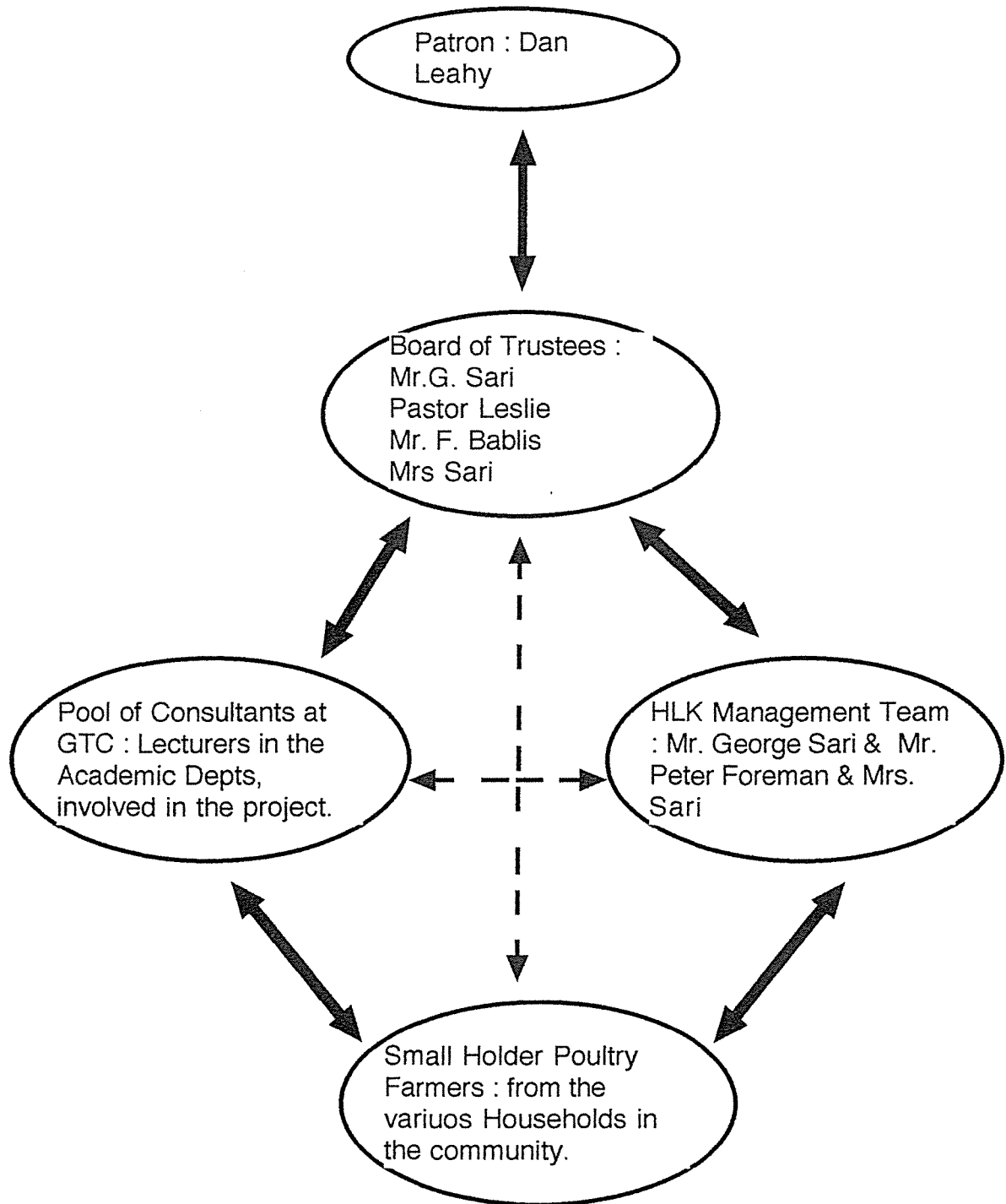
A joint meeting between CHE, NUS, DHY, Dept of Provincial Affairs(?), and NGO's should also be held before the programme is finalized.

PAUL NGABUNG
a/PPO - P & R

January 1991.

APPENDIX L

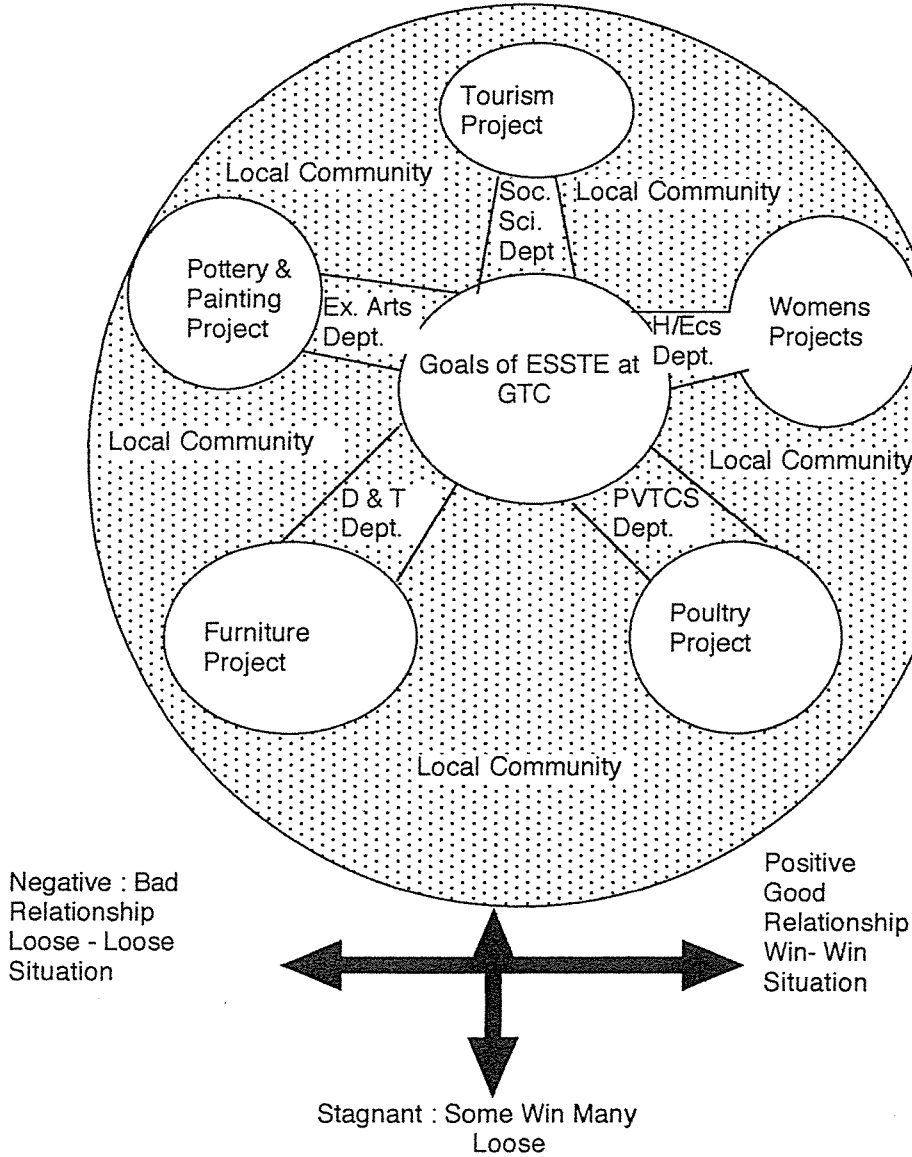
HAUS LAIN KAKARUK ORGANISATIONAL STRUCTURE



APPENDIX M

The ESSTE Prototype Model as
Tried at GTC (1990)

Imagining the whole community is a Wheel of Progress
ESSTE is like a stimulant (Engine) that make it move
in a positive negative or remain in a Stagnant position
(as shown below).



Appendix N

INTERGRAL - ENTERPRISE HUMAN DEVELOPMENT MODEL

