

# **Chapter One**

## **Description of The Study**

### **Introduction**

The Papua New Guinea Institute of Public Administration (PNGIPA) has, since its establishment in 1963, then called the Administrative College of Papua New Guinea, always been in the front line of training. It has and is the government's main training institute for public servants, despite its gaining autonomy in 1993. Being in the front line of training has subjected the Institute to a lot of pressures coming from all sectors of the economy. Some of these pressures came in the form of criticisms levelled at the Institute asserting that the training it currently provides is irrelevant and misdirected (Saffu 1993, p.2). This view was raised earlier at a workshop held on the 22 of July 1991 to assess the Administrative College Preparedness for Autonomy (Duque and Saffu 1991). Whether the problem lies in the design of the training courses, the implementation of the training courses or the evaluation of the training courses, is difficult to tell until a proper investigation is carried out. This study, in part, was focussed on the curriculum processes of course development in the Institute in an effort to find some of the answers to these criticisms.

### **Purpose of the Study**

This study was aimed at identifying the curriculum development practices of the Papua New Guinea Institute of Public Administration as opposed to the intended curriculum development model for the Institute. In doing so, there were several issues that the study addressed.

Firstly, the study intended to establish what the actual practice was. It did this by investigating how the lecturers developed their courses. The focus was on the procedures they used in their course development processes. Secondly, this study sought the staff's perception on the strengths and the weaknesses of their course development approach and how improvements could be made to better the field of course development within the Institute. Their perceptions are valuable since they offered insight into the internal functions of curriculum development within the Institute. Thirdly, the study identified what the intended PNGIPA curriculum model

was and the extent to which this model was utilised. Finally, study identified the discrepancies in terms of the similarities and the differences between the actual practices and the intended practices of curriculum development and the possible causes of these discrepancies. It concluded the investigation by proposing recommendations aimed to improve the current practices so that the training delivered was compatible to the clients' actual needs: a training of relevance to the clients.

### **Significance of the Study.**

There are four perspectives from which the significance of the study is developed.

#### *National Perspective*

Papua New Guinea's major aspirations in education and training were political in the post-independence era and was embedded in the Somare-led government's Eight Point Improvement Plan, sometimes referred to as the Eight Aims:

1. a rapid increase in the proportion of the economy under Papua New Guinea individuals and groups;
2. equal distribution of economic benefits;
3. decentralisation of economic activity, planning and government spending;
4. an emphasis on small scale artisan, service and business activities;
5. a self-reliant economy;
6. an increasing capacity for meeting government spending;
7. a rapid increase in equal and active participation of women; and
8. government control and involvement in those sectors of economy where control is necessary (Kavanaraur 1993, p.47 ).

The philosophy inherent in the Eight Aims of the Papua New Guinea's constitution reflected a range that would cover all spheres of human development. The National Goals and Directive Principles emerged as a direct result of this philosophy and were delivered under these headings:

1. Integral Human Development;
2. Equality and Participation;
3. National Sovereignty and Self-Reliance;
4. National Resources and Environment; and
5. Papua New Guinea Ways (Methods) (The Constitution of the Independent State of Papua New Guinea, 16 of September 1975, p.1-4)

These National Goals and Directive Principles were the governing influences directing the aims and the objectives of Papua New Guinea Institute of Public Administration (PNGIPA). This was perceived in the way PNGIPA identified itself. The Institute saw itself as a tool by which productivity, growth and prosperity could be achieved in promoting a better way of life. The Institute's firm belief in achieving such objectives was through providing training, consultation, research, community service and any other related activities. With the emergence of the National Training Policy (NTP 1989), PNGIPA had been delegated a distinct role to play in ensuring that the National Goals and Directive Principles were accomplished.

### ***Personal Perspective***

Although this study was a personal gain for the researcher, the researcher did also realise that knowledge in vocational curriculum development processes (models) coupled with skills of implementation was a vital asset to the Institute's training activities. The study has enhanced the researcher's knowledge on the theories shaping the environment of vocational curriculum development.

It was all so easy to hear so much about Training Needs Analysis, Setting of Objectives, Design of Training Programmes, Implementation and Evaluation of the Training Programmes yet when it came to the actual activity itself the confusion and the frustration began. I have realised that course development was more than just reviewing the existing course contents and making changes where appropriate. Firstly, with socio-economic political changes rapidly taking place beyond the PNGIPA environment, these changes would surely affect the existing courses in terms of making them outdated and irrelevant and, in the absence of clear knowledge in vocational curriculum development processes, updating and improving of existing courses would be a difficult task to perform. Secondly, the question of keeping abreast with the changes of time certainly left one handicapped if one lacked the knowledge and skills in developing completely new and relevant courses. Often the researcher pondered upon the curriculum processes of the Institute and has asked questions such as:

- Where would one begin if one would like to develop a course and how does one begin?

- Was there a set procedure on how to develop a course and if so where does one find it?
- Were there things one ought to know before one began designing a training course?'
- How does one know that one's course was what one's clients actually needs?
- Was there a set procedure on how one was to evaluate one's course?

It was indeed frustrating to find oneself in a situation where one was expected to develop and design training programmes when one was not well versed and skilled in the mechanics of vocational curriculum development processes.

### ***Theoretical Perspective***

The intended PNGIPA curriculum model was the Discrepancy Approach (see Appendix 1) of Hickerson and Middleton (1975, p.23). This model was endorsed by the Board of Studies (BOS) in May of 1989 following the urgency of the situation at that time. In 1990, the Institute was in the final stages of gaining autonomy and needed to know exactly where to start with its training programmes. It, therefore, urgently needed some kind of curriculum development guideline to form the basis of conducting its proposed Public Service Training Needs Analysis. Thus, the Discrepancy Approach model, at that time used and taught as a course subject, was presented before the BOS and was approved as the model for course development in the Institute. This model, however, appeared to be confined to the Training of Trainers Section of PNGIPA. It appeared that the knowledge of this model being the intended curriculum development model for the Institute had not been widely disseminated. It therefore left everyone still guessing what the vocational curriculum development model for the Institute was. Another guess would take the guesser onto the questions; How were the lecturers developing their courses? What vocational curriculum development models were they using?

In such a context, the question of the type of vocational curriculum model currently utilised by the Institute has yet to be properly disseminated to all parties involved in course development. It was an area where very little attention has been given and has, in fact, for years been lying dormant in the recesses of the Institute. Theory has spelt out that there were already in place established vocational curriculum models. How and where PNGIPA fitted into this broader picture was once again anybody's guess.

***Practical Perspective***

This study was aimed to amplify the call for a more urgent need in the in-service training for PNGIPA's lecturers in the field of vocational curriculum development. Currently, it appeared that the knowledge and skills of implementing the curriculum processes was limited to just a few. From personal observations there was very little in terms of a set policy that dictated the procedures one should implement in the development of course. It appeared that individual lecturers were left to fend for themselves thus while some had some form of course development guidelines, others blundered their way through with little guidance. The Training of Trainers Section was the only section actually involved in delivering the skills necessary in implementing vocational curriculum development processes. The section needed to be fully utilised by means of holding regular workshops and conducting in-service training for PNGIPA's teaching staff in the field of vocational curriculum development. It would also be cost-effective considering that the problem of hiring 'experts' elsewhere was not needed. However, as it was, this section has been under-utilised as well as overlooked.

**The Statement of the Problem**

In the three years of being with the Papua New Guinea Institute of Public Administration (PNGIPA) there has been quite a lot of criticisms regarding the credibility of PNGIPA as a training institute and that was whether it has actually been performing the role that it has been delegated to. There were many factors involved that may have in one way or another prompted these verbal attacks. The general impression the researcher has reached was that it was now the time for PNGIPA to reassess its current situation, its existing training programmes with particular interest towards the curriculum development processes involved in order for it to meet the changing needs of the clients. Turner (1985) foresaw the problem when he commented on training saying that the skills delivered were irrelevant, misdirected and misplaced. Duque and Saffu (1991) gave supporting evidence to that of Turner when they encountered criticisms directed at the Institute regarding lack of proper and relevant training. Whether the problem laid in the curriculum design, the delivery of training packages or the evaluation of training packages, it was difficult to identify as yet. The strong indication

reflected here was the urgency to correct the situation. It was once again the hope of this study to be able to provide some answers to this problem.

Although PNGIPA did realise the need for evaluation on many of its training programmes, the move to have an evaluation carried out was still awaiting action. The main reason for this delay was due to the lack of trained and skilled vocational curriculum evaluators available. Until then, PNGIPA would continue delivering training viewed as irrelevant. If such was the current situation of the Institute then the question of quality and relevance of the training delivered by the Institute arises. PNGIPA cannot guarantee that the courses it offered encompass quality and relevance towards the clientele when it lacked the evaluative evidence to support the claim.

Therefore, lecturers must be equipped with the knowledge and skills to meet and effect the changes. Currently, there was no Staff Development and Training Section within the Institute. This section was vital for the professional development of lecturers. Whether in the planning stages allowances are being made for the professional development of the academic staff of the Institute was yet another question. The lecturers and trainers possessing knowledge and skill in vocational curriculum development would be an asset to the development of training programmes.

### **The Research Questions**

As this study was centred on identifying the strengths and weaknesses of the current vocational curriculum practices of the Institute as perceived by both administrators and lecturers, it was not possible however, to obtain their perceptions if the study first did not establish what the current curriculum practice was within the Institute. Therefore, the first of the issues to be dealt with was the question regarding the actual vocational curriculum development process of the PNGIPA.

**Issue 1: What was the actual curriculum development model for PNGIPA?**

Sub-Issues: How did the lecturers develop their courses?

What procedures did they follow to develop their courses?

Were there any policy guideline on curriculum development procedures to guide them in their course development?

How did they evaluate their courses?

Did they follow any standard procedures in course evaluation?

Only after this issue has been answered could the study move on to establish whether this actual practice was the curriculum approach dictated by the institutional policy on curriculum development procedures. The study therefore, raised the second issue regarding what the institutional policy dictated about its curriculum development procedures.

## **Issue 2: What was the intended curriculum development model for PNGIPA?**

Sub-Issues: Were there any existing guideline on procedural steps of curriculum development in the Institute?

If so: - Where were they located?

- What did they dictate?

- Were all lecturers familiar with it?

- How much of it was being used by the lecturers?

The need to establish this knowledge was important because it offered an opportunity to identify whether there were differences between the actual curriculum development practices and the intended curriculum development practices. Should there be significant differences the study intends to further pursue the investigation by identifying the possible causes and what improvements would remedy the situation.

The study, in addition to establishing the actual curriculum and the intended curriculum development processes of the Institute, further sought to establish if there were any similarities and differences between the two approaches to curriculum development. The study identified this through the perceptions of both the lecturers and the administrators.

**Issue 3: What were the strengths and weaknesses of the actual curriculum processes involved in the development of training programmes delivered by PNGIPA as perceived by the lecturers and the administrators?**

Sub-Issues: In what ways was the actual course development approach advantageous? Give reasons.

Were there any disadvantages in the actual approach? Give reasons.

In the context of curriculum development, how could PNGIPA improve upon its current curriculum practices?

**Issue 4: What were the similarities and the differences between the actual and the intended curriculum development process of PNGIPA?**

Sub-Issues: Were the procedures of course development similar? If so, how was it similar?

Were there any procedural steps that were different? If so, how were they different?

It was the general intention of the study to offer some answers to the criticisms levelled at the training courses delivered by PNGIPA.

### **Limitations of the Study**

Although much has been written about the Institute, very little has been written on the curriculum development practices of the Institute. Rather, what has been written has addressed the subject of training in very broad terms and not specifically highlighting the curriculum processes involved, meaning, explaining and discussing the curriculum model used, its processes, its implications and the type of evaluation models that could be used to evaluate the courses. With this kind of a backdrop to the study, literature specifically on the curriculum processes were limited and scarce.

The geographical location of the Institute places some limitation on data collection. With PNGIPA operating on a multi-campus manner, the easy access to all potential subjects of the study became difficult, particularly so in the case of the interviews. Given this scenario, it thus,



narrowed the number of people who were interviewed to those only in the main campus of the Institute. Yet, although the Questionnaire was mailed to these potential respondents it still lacked the 'personal touch' that would have been associated with the researcher personally distributing them. The questionnaire therefore, appeared to be informal and impersonal.

The time factor also placed a lot of pressure on data collection. There was much to do within a very limited time frame. Some data sources were not fully utilised nor even accessed as in the case of the regional training centres, 3 of which were located elsewhere in the country. It was an expensive exercise following the questionnaires through with telephone calls. The Islands Regional Training proved very difficult to contact with it shifting from Rabaul in the East New Britain over to Kavieng in the New Ireland Province. There appeared to be a confusion over its current address and telephone number.

Further to that, data collection occurred at the beginning of the training year which therefore meant that a lot of the lecturers were busy either teaching or making preparations for their coming courses.

Another limitation though perhaps not as obvious was the language of delivery in the Questionnaire. English, being the third or perhaps the fourth language of most of the respondents meant that the possibility of misinterpretation cannot be ignored. This was particularly so in the written text where elaborations cannot be made to make the meaning clearer. One respondents' comprehension of the question may not be the same as the other. In as much as possible this concern took the forefront of the preparation of questionnaire.

Finally, the situation at the time of this research fieldwork was that there had been a re-structure within the Institute. Changes were being implemented, people were being reassigned to acting positions which left a lot of staff members very disgruntled and frustrated, people were moving offices thus there was a lot of activity This undoubtedly interfered with the planned research field-trip activities. Morale was low and many officers were not in the right frame of mind to

actively participate in responding to the questionnaire and the interviews. Although just over a half of the questionnaire were returned, had it been at another time, the expected response would have been better. The interviews fared similarly to that of the questionnaire.

### **Data Collection**

As the study was aimed at seeking peoples' viewpoint on the curriculum development issues, the best methods that would achieve this was through the use of questionnaires and interviews. The other source used was related documents that could be used for cross-referencing and substantiating various opinions that stemmed from the questionnaire and the interviews.

### ***Questionnaire***

The two types of question forms used in the design of the questionnaire were:

**Statement Question.** These were questions presented in a statement form with graded responses ranging from one to five attached. The respondents were expected to respond by indicating the grade that best suited to their response. These types of responses made it a lot easier for subsequent computer analysis.

**Open-Ended.** These questions allowed the respondents to answer in their own way what they felt about certain issues as posed by the question. The anticipated responses were coded to enable a more comprehensive presentation and analysis of the data.

The questionnaire was pre-tested by a colleague currently studying at the University of New England. This was done to minimise the chances of ambiguity, misunderstandings, contradictions and so forth (Leedy 1993, p.187-192). Improvements to the questionnaire were made as a result of the comments received before a draft copy was sent to the Director of PNGIPA for his approval.

### ***Interview***

The second source of data was from interviews. All the interviews were conducted with respondents from within the immediate PNGIPA campus as it was easier to reach them.

***Literature***

The third selected source of data are other related literature. This together with the former two methods provided the basis for triangulation. Verification and cross-referencing of all pieces of information obtained was important to make this study meaningful.

**Conclusion**

To conclude, the description accorded to the questionnaire by Tuckman (1978, p.196) and the interview for that matter, summed it up neatly saying that it provided access to what was 'inside the persons' head.' This study intended to seek what was 'inside the person's head'.

## **Chapter 2**

### **Literature Review**

#### **Introduction**

PNGIPA experiences over the past years have indicated strongly that there was a need for a critical review into assessing the Institute's training activities to account for the ineffectiveness as claimed and revealed by Reily (1976, p.206-217) and Turner (1985, p.2-49). Possible causes of the claimed outcome was not as explicit since many other factors were involved. The claim that PNGIPA was ineffective should then be taken further by raising the question of 'why'.

PNGIPA professed intended curriculum model was the Discrepancy Approach of Hickerson and Middleton (1975). This, as mentioned earlier, was just recently endorsed by Board of Studies (BOS). It has, however, been in use quite extensively by the Training of Trainers Section of the Institute. It was upon this model that the literature review was focussed in relation to the other established framework of vocational curriculum development models. Thus, the literature review discussed in detail in as far as the literature allowed the curriculum development process involved in the PNGIPA context.

#### **PNGIPA's Discrepancy Approach Model and the Selected Vocational Curriculum Models**

The curriculum development models which were especially chosen for the literature review due to the similarities to the PNGIPA context were Nadler's (1989), Critical Events Model (CEM), (see Appendix 4), Blank's (1982) Competency-Based Training (CBT), (see Appendix 5), Knowles' (1975) Self-Directed Learning (see Appendix 6). They all posed some significance that related to the PNGIPA setting. The principles upon which these models and the intended PNGIPA model operated were, in essence, the same. These models were centred on the adult learner alleging that the adult learner has some idea on what their needs were and with guidance

and direction they would fulfil their needs. These models offered the background against which PNGIPA's curriculum model was contrasted.

Curriculum development played a central role in any educational and training Institute. PNGIPA as a vocational in-service training Institute needed to have certain mechanisms in place for it to achieve its training objectives. The curriculum model that PNGIPA adopted was the Discrepancy Approach of Hickerson and Middleton (1975). The Discrepancy Approach (1975, p.4-7) defined training as 'learning designed to change the performance of people doing the jobs'. It explained performance as 'how a person does the job or behaves on the job.' (Hickerson and Middleton 1975, p.5). According to Hickerson and Middleton, to ensure that a change in performance be the end result of the training offered, the course objectives must clearly state the desired change. In their approach, this type of objectives was called 'behavioural objectives' (Hickerson and Middleton 1975, p.90). The PNGIPA has visioned itself performing this role of changing the performance of the people in the workforce for the better. In this approach the three key features that were highlighted were: the jobs, the people, and the performance. The Discrepancy Approach placed a lot of emphasis on these three key features. The Discrepancy Approach has six (6) phases of implementation. Each phase would be discussed in conjunction to the selected established vocational curriculum models.

### ***Phase 1 and Phase 2: Job Analysis and Decision to Train***

The Discrepancy Approach begins with the Tasks Analysis. The purpose was for trainers to understand exactly what the nature of the job was. This model emphasised that the task analysis was very important because it gave the trainer an idea on:

- what to teach and how to plan to teach it effectively;
- how to identify only those discrepancies that will need training to minimise it;
- the setting of learning objectives;
- keeping in perspective that job description must be performance-orientated;
- the valuable actions that the worker is required to perform;
- measures that can be developed from task analysis which would make the job easier to assess; and
- time wasted in training if only discrepancies were the central focus rather than a complete re-training (Hickerson and Middleton 1975, p.26).

The people who were involved in the task analysis were normally the PNGIPA trainer, the employee and the employee's supervisor. They were each required to provide an input into defining the job the way they perceived it to be in relation to the organisation's aims and objectives. A task analysis could be conducted through interviews with those who were directly and indirectly linked to the job. Those who were directly involved would be the people performing the tasks while those indirectly involved would be the supervisors. The perceptions of those who were performing the job and those who were indirectly involved may vary in great detail or may not vary at all, but these differences do not matter at this stage. To further supplement this data, duty statements (job descriptions) were also made available to the trainer for analysing. All the gathered pieces of information were then combined into a job profile (see Appendix 3). from which the trainer would then be able to identify the performance discrepancies in relation to the organisation's aims and objectives. This job profile provided the basis upon which certain decisions were made, either it be further training or other administrative changes.

The Behavioural Objective approach was strongly evident in this approach when the assessment of actual results were compared against the intended results as dictated by the task analysis. In fact the Discrepancy Approach makes special emphasis on this type of objective (Hickerson and Middleton 1975, p.89 -107). With the job clearly defined and understood, the task to examine the actual results of the job performance as opposed to what the duty statement intended to have accomplished, was made much easier. This was otherwise known as identifying the performance discrepancy. Should there be an indication that suggested that the actual performance did not equate the job's expectations or was different to the intended tasks then investigations to uncover possible causes would be applied. The causes may range from very official matters to more personal concerns which may be responsible for the performance discrepancy of the worker.

Yet considering Nadler's (1980, p.49), view of interdependency of jobs and other outside influences, the behavioural objective approach would only answer to part of the problem. The

discrepancies identified would be limited only to the job itself, disregarding other outside influencing factors. For example, as illustrated by Nadler (1989, p.49), one persons job was someone else's output. The output of this job would later be someone else's input and so the flow continues. The results in the job performed may either be over-performed or under-performed depending on what the input or output was.

The second useful purpose of the task analysis was that the trainers could also identify other actions, such as administrative changes that may best eliminate performance discrepancies. Hickerson and Middleton (1975, p.39), however did caution that it was important that the terminology used in the task analysis was clearly understood before an analysis was to be effected. They have identified five of the terminologies which they considered important when used in conducting a Training Needs Analysis.

According to Hickerson and Middleton (1975, p.27), major tasks were the outcomes of the employees' performance which were closely related to the job. The example below, in Table 1, of a Papua New Guinean high school teacher would perhaps help define the concept of tasks. This same example would be used throughout the five terminologies.

Table 1

**Major Tasks**

(Hickerson and Middleton 1975, p.27)

OCCUPATION	TASKS
High School Teacher	Prepare lessons Teach lessons Organise and supervise student activities Participate in staff meetings

Hickerson and Middleton refer to measures as 'how the job is evaluated'. There were many ways by which a job could be evaluated. The evaluation may be dictated by formal rules of the

organisation or by informal rules at the discretion of the supervisor. Measuring or evaluating the job was the key to identifying performance discrepancy as accorded by the behavioural objectives (see Table 2).

Table 2

**Measures**

(Hickerson and Middleton 1975, p.27-28. )

<b>OCCUPATION</b>	<b>TASKS</b>	<b>MEASURES</b>
High School Teacher	Prepare Lessons Plans	Lesson Plans checked by superior
	Teach Lesson	Lesson observed by superior
	Organise and supervise student' activities	Written report on students' activities presented to superior

Duties were all specific 'actions' that a worker did in order to perform the major tasks. The example in Table 3 below highlighted what duties were.

Table 3

**Duties**

(Hickerson and Middleton 1976, p.28-32)

<b>OCCUPATION</b>	<b>TASKS</b>	<b>MEASURES</b>	<b>DUTIES</b>
High School Teacher	Prepare Lesson Plans	Plans are checked by the superior	Write the detailed lesson plans
	Presentation of Lesson Plans	Lesson Observation by superior	Teach the lesson plans
	Organise and supervise students' activities	Report on students' activities	Write on students' activities



Conditions referred to the particular circumstances under which the duties and tasks were performed. These circumstances may either be advantageous or dis-advantageous to the performance of the tasks. For instance, the condition of the above example was outlined below in Table 4.

Performance: It was important that tasks were used as the measuring unit of job performance. It was equally important to also take note that outside contributing factors may also affect the performance. The reason column of the Job-Structuring table should note such information. Further to that performance was measured at two levels, the general level which included all workers in the job position on which the task analysis was focused and the individual level. It was important to note that the general level was not specifically involved initially yet, it was one of the two measuring levels.

Table 4

Conditions (Hickerson and Middleton. 1975. p.32-33)

OCC.	TASKS	MEASURES	DUTIES	CONDITIONS
		Lesson Plans Checked by superior regularly	Write detailed lesson plans	Inadequate resource materials for school to operate efficiently.
		Lesson Observation by superior	Teach the lesson plans.	Location of the school: rural schools disadvantaged in . easy access to resources
				Class size 35-40 students in a class

In support to this idea, Blank (1982, p.95) in his elaboration on the importance of analysing tasks, has highlighted explicitly the kind of information needed if a task was to be fully analysed. He has divided these into six major components of job tasks that were essential to

competency. Firstly, information associated to procedural step was required to correctly and completely perform the task identified. These, he stressed, must be written down so that learning activities could be programmed to teach all steps. Secondly, the facts, the concepts and other knowledge essential to performing the steps accurately and competently needed to be identified to ensure that this knowledge was learnt by the student. Thirdly, other resources such as specialised equipment and tools needed to perform these tasks must also be identified and made available to enable students to learn to master the use of these resources during the learning process. The fourth component was related to the academic background that was essential to the performance of these tasks. Content knowledge also needs to be identified so that the student could learn either before or while the task was being performed. The fifth component concerns itself to safety knowledge and skills associated with the job. These were critical and must be identified so that instructional materials address each safety point as it occurs. The final component dealt with the attitudes towards the job. This formed an integral part of performing the task competently. Blank argued that by identifying these attitudes and making them a part of the learning programme, would help students develop sound attitudes towards their jobs. It was therefore, important to have the tasks specified since it provided the basis to assess the actual job performed as opposed to the job expectation. In summary, the focus was on competency standards that was centred on the outcomes. However, for an effective job analysis it was important to know exactly what the relevant sets of competency standard were as accorded by the organisation (Harris, Guthrie, Hobart & Lundberg 1995. p.223). If none was available then other methods could be used in identifying the competency standards. This could be done through the use of questionnaire, interviews observation and descriptive methods using the literature on the organisation. Heywood (1992) and Emery (1993) have both developed comprehensive guide which could be used to develop competency standard. Blank (1982, p.36) has developed some useful questions that would assist during the implementation of the task analysis process:

- \* Is formal training required for entry into the occupation?
- \* Are we allowed or authorised by law, regulations, rules, or policies to offer training in the occupation?

- \* Is reliable data available indicating present and future employment demand in the occupation?
- \* Is there evidence that students are likely to enrol for training in the occupation?
- \* Is the occupation at entry level and not a level of advancement for which workers are typically trained on the job?
- \* Is the facility, including tools, materials, and equipment, adequate or readily obtainable?
- \* Would the demand for additional graduates be adequate to justify offering training in the occupation if other training programmes exist nearby?

The Discrepancy Approach implied that the job analysis was restricted to, in most cases, the employer, the employee and the training officer. It would be worth the while to focus on how other vocational curriculum models approach the issue. Other sources may offer additional and valuable information in specifying the job. Both Blank and Nadler agreed that in identifying and verifying jobs, more than one source of information was needed. Blank (1982, p.35) suggested the United States Labour Department's Dictionary of Occupational Titles, other employees, the management, labour unions and others still as potential sources for the job identification. This was particularly useful especially when all jobs were really either inputs or outputs of another job. Nadler (1989, p.49) stressed this interdependency since it also has some impact on the job performed. The job may be over-performed or under-performed as a result of the input and output factor.

Further, having been involved in the establishment of a clear understanding of the nature of the job, the likelihood of being influenced by such knowledge in identifying performance discrepancy was very probable. This knowledge would surely dictate what effects to look for. This was the disadvantage of the Behavioural Objectives. Its concentration was purely on the desired outcomes thus the unintended outcomes were overlooked. It did not allow for the identification of the unintended effects. On the other hand, should the actual effects be identified, without prior knowledge of the tasks assigned to the job, then perhaps it would be probable that not only would the discrepancies be identified but also the unintended effects. In eliciting the probable reasons for such results it was not surprising that reasons vary from job-related to those not related at all. It would be worthwhile not to disregard reasons that were not

job related but to further analyse them for often they did have influence over the employees' performances. Therefore, the reasons provided for these unintended effects and discrepancies would naturally be more meaningful when deliberations on training takes place. It did create an opportunity for PNGIPA to employ Knowles' (1975) and Tough's (1979) approach of self-directed learning in which the employee has the chance of identifying their own training needs that would effect a more productive performance. Since they were already performing the tasks they would surely know what they needed to make themselves better at their jobs. Tough (1982 p.104) asserted that because the adult learner knew what they wanted they make the decision for the change and in the light of this instance, the change implied here would be change through training. He elaborated on this stating, 'The adult's highly deliberate efforts to learn provides an excellent starting point for developing a better competence and help in adult learning' (Tough 1979, p.13).

His argument was that a person was more willing to accept advice and assistance when there was already in place a personalised targeted objective to be accomplished. This urge to accomplish the set objective was the drive and the motivation of the willing learner. Knowles' argument followed the same principle when emphasising that a more effective learning occurred when it was the learner's initiative. The learner was therefore, motivated by their own purpose rather than other outside influences. Much too often the supervisor or the training officer assumingly determined the training needs of the employees based solely on the duty statement and organisation's aims and objectives. This did affect the training performance of the employee. Throughout the processes of Phase One there must be constant feedback and evaluation. These were the formative evaluation as illustrated by the model.

In retrospect, Nadler's (1980) Critical Events Model (CEM), Blank's (1982) Competency-Based Training (CBT), and Knowles' (1975) and Tough's (1979) Self-Directed Learning Models all encompass TNA though there were of course variations in the application of it.

***Phase 3: The Setting of Objectives and Formative Evaluation Procedures.***

The discrepancies identified in the job-structuring table (see Appendix 3) were then scrutinised to determine whether they affect job performance tremendously and if further training was required to overcome this difficulty. If so, then the decision to train could be made. The training objectives developed would be aimed at what the trainee should be able to do at the end of the training course. The objective must fulfil the job discrepancy, in other words, the trainee should be able to perform at the required level in the job as a result of the training received. The discrepancy approach identified these objectives as behavioural objectives. The discrepancies identified in the job-structuring table form the basis of these objectives in an effort to overcome them.

The advantage of a behavioural objective as advocated by Hickerson and Middleton (1975, p.90) was the 'exactness in direction to a training course'. The emphasis was on what the trainee would be able to do at the end of the training programme. While accepting and agreeing with the term 'behavioural objective', Blank (1982, p.122) made an elaboration to the behavioural objective to include performance. He argued that the objectives should not be restricted to behaviour only but to include performance as well. Blank, in his argument, made a distinction between behaviour and performance. According to Blank, the desired behaviour after training did not necessarily mean that the trainee has mastered the skills required to perform certain tasks as identified in the tasks analysis. Behavioural objects only advocates a certain behaviour pattern as the end result of the training. On the other hand, performance objectives actually specify what task activity the trainee should be able to accomplish after the training. He, therefore, preferred to identify these objectives as 'performance objectives'. He believed that performance objectives enabled the trainers to focus their attention on the performance that the trainees should accomplish at the end of their training. This view was important if the concentration was on providing or enhancing skills to promote change as advocated by the discrepancy approach.

The setting of objectives and formative evaluation procedures process would require very close consultation between the client organisation, namely the supervisors and the training officers and the trainer which, in this case, would be PNGIPA. Blank (1982, p.120-123) agreed with the view that the training objectives should be determined with the collaboration of the relevant supervisors. In his argument, Blank claimed that the employee could easily identify from the well-stated training objectives what performance skills they needed to master, under what conditions they would be assessed, and how they must perform to be judged competent. However, this approach may have conflicting results. People have different values towards job performances and these values come from their experiences performing the job. This could and did affect job performances. Nadler asserted (1980, p.241) that peoples' values affect decision making. The values placed upon the tasks as perceived by the supervisor did not necessarily have to agree with the employees' value. Knowles' approach however, implied supportiveness to this view arguing that the learner's experience was a rich resource which should be used along with the resources of the experts (Knowles 1975, p.20). These experiences were already tasks orientated which was an advantage. It could therefore, be taken as another checkpoint to have employee's input into the setting of objectives. Kidd's (1973, p.278) elaboration of these experiences was more illustrative since it revealed a lot more of the adult learner. Kidd stressed that in choosing a curriculum for the adult several factors needed to be taken into consideration. These considerations include being able to understand the interests and the needs of the adult learner, being able to understand the situation the adult learner lived in and the kind of content that may serve the adult learner's needs. He concluded by asserting that the learners themselves were in the best position to identify these needs. According to Kidd (1973, p.278) all these meant that the statement of objectives were carefully set out in a manner where desired changes and subject matter were clearly stated. The learning experiences must require the fullest participation of the adult learner. It was therefore, advisable to consider whether or not a person's values affect the job performance. If such was the case, then the need to establish a common understanding should be priority before the setting of training objectives. This was especially true in the context of Papua New Guinean's diverse cultural values.

Langenbach's (1988) summary of Nadler, illustrated Nadler's approach as a combination of both Blank's and Knowles' approaches. Here, Nadler stressed the importance of identifying the learner's need before setting training objectives. To this one needs to identify the source of information and the most appropriate source of information would be from the employee. The employee would be the primary source of information while the supervisors, other workers and those in management were the secondary source. All checkpoints were in place and key participants involved in the training needs analysis of Phase 1 were still included.

Of the views presented, the discrepancy approach was more biased towards Blank's argument. In the initial stages the help of the employee was enlisted while the rest of the process was implemented with the help of those in authority. The training programmes were developed in consultation with those not directly involved in the tasks, that was the supervisors training officers and other members of the management. This in fact brings to light a very important issue that was the identity of the client. The term 'client' as viewed by Nadler, Blank, Knowles and Tough was the individual. While the discrepancy approach appear to focus on the individual as the client, the individual learner's input into the analysis of the job was very limited. Therefore, the discrepancy approach appeared to place more emphasis on organisational needs rather than those of the individual clients themselves. This suggested that the learner's (employee) needs were not determined by the employee but by others as dictated by the organisational aims and objectives. The question then of verifying that the training needs analysis was accurate to the employee's needs could be raised. It became a debatable topic in that one may argue that this has already been accomplished in Phase 1. The only support that could be used to verify the training needs analysis would be based upon the responses elicited from the performance discrepancies. This would not be sufficient if the employee's real needs were not identified since the responses themselves were a compromise of the supervisor and the employee. For the real need of the employee to be extracted then the main primary source would ultimately be the employees themselves. Therefore, Nadler's step to have learners' identify their own needs would run along similar principles as Knowles. A continuous input from the employee as suggested by Nadler and Knowles raised the employee self-esteem, the

desire to achieve and develop, the satisfaction of accomplishment became the motivating factor. The training objectives would also be serving a real need as identified by the employee rather than an assumed compromised need.

#### *Phase 4: Designing Training Programmes*

The fourth phase in the Discrepancy model involved the design of training programmes. Out of the many principles of teaching and learning the discrepancy approach limited itself to the use of five (5) teaching-learning principles namely, perceived purpose, graduated sequence, individual differentiation, appropriate practice and knowledge of results. The justification for such was that it was easier for a trainer to become proficient in the use of a few principles than to be bogged down by trying to remember to use a multitude of principles.

The Perceived Purpose was important in that the clients were adults and that they already had some idea on what they would like to learn. Therefore, the importance of the study must first be understood by the trainees if the study was to mean something to them. They must be able to relate to why the study was useful to them and how useful the study was going to be. Hence, the job-structuring table could now be utilised to show the link between the design of training and the performance discrepancies and job tasks. Not only that this connection be immediately established but that the trainees too must be able to make that connection.

In this instance, the Discrepancy Approach agreed with Knowles' (1975) and Tough's (1979) adult learning approach indicating that the adult learner had some knowledge on what they want to learn. Yet, in the setting of the objectives, the adult learner has had very little input into the setting of the objectives. The implication was that the learner's input was only an indicator to how the course would be designed. The already set objectives and the design of the training programme would enable them to identify how the objectives and the designed course would benefit them. These objectives were, therefore, formulated in isolation to the learner, hence, the utilisation of the job-structuring table for the learner to make sense of the programme of training and how it useful it will be to them. Knowles and Tough, on the other hand, advocated the



fullest participation of the adult learner as possible in the whole cycle of training from the initial identifying of their needs to the evaluation of the training programme.

The Discrepancy Approach offered five (5) guidelines on how to develop perceived purpose:

1. The instructor must try in some way to create a positive perceived purpose for the subject to be studied.
2. The Perceived Purpose must be relevant to the specific behavioural objective being taught.
3. The Perceived Purpose developed must be relevant to the particular trainees whom the trainer is training; it must be something important to them personally.
4. Perceived Purpose must be developed sometime near the beginning of the instruction. Repetition of Perceived Purpose may appear at the end, however, it is important that it is near the beginning.
5. Perceived Purpose must support the self-esteem of the trainees, it should not belittle them, frighten them or make them feel incompetent (Hickerson and Middleton 1975, p.161-162).

The Discrepancy Approach described graduated sequence as the teaching-learning process progressing in a logical sequence from least difficult to more difficult until the objective was reached. Graduated Sequence could refer to any of the following dimensions; simple to complex, easy to difficult, known to unknown, familiar to unfamiliar, from highly motivating to less motivating, from individual parts to complete whole, from individual units to a combination, from doing something with assistance to doing something alone and from theory to practice.

The Discrepancy Approach stressed that because each trainee was different it was important for the trainer to recognise this and be able to develop learning activities that would offer each trainee the opportunity to learn in the way best suited. Then problems of boredom, disinterest, frustration and many others may be avoided if the instructor was more perceptive about individual differences in the trainees and their learning difficulties. With this in mind, a variety of teaching approaches must be considered in the process of developing training programmes. This was done in anticipation of the varied range of clients the instructor may be facilitating with during the course. However, the success of this, as pointed out by Hickerson and Middleton (1975, p.192), was dependent on what the instructor already knows about the

trainees. Therefore, a pre-evaluation mentioned in Phase 3 was necessary to prepare the instructor on what to expect. Consequently, the instructor would be able to plan how best to deal with such differences. It was however, not to say that there would be always so many differences every time a course was conducted. This was merely pointing out the existence of such differences. The discrepancy approach further outlined some areas of individual differences a trainer may consider; by intelligence, by speed of learning, by previous experience or educational background, by interests, by special talents, by sex, by age, by job designation, by trainee's own preferences, by motivation for learning the course material, by language ability and so on.

Appropriate Practice referred to the trainees being able to practice and demonstrate the behaviour described in the behavioural objective. This was especially important in skill-based training as in any vocational training. If, for example, it was a report writing course then the course participants may well be expected in due course, to submit to their immediate supervisor a report on the course they have attended. With this notion in mind, exercises of similar nature could be developed to provide assimilated practices. These exercises would be helpful in providing the trainees the opportunity to practice, to produce and demonstrate these new learnt skills and knowledge. Immediate use of the newly acquired skills enforced the learning and mastering of these new skills.

Knowledge of results meant that of the instructor would need to offer supervision, assistance and correction towards facilitating the trainee's learning. There must be constant dialogue between the trainer and the trainee. Trainees must be made aware of their own strengths and weaknesses in order for the trainee to improve from one practice onto the next. The trainer's role was to guide the trainee into performing in the behaviour as described in the behavioural objective.

While on teaching and learning methodology, Blank's idea to start with other identified teaching and learning strategies that have already been proven to be highly effective did offer a

basis to start from. Time involved in developing completely new training programmes would be reduced. These highly effective teaching and learning strategies referred to methods that have resulted in a high percentage of student reaching a high level of mastery of learning tasks. Yet, the delivery of content need also to be taken into account carefully. While some aspects of the content may not be suitable for one approach of delivery it may quite suitable for the other parts of the content. On this note, it was interesting to see how Houle (1972, p.44) approached the design of teaching and learning programme. He asserted that the central issue to the design of any learning programme was not 'Which is better than the other?' but should be, 'In what circumstances was one category better than the other?' There was a need for the trainer to ask this question before progressing any further.

#### *Phase 5 and Phase 6: Implementation and Evaluation of Training Programmes*

The Discrepancy Approach illustrated that both Pre-Evaluation and Post-Evaluation were conducted to measure trainees' growth through training, consequently, providing the facilitator areas of strengths and weakness in the training programme. Pre-evaluation was an evaluation conducted before the instruction begins to determine what the trainees already know about the subject matter and other important information about the trainees' (Hickerson and Middleton 1975, p.132).

A good pre-evaluation should be able to accomplish three things as accorded by the discrepancy model:

1. It should determine whether or not the trainee can already do the activity, the activity specified in the behavioural objective.
2. It determines whether the trainee has prerequisite skills needed to learn the new skill.
3. It should find out enough background information about the trainee, in terms of his/her interests, skills and experience so that the trainers can plan better learning activities (Hickerson and Middleton 1975)

Although the model emphasises all three evaluation: pre-evaluation, formative and summative, the approaches to conducting these evaluation was rather general. Langenbach's summary (1988, p.13-36) of Nadler's model there were seven checkpoint after every stage (see

Appendix 4). The first stage which was the job specification, an evaluation was to be conducted to obtain feedback on the nature of the job. The participants in the discussion and sharing of the findings were the people doing the job, the supervisors and the managers. However, Langenbach cautioned that it may not be practical in such circumstances since the presence of supervisors or those in authority may stifle some participants. The important thing was that there was continuous evaluation and feedback to keep the development of the course in line with the organisational aims and objectives. The data collected prior to the evaluation would first be transformed into easily communicated information. The data itself would have been collected through questionnaire, observation and interviews. The most appropriate and time and money saving would be in the form of a meeting where both potential learners and their superiors discuss and share in the findings.

Formative evaluation was approached in the Discrepancy Approach through a Criterion Test (Hickerson and Middleton 1975, 146-147). These were small tests, not usually graded, which were meant to detect areas where more attention was needed. These tests gave the trainer an indication on how the training was progressing and the opportunity to put more emphasis on parts of the training course that the trainees have difficulty in. In the Competency-Based Training model, Blank stated that evaluation procedures used depended on the context of the programme. He saw the tests as playing a major role in the evaluation of a training programme. He gave four reasons for this:

1. Diagnosing entry-level competence of new trainees.
2. Providing immediate feedback to students during the learning process.
3. Assessing trainees' mastery of each task.
4. Evaluating effectiveness of training materials (Blank 1982, p.156).

In Blank's diagnostic test the trainees were tested on the skills indicated in the objectives prior to the course itself to determine whether or not the trainees did need the training. The trainees who indicated a mastery of the skills would have their learning activity focussed on other skills they have yet to master. Further to that, constant feedback on the progress of the trainee was important. Blank identified these feedback in the form of short informal tests which he called

self-check. This was monitored by the learner themselves to check their own progress. This bore some resemblance to Knowles and Tough's individual learning approach. The emphasis was on the learner and how they would like to progress in their training. Mastery of skills were evaluated through the use of performance tests. This type of test was used either during or after training depending on the trainer.

Langenbach (1988, p.32), in summing up Nadler's approach to evaluation stated that the actual job performance improvement was not the duty of the instructor to assess rather it was that of the supervisor. The instructor's role in the evaluation process was limited to the learning process only. Tests should be designed as near as possible to the actual job situation. However, it was worthwhile, according to Nadler that these three questions were kept in mind:

- a) Does it appear that the results of the programme have solved the initial (organisational) problem?
- b) Is there a need to repeat the programme?
- c) If the programme is repeated, are modifications required?

The definition of post-evaluation offered by Hickerson and Middleton (1975, p.116), was simply the 'means of determining whether or not the training has been successful in achieving the behavioural objectives stated at the beginning of the course'. The post-evaluation consists of 'test items' which duplicates as much as possible the action called for in the behavioural objective.

The model, however did not provide the specifics of any one particular evaluative procedure to apply. It therefore, left the implementors of the model to evaluate any way they saw fit. Knowles evaluation approach on the other hand differed greatly. The learner in Knowles Self-Directed Learning approach, designed the evaluation instruments. These instruments came in the form of either short open-ended questions or in statements where graded responses were required. Table 5 showed a sample of such an instrument.

Table 5

**Knowles Evaluation Sample** (Knowles 1975, p.112)

EVALUATION				
<b>Course:</b> _____				
<b>Learner:</b> _____				
<b>Evaluator:</b> Inquiry Group				
<b>Objective:</b> To develop a better understanding of current learning concepts and theories.				
<b>Learning Strategy:</b> To attend class regularly and to participate in class activities and discussions.				
	Low		High	
1. was my participation adequate?	1	2	3	4 5
2. Were my questions relevant to the discussion?	1	2	3	4 5
3. Did I take up too much class time for my own observations and remark?	1	2	3	4 5
4. Was my attendance at class meetings regular?	1	2	3	4 5

One of the current practice of evaluation as in the case of the Southern Regional Training Centre, a branch of PNGIPA, was evaluating training results through what was called On-The-Job Training (OJT) Inputs. These inputs as part of the evaluation process were evidence of actual On-The-Job tasks being done or completed by the trainees while back in the actual job situation. The Discrepancy Approach identified its behavioural objective to include performance. Therefore, it was under this implication that the OJT were conducted, centring on the skills acquired during training. For example, a student of a Report Writing Course needed to furnish actual official reports compiled while on the job to satisfy the training programme's objective that the skill taught was actually being utilised in the work situation. Blank (1982), made that distinction between the two types of objectives, the behavioural and the performance-based, to allow for a much clearer focus.

Of course, it was easier for pen and paper type of jobs than for work which involved the rural field extension officer out in the field. To overcome this problem, the trainer was required to go out on field trips to evaluate On-The-Job Training as well as offering assistance.

Although the process described above seemed mainly to reflect the summative evaluation of a training programme, it really was not so. Due to the nature of these courses being short (about two to four weeks) several of these courses were conducted in a year. The intervals in between the course were often spent in reviewing the course as a result of the evaluation made. The on-going improvements were the formative evaluations.

### **Conclusion**

The Discrepancy Approach obviously has most of the major components of vocational curriculum development practices. It was fairly easy to understand the stages involved as indicated in the description offered by Hickerson and Middleton. However, considering the time of its inception which was just about twenty years ago much has happened in the world of vocational curriculum development. New perspectives towards vocational curriculum have emerged. Perhaps it was time now for PNGIPA to have the model assessed in an effort to enhance its applicability in the Institute's context.

## Chapter 3.

### Methodology

#### Introduction

It seemed that the search for knowledge has led people to develop plausible explanations regarding their existence to their surroundings based on their experiences, observations and ideas. Their awareness of orderliness in the universe and the cause and effect relationships prompted them to pave the way for a more systematic approach to reasoning. The first such approach was the deductive method introduced and used by Aristotle (384 -322 BC) and the Greeks and later improved upon by Gottlob Frege (1848-1925). This method involved moving from a general assumption to a more specific application. In this method of reasoning Aristotle identified that *validity* and *soundness* of an argument were two distinct features of an argument. Validity was based on the form of the argument which was the sentence structure that made up the argument rather than the content or the subject matter of the argument (Blumberg 1976, p.377). On the other hand, soundness referred to the logic of the argument. Deductive logic was further developed through Frege's works (Blumberg 1976, 115), by introducing a system of sentence logic and a quantification theory. The main governing theory of deductive reasoning was to 'explain the relationships between premises and the conclusion of a valid argument and to provide techniques for the appraisal of deduction arguments' (Copi 1968, p.123). This basic aim of deductive logic from Aristotle to Frege has not changed much. It was for the purpose of discriminating between valid and invalid deductions. Cohen and Manion (1994, p.3) illustrated this logic in the following simple example:

All planets orbit the sun;  
The earth is a planet;  
Therefore the earth orbits the sun'.

However, the deductive method had its limitations. Already in place were old accepted assumptions and religious dogmas which prevented the discovery of new truths. Religious figures of the priesthood in that era preached to the people associating the forces of nature to the workings of supernatural powers. In other words, nature's processes were explained in terms



of the supernatural and mysticism. Galileo, in search for the truth, identified some new truths about the earth's motion. His declaration of this new truth was not only seen as a direct challenge to the religious authority with their established religious dogmas but it also affected the attitudes of the people. In the original indictment issued by the religious authority, as translated by Finocchiaro (1980, p.18) in his study of Galileo, it was pointed out that the Bible was the ultimate authority on all knowledge. This subsequently led to Galileo's strict house arrest, a classic example of the power of religious dogma presiding over scientifically proven fact.

Much later another method of reasoning was developed by Francis Bacon. According to Best and Kahn (1986, p.3), Bacon argued that there was minimal chances of arriving at new truths when deductive reasoning began from old and accepted religious assumptions which were difficult to change. His main emphasis therefore, was placed on direct observations of phenomena in order to make generalised conclusions. His approach was, in fact, the exact opposite to that of Aristotle and Frege. Such an approach means that generalised conclusions were made on the basis that a lot of individual observations had been carried out. This process of reasoning going from the specifics to a generalised conclusion was the inductive method of reasoning. Inductive reasoning was merely to establish probable truths (Copi 1968. 305). However, on its own, the inductive method of reasoning had its limitations as well. Although there were a lot of individual observations carried out there also need to be some unifying concept linking these individual observations before generalised conclusions could be drawn. Without a unifying concept the conclusion cannot be regarded as a general conclusion true to each of the individual observations. On its own, inductive reasoning was not able to provide a satisfactory system for the solution of problems.

In the works of Charles Darwin, both the deductive and the inductive methods were fully integrated. The deductive method set out the assumption or hypothesis that was subsequently tested by the collection and logical analysis of data. Direct observation of the phenomena was necessary to confirm the existence of the hypothesis. Darwin's method of enquiry ran very

much along this method of enquiry. His was highly data orientated, data that would support, verify, extend or improve his hypothesis (Travers 1978, p.43). The deductive-inductive method has now been recognised as an example of a scientific method of enquiry. A method of enquiry by which evidence could be found to substantiate a hypothesis.

Although this method has been recognised it still has not made the task of defining the enquiry method any easier. Some scientists saw it as an environment where the researcher must have almost complete control and manipulation over the variables. This view was reflected in the many assumed definitions of research as presented by various researchers. For example, Irvin and Mehrens (1971, p.2.), asserted research to be 'a controlled enquiry to discover new information or relationships to expand and to verify existing knowledge'. Kerlinger (1973, p.11), assumed a similar definition when he asserted that 'scientific research is systematic, controlled, empirical and critical investigation of hypothetical propositions about the presumed relations among natural phenomena'. He claimed scientific research to be so ordered and tightly disciplined that an investigator could have confidence in the research outcome. In fact should the investigation be replicated the outcome should still be consistent. This owed to the fact that the environment surrounding the investigation has been specifically replicated to accomplish a particular objective of the investigation. Rummel (1964, p.2-3), accentuated that research was 'the manipulation of things, concepts or symbols for the purpose of generalising and to extend correct or verify knowledge and whether the knowledge aids in the construction of a theory or in the practice of an art'. The German philosopher, Jurgen Habermas' theory on technical cognitive interest also shared this view. According to Grundy's translation of Habermas' work (1987, p.8), Habermas asserted that knowledge and people do not exist in isolation of each other but rather that peoples' interests construct knowledge. Habermas advocated that people manipulate the environment to realise a particular condition in order to suit their own conveniences (Grundy 1987, p.11 -12). He alleged that the manipulation of the environment stemmed from many experimental observations to identify any consistent regularities in the environment. These identified regularities provide the basis upon which safe predictions could be made about the environment. In other words, the investigator using this methodology thus

created meaning out of the natural physical environment. These predictions guided the initiatives taken by people to control and manipulate the physical environment. Evidently, the two main arguments supporting this research approach was its empirical nature and its attribute of objectivity (Cohen and Manion 1994, p.19; Kerlinger 1964, p.6).

Yet, a conflicting view emerged as a result of this very controlled and manipulative form of investigation. That was the view of having the variables removed and isolated from their interactive relationships with and within its environment, in other words the natural social environment. Furthermore, it was the view of having meaning being constructed of the natural environment by the investigator rather than by those interacting with and within the environment. It was within this conflicting context that qualitative research began to emerge, a research approach that would examine and investigate a problem within its natural social environment. Unlike the quantitative approach it allowed for exploratory activities to take place. It was a research approach that some investigators find appropriate within their context of investigation.

There were three assumptions that a qualitative research approach posed. This approach was more interested in understanding the pattern of behaviour or the various ways the pattern was manifested than in the account of events and its distribution, in other words, attaching numerical value to the subject of investigation. Firstly, the socio-cultural patterns of human behaviour were more important than human events (Sherman and Webb 1988, p.80). Cohen and Manion (1994, p.9), accorded it as 'an understanding of the way in which the individual creates, modifies and interprets the world in which he or she finds himself or herself'. The emphasis was placed on the relationships between the events and how these relationships interacted to form coherent meaningful patterns. Secondly, it maintained that events were understood and categorised in terms of the respondents' definition of events. As a result, care should be directed towards the respondents definition of their own situation. According to Habermas, (Grundy 1987, p.12 -13), practical interest unlike empirical interest, placed its emphasis on understanding the environment rather than controlling the environment. The

understanding of the environment was necessary in order to effect proper interaction with the environment. Its main concern was with the social rules of the environment. It was about harmoniously being a part of the environment through interaction rather than dominating and controlling the environment. Simply stated it was to understand the thoughts of a people therefore, the whole analysis of experience must be based on their concepts, not ours. Thirdly, the researcher attempted to understand holistically the cultural meanings of behaviour observed. Habermas asserted that historical and literary interpretation provided the basis upon which one could determine what actions were appropriate within a given context. The investigations were carried out under more natural social settings, a setting where control and manipulation of the variables do not play any significant role. Unlike the inductive-deductive method this approach allowed for knowledge to be constructed in a subjective manner, the way it was interpreted by the people within their social environment.

In such a context as described, qualitative research took precedence over quantitative approaches as described earlier. For example, a clearly defined problem that was susceptible to the research process is often the result of a lot of speculations and imagination which were essential parts of the process. This was, as Best and Kahn (1986, p.5) pointed out, due to peoples' thought patterns not being presented in an orderly manner. Thus, the 'scientists' definition was not flexible enough to accommodate the exploratory activities that were observed as people's speculation and imagination took form and shape.

Given these two broad paradigms, Cohen and Manion (1994, p.40), summed it up neatly by asserting that research was 'too broad a term to define if isolated from a specific context. It needed to be defined within a specific context'. Thus, it was with this understanding that this research was defined accordingly.

### **Research Design**

This study was focussed on the perception of the staff, namely, senior management and the teaching staff of PNGIPA on the current curriculum development processes of the Institute.

These people were the most appropriate respondents to this study since many were either directly and indirectly associated to the Institute's training programmes. These respondents have been classed into two main groups according to the role they play in the Institute.

The first group, the lecturers and the trainers were directly involved in the development of training courses and programmes. Their direct participation began with identifying training needs of the clients and developing a course of training that would best respond to those identified needs. However, from a personal observation the distinction between a trainer and a lecturer has not been clearly defined. Often these two terms have been used interchangeably. The most commonly used of the two within the Institute is 'lecturer'. Therefore, the same term 'lecturer' would be used which included both the trainers and the lecturers in this study.

The second group of respondents were the administrators or managers. These were people who were members of the management team and were part of the decision making body of PNGIPA. Their participation in course development may either be direct or indirect. For a clearer understanding of what was meant by 'direct' and 'indirect' participation of the administrative rank, I need to point out that there exists within this rank two groups of administrators. One group's role in the Institute was solely administrative meaning that theirs would be an indirect participation towards course development. They would be involved in policy matters and decision-making with regard to training. The other group of administrators on the other hand, were those performing both administrative duties as well as teaching duties. These were the people who while performing administrative duties and that includes decision making, were also directly involved with course development processes since they also needed to review their own existing courses in addition to developing new courses. Their experience and 'expertise' brought along with them into the managerial rank hopefully bridged the gap between pure managers and the lecturers. Together their perceptions provided insight into curriculum development process within the Institute. The approximate size of the population totalled to about 40 with a very small percentage coming from the Regional Training Centres.

This study was not intended for the investigator to create meaning out of the given context but to identify what those within the institutional setting understood about their curriculum development practices and how they related themselves to the practice within the context of PNGIPA. As described by Bodgan (1984, p.6), this type of research presented data as demonstrated by the respondents' experiences, perceptions and how they identified their relationship with the curriculum processes of the Institute. Habermas identified this type of information as 'subjective knowledge' (Grundy 1987, p.14). This meant therefore, that much of the data was their personal interpretations and implementation of the curriculum processes of PNGIPA. The study therefore, applied the qualitative methodology. The data included information on:

- what the administrators and lecturers interpreted the Institute's curriculum development processes to mean;
- what they understood the Institute's curriculum policy to mean;
- what they perceived as the strengths and weaknesses of the curriculum development practices of the Institute to be.

It was with this notion of eliciting these pieces of information that the following research question and its related issues had been designed:

**Research Question: *What were the strengths and weaknesses of PNGIPA's curriculum development processes as perceived by the administrators and lecturers of the Institute?***

- Issues:**
1. *What was the actual curriculum development model for PNGIPA?*
  2. *What was the intended curriculum development process for PNGIPA?*
  3. *What were the strengths and weaknesses of the actual curriculum development processes of PNGIPA?*
  4. *What were the similarities and the differences between the actual and the intended curriculum development process of PNGIPA?*

The study however, was not strictly qualitative but also had some elements of quantification attached. The graded responses of the questionnaire represent the quantitative aspects of the

research. These responses were subjected to computer analysis to identify distribution of these responses and the patterns they portrayed.

### **Data Collection Methods**

With the study centring its focus on seeking peoples' viewpoint on the curriculum development issues, the most appropriate methods that would achieve this was through the use of questionnaires and interviews. These two sources of data were then supplemented with the use of a third source of data which consisted of any other related curriculum documents. These 3 sources of data have been selected to allow for information to be cross-referenced in substantiating various opinions that may stem from the questionnaire and the interviews, in other words to triangulate the sources of information. This method of cross-referencing was aimed at validate the data collected. It was realised that data collected from only one or two sources may not be enough to present a broacer and accurate view of the Institute's course development processes. It only presented a view that may be biased towards a more dominant source of data than the other. The use of the term 'dominant' in this context mean how easily accessible the data source was compared to tfe other chosen data source. It then raised the question of validity of the data. If one source was more dominant than the other the question of cross-checking became biased. It heightened the risks of not having enough confidence in the data collected. Cohen and Manion (1994, p.242), write:

any one method can be efficient, less efficient or inefficient depending on the kind of information desired and the context of the research....  
The researcher will combine those methods (or sources) that will, in complementing each other, build up as full a picture of the areas

It was therefore, with this view in mind that these three (3) sources for data collection have been identified. These three methods of data collection possessed certain qualities that would work well in the context of PNGIPA.

### *1. Questionnaire*

**(a) Its Strengths and Weaknesses.** The use of a questionnaire in the context of the study was justified in a number of ways. Firstly, a lot of people were easily reached through the questionnaire. This was an advantage as it turned out a larger range of responses relating to the context of the problem.

Secondly, the questionnaire immediately portrayed to the respondents that they were not obliged to respond but rather given the choice to do so (Dane 1990, p.39). This was particularly so in the case of PNGIPA given that the time of administering the questionnaire would undoubtedly be one of the busiest times, as it was the beginning of the training year. The administrative staff as well as the academics already had heavy workloads. Being consciously aware of this fact, a questionnaire would immediately portray to the respondents that it was not obligatory but an option. Less pressure would be applied on the potential participants if they felt that this was optional. Although the possibility of participants responding only because they felt obliged to do so cannot be ignored, the researcher was confident that it would not be much of a problem. The researcher's observations and experience at the Institute over the 4 years has led the researcher to draw the conclusion that staff would be cooperative. Working on the assumption that a willing participant's input was self-motivated provided the hope that it would be an advantage towards data collection. The chances of having genuine responses could therefore be expected. Furthermore, the respondents were already either directly or indirectly involved in course development activities. Their own experiences would prompt their responses. It would be a safe assumption that the respondents would have their own opinions on the subject. It consequently provided the motivation needed to respond willingly.

In addition, it was essential that anonymity and confidentiality was maintained. Currently, existing in the Institute were tight little cliques who have different views about the current practices of vocational curriculum development in PNGIPA. Some of these views may not go well with other cliques in the Institute. Therefore, it warranted perceptiveness and sensitivity in



dealing with these different views. Anonymity and confidentiality had to be maintained to avoid promoting friction between groups. The American Psychological Association (1973, p.68), relates the ethical obligations associated with anonymity to the widely accepted rule of human conduct that 'every person has the right to privacy'. Homan (1991, p.140), asserted it as a contract signed between the researcher and the participant. It therefore, demanded that they both respect and honour the contract especially so of the researcher. The researcher preferred to maintain this as such since the participants were colleagues of the researcher whose professional and personal relationship with them have been friendly. Consequently, the researcher had no wish to jeopardise this relationship. It would be unprofessional of the researcher to disclose the sources when the colleagues' confidence and trust had been invested in the researcher. A questionnaire had that assurance.

Thirdly, the use of questionnaire allowed for uniformity to all its respondents. Each identified group of respondents were given the same set of questions regardless of the circumstances surrounding each respondent. The experiences and other influences surrounding the respondent did not affect the question in any way. Of course, the comprehension level of each respondent differed considering that English was perhaps their second, third or fourth language. Their responses naturally was determined by their comprehension level. However, that was anticipated and a follow-up was made later in the interviews. As mentioned earlier, questionnaires were directed towards people's perceptions and judgements so such responses should not come as a surprise.

Finally, the geographical location of the Institute lent itself in a little way to the use of the questionnaire. With the Institute operating in a multi-campus manner, the questionnaire was the ideal method to use to obtain information from the regional training centres, namely the Northern and the Islands Centres. Although the hope of claiming 100% of the response back was not realistic, on the other hand, it was assuring to know that the Regional Training Centres only hosted about 4.8% of the Institute's academic staff. The questionnaire was mailed to the Regional Training Centres. A reminder was sent after a period of 3 weeks. This was to

allow sufficient time for the postal services to be effected as well as for the participants to respond.

Despite these advantages, there were limitations in the use of the questionnaire. Unlike the spoken word, it lacked the flexibility of employing probing exploring questions to elaborate on areas of interest. The respondent was somewhat directed into giving certain responses especially so in the case of the graded responses. Further, the questions were subjected to the interpretations of individual respondents, thus, one can only respond according to one's understanding of the question. It was therefore, difficult to monitor whether the questions were understood exactly the way it was meant to be understood. This was particularly evident in Papua New Guinea with English being one of the many languages spoken by the respondent. In such a context, the interpretation of the responses may not mean exactly the way it was written. Ambiguity and misinterpretation was expected.

**(b) Procedure in the Construction of Questions.** Before the actual construction of the questions themselves, an overview table was developed that connected all the ideas that were related to the research problem. The flow table outlined the research problem, the issues related to the problem, the literature related to the problem, proposed instruments of obtaining the data, source of data, why these particular sources were selected, what information these identified sources were expected to provide, and how the data was to be analysed. This table would then act as a guide in formulating the questions within the scope of the research problem. The overview table assisted in the formulation of the questions by keeping the focus of the items very closely linked to the research questions and the issues raised.

Several drafts of the questionnaire had to be prepared before the questionnaire became perfected. The first draft of the questionnaire was very heavy on the open-ended question. It meant therefore, that the coding and analysis of responses to such questions would be difficult considering the broad range of responses that may result. As it was, there was limited time to implement such activity, thus, it was felt that the questions needed to be approached in a manner where anticipated responses could be identified and presented as statements. The

respondents needed only to choose the anticipated response that best suited their own response. This did not mean to say that the open-ended questions were to be completely ignored rather, it was felt that they can be applied elsewhere in the questionnaire. The open-ended questions would provide other information which otherwise could not be represented well in statement question such as in contexts where an elaboration of personal opinions were needed. Subsequently, these type of questions were left as open-ended. A rewrite of the questionnaire took that into consideration changing wherever possible the open-ended questions into question statements and leaving those that were too awkward to be converted as they were, open-ended questions.

This resulted in the second draft of the questionnaire. Although it did try to include question items which required some form of graded responses, the questions, unfortunately, lacked the precision in identifying the degree of people's perceptions in the form of graded responses. It only allowed for confirmation of question statement rather than adding new information to the already identified problem. It was very biased towards the negative comments raised in other related literature. Much of the identified problems which were quoted were from Reily (1976); Turner (1985) and Development of the Administrative College Reference Group (1990). The questionnaire merely identified the problem and presented them as problems without attempting to convert them into unbiased or positive statements. Below in Table 6 were some examples of the type of problem statements which had to be changed into unbiased or positive statements. As well as that to incorporate graded responses as an indication to the degree of perceptions as opinioned by individual respondents.

The main reason determining the change in the question statements was to avoid creating ill-feelings from among the staff of the Institute. There were members of staff who have genuinely invested much time and effort into their training activities and such criticisms directed at the Institutes would undoubtedly be taken personally which was not the aim of this study. It was therefore, wise not to dwell heavily on these criticisms but to have these presented in unbiased

or positive statements leaving the respondents a choice to voice an opinion. Further improvements were made to the questionnaire thus the final draft (see Appendix 8).

Table 6

**Sample of Draft 1 of Survey Questionnaire**

<b>Identified Problem</b>	<b>Major Problem</b>	<b>Minor Problem</b>	<b>Not a Problem</b>
<p>Reily (1976, p.213-214 states: 'planning was mostly done on an "ad hoc" basis within each branch'; 'bulk of planning left to senior members of the staff with minimal amount of consultation taking place, that is with the lower ranks'.</p> <p>Turner (1985): 'vague objectives hamper Institute's direction in training'; 'no justification of course existence'; 'staff and clients do not know exactly what the Institute is attempting to achieve: what is the Institute objective for training?'</p> <p>Partridge (1974): 'institutionalised training alienates trainee from working environment.'</p> <p>Dobunaba (1990): 'basic problem encountered ... clients were not sure what PNGIPA was really providing in terms of training'; 'clients were concerned that PNGIPA tended to offer courses which did not meet their needs'; 'comments were frequent about poor planning and conduct of actual course'.</p>			

Some of the questions were prepared to accommodate the Likert scale formatted design of the question. The series of anticipated responses were then balanced out by changing some of the negative statements to positive statements. It would thus, be a lot easier to classify and tabulate the responses. Moreover, as it was one of PNGIPA's busiest times, it was wiser not to take up

more time than necessary. The respondents were quite busy at that time thus, consideration to this was important.

The final questionnaire emerged comprising of two types of question format used, the questions and the statements. The former were presented as Open-ended and come in a variety of forms such as direct questions, indirect questions, factual questions and opinion questions while the latter appeared as statements expressing fact and opinions with graded responses from one to five.

The questionnaire had been divided into five (5) sections because of the grouping under which the respondents have been classified. The first section, Section A, of the questionnaire was directed at extracting biographical data. This component was necessary in the light of circumstances surrounding the respondents. The performance of any one person in an organisation could not be kept within the boundaries of the job itself. Often there were other outside influences that prescribes a person's performances in the workplace. This type of data would be useful in identifying these outside influencing factors and how they affected course development work in the Institute. This would be especially useful in identifying certain patterns of responses which existed and which were generated by factors such as the respondents' cultural background, their training and qualifications, their period of employment with the Institute, their interests, their experiences gained while at the Institute and of course, genre issues. Finally, the data aimed to explain the reasons why these patterns of responses existed among the different groups of respondents.

The following section, Section B, unlike Section A, had been divided into two (2) parts. It was specifically aimed at only the lecturers. This was so that two separate views could be presented by each respondent. Part A sought to elicit the respondents' general opinion on the curriculum development activities of the Institute. Part B on the other hand, focused more closely on their own perception regarding course development processes within their own branches and sections.

The next section, Section C, was directed towards the lecturers who have actually participated in course development activities using a curriculum model. A curriculum model in this context was defined as 'a set of procedures to be use in developing a course'. This section's objective was to identify the actual procedures used by the lecturers in course development, how these procedures were implemented and whether there were commonalities across the different branches and sections in the approaches taken. Further, it also wished to establish whether lecturers were aware of PNGIPA's intended vocational curriculum model and how much of it was actually being implemented by them.

The fourth section, Section D, of the questionnaire was directed to those lecturers who have never participated in any course development processes. This section attempted to identify and explore the reasons for non-participation in course development activities.

The final section, Section E, was intended for the administrators in an effort to establish what the policies dictated on vocational course development within the Institute and how these policies related to the real practice of course development in the Institute. In other words, in what manner were these policies being implemented and how much of it were being implemented.

(c) **Procedure in the Administration of Questionnaire.** All the final preparation of the questionnaire was done at the University of New England before the field trip. In view of a valuable point raised by Leedy (1993, p.187-192) emphasising the pre-testing of questionnaires before circulation, the need to administer a pre-test to avoid contradictions, ambiguities, misunderstandings and so forth was taken into consideration. The questionnaire needed to be quality-tested for precision of expression, objectivity, relevance and suitability to the problem at hand. In such a manner, the chances of obtaining vague and irrelevant information would be lessened. Although Leedy's point was indeed valuable it was not as feasible as the researcher would have hoped for. The environment surrounding the pre-testing was awkward in that it was very isolated from the people who were familiar with the

current context of the Institute. There was fortunately, a colleague also studying at the University of New England who was able to make a substantial input on the questionnaire.

Copies of the questionnaire were then circulated personally to all lecturers and the identified administrators of the Institute. This was to provide the opportunity for the respondents to ask questions regarding the questionnaire and what the researcher was doing. The respondents were given at least three days to respond after which the questionnaires were collected. Another preliminary analysis of the questionnaire was then required in order to make improvements to the interview schedule before conducting the interviews.

## **2. Interviews**

**(a) Its Strengths and Weaknesses.** The second instrument that was applicable in this context was the Interview given that most of the participants were physically within easy reach once in the field. The interview structure that would best work for the researcher was the semi-structured approach. Although the open interview provided a rich interaction, the tendency to overlook the aim of the interview was high. The semi-structured approach was a better option in this situation because while it allowed for expansion of ideas, clarification of ideas and further delving into points of interest, it kept the interviewer (the researcher) reminded of the purpose of the interviews as well as the scope of the interview.

One of the advantage of an interview was its ability to explore and probe further into ideas that surface during the interview. It allowed for elaboration of ideas, for explanation of meanings, for discussion of interesting point and so forth. For example, should a respondent express an opinion, it was not sufficient to leave the opinion as it was without attempting to elaborate on it. There may be more to the opinion than it being just an opinion. People saw it as an opportunity to express something they felt strongly about. Hence, the flexibility of the interview was its main asset. It made it possible for the interviewer to tailor the interview to suit the interviewee's particular circumstances. It was able to draw out ideas that a questionnaire may not be able to do so. However, the interviewer had to be alert enough to recognise the signals in the flow of conversation to be able to effectively lead the conversation into these areas of interests.

In addition, uniformity so evident in a questionnaire did not exist in an interview. Each interviewee would along with them their own personal experiences and language thus, the flavour of the interview was personalised as well as responding to the same questions. This was so much easier in the individual interviews because the individual would not be intimidated by others. Their personal flavour and expression dominated the interview. However, the same could not be said of a group interview. There was possibility in group interviews that this personalised flavour may be left unexplored particularly where there were people in the group with domineering attitudes presiding over the interviews. It would be wise that the construction of group interviews was such that not any one person dominated the discussion. In interviews one could have as Tuckman (1972, p.196), describes 'access to what is "inside a person's head"'.

The main weakness anticipated in this method was the time factor involved. However, much as the researcher would like to have as many persons to be interviewed, it was difficult for two reasons. Firstly, it was the beginning of the training year and a lot of the lecturers were busy with preparations of coming training sessions or were already be teaching. The chances of arranging and confirming interviews did not follow any orderly manner but wherever convenient for the interviewee. Secondly, with some of the staff members serving out in the provinces there was insufficient time to travel to the provinces to collect their valued views. Thus, data collected was mainly from the main campus of PNGIPA.

**(b) Procedures in the Construction of Interview Schedule.** In an effort to cover a wide range of people the researcher had planned for four group interviews. A tentative interview timetable and the selection of the potential interviewees was prepared while still at the University of New England. There were to be two interviews held per day, one in the morning followed by the second in the afternoon. For each interview a new interview schedule was used to record responses. The interview schedule was divided into two parts, Part A for the lecturers and Part B for the managers.



In a similar approach to the questions in the questionnaire, the interview schedule was prepared with guidance from the overview table providing the focus for the formulation of the assumed prompts and probes. The questions were specifically aimed at eliciting from the participants their opinions on the curriculum development processes of the Institute in direct response to the barge of criticisms, as highlighted in other related literature, levelled at the Institute and its training programmes. The open-ended questions began in very much the same manner as the questionnaire full of lead-in questions or prompts only. These questions were ineffective as far as setting the scope for the interviews. The flow of the interview could become uncontrolled and would wander off into areas entirely unrelated to the study. There was no checkpoint in place to monitor the flow and the direction of the interview. Therefore, the prompting questions needed also to have other questions that investigated further any other ideas or areas of interest that arises during the interviews. These probing questions set the perimeters of the interview. The first draft of the interview schedule lacked these exploratory questions as seen from the sample below.

#### **Sample Interview Schedule for Lecturers Only**

1. How did you develop your own courses?
2. In what ways do you find your course development procedures advantageous?
3. Are there any weak points in your course development approach? If so, could you explain what they are and why you think they are weak?
4. Were you given any written guidelines on how to develop your courses?
5. What do you know of the Discrepancy Approach? Could you tell me?
6. Have you used much of this approach in your course development?
7. How do you think PNGIPA could improve upon its course development processes?!

#### **Interview Schedule for the Administrators**

1. What are the Institute's specific aims and objectives towards training?
2. Does the Institute have any written policy on its training activities?
3. How do they accommodate vocational curriculum development models?

4. What sort of training do lecturers need to have to qualify in implementing this vocational curriculum model?
5. Do you think the risk of having 'junk training' is highly possible since short courses are not examined by the Board of Studies.?
6. Have you ever participated in any course development activity?
7. How does management closely supervise how courses are developed?
8. How does management verify that course evaluation reports are properly conducted and therefore valid?
9. Does the assumed PNGIPA's vocational curriculum development model has any advantages?
10. What are the disadvantage in the accepted PNGIPA curriculum model?
11. What could be done to improve the current PNGIPA curriculum development processes?

For a first timer in the field of research, this did not provide a sufficient guide to keep the focus of the interview. Given the inexperience in research activities, the researcher may not be alert enough to identify the cues or the important pieces of information in the conversation flow and thus, not be able to pursue these points of interest when they arose. The second and final draft of the interview schedule came about as the result of those weaknesses (See Appendix 9). With the probes added to the interview questions it accommodated the possibility of delving further into points of interests and at the same time keeping the direction and the scope of the interviews.

**(c) The Administration of the Interview Schedule.** The interview preparation included developing an interview schedule, preparing an interview timetable and selecting the interview participants. Having already circulated the initial letter of introduction with the questionnaire (same participants), there was little need for a second letter of introduction.

Before anything else was to be done the tentative interview timetable had to be confirmed. Confirmation involved arranging for a suitable time as well as choosing a suitable place for the

interview to take place. This was done by either personally calling in to see the potential interviewees or by calling them up on the telephone. Should instances where a potential interviewee refused to be interviewed then arrangements could then be made to find someone else. These confirmation were done while the researcher was waiting for the responses from the questionnaire.

As planned, all the interviews were to be taped, a tape recorder (one with a flat microphone) was borrowed from the Curriculum Library and three blank cassettes obtained to serve this purpose. A practise run of interviewing techniques and skills was also scheduled and conducted at the University of New England prior to the data collection field trip. The researcher was also aware that the interviewees may decide to not be taped therefore, in order to record in as much as possible an accurate account of the responses, the researcher decided to verify all responses during the interview rather than after the interview. This was done by relaying back to the interviewee what was said to confirm that the information had been understood exactly the way it was meant to be. This was the only method the researcher had to use due to the time limitations.

In spite of all these preparations the interviews did not go according to plan due to certain circumstances back in the Institute which are beyond the researcher's control. This meant much of the planned activities had to be changed as dictated to by the events surrounding the Institute.

### ***3. Document Analysis: Its Strengths and Weaknesses***

The third source of data were PNGIPA curriculum documents specifically concerning curriculum development processes of the Institute. It served to determine the official motives, the goals, the intentions, the values, the sentiments of the sources and their association in relation to the Institute's training operations. In summary, the document analysis intended to identify the purpose, rationale, and history as documented and how they have influenced the real practise of curriculum development in the Institute.

It was further useful in cross-referencing the various data received from both the questionnaire and the interview. It offered an insight into the intended practise as opposed to the actual practise of curriculum development activities of the Institute. In other words, how did the documented curriculum development procedures relate to the real practise.

### **Analysis of Data**

Emanating from the questionnaire data were two types of responses, the Likert scaled items and the open-ended items. These two types of responses were then subjected to two types of analysis.

Firstly, the open-ended items were analysed using content analysis. In this case, the focus was on the meaning of the utterances or in other words the subject matter (Krippendorf 1980. p.41) rather than on individual words of the utterances. The aim was not to go into the historical origin of each word and what they meant in different context but to establish what the response meant as conveyed by the respondent responding to the given question. The meaning of the whole utterances had to be established to enable a comprehensive grouping to items with similar meanings. The meaning of the utterances then provided the framework within which patterns of responses among the groups were established. It also provided the distribution of the patterns across the sample population. The task of identifying the strengths of groupings of opinions according to distribution to the sample population became a lot more easier. The interview's open-ended responses were analysed in the same manner.

Secondly, the Likert scaled items, on the other hand, were analysed through the use of simple statistical toll of frequency distribution and percentiles. This was particularly useful in identifying where the strengths of opinions lay in terms of how many people responded to which item from the least concentrated to the most concentrated. The distribution of responses indicated a numerical value for easy understanding on the spread of the sample population as well as the strengths of the data.

**Conclusion**

With all these factors taken into consideration the data collecting instruments were thus, designed and implemented.

## **Chapter 4**

### **The Papua New Guinea Institute of Public Administration**

#### **Introduction**

The country of Papua New Guinea is divided into four regions, Southern, Northern, Highlands and the Islands. For PNGIPA to effectively reach all four regions of the country it became necessary for the Institute to operate in a multi-campus manner (see Appendix 1). The main campus of the Institute is located in Waigani, Port Moresby with its four regional training branches elsewhere in the country. The Islands Regional Training Centre (IRTC), is based in Rabaul catering for the island region of the country, the Northern Regional Training Centre (NRTC), in Madang catering for the northern region of the country, the Southern Regional Training Centre (SRTC), in Port Moresby catering for the southern region of the country and the Highlands Regional Training Centre (HRTC), in Mt. Hagen which was under construction at the time of this research.

#### **Historical Context**

The pre-independence public scenario in Papua New Guinea was such that the majority of the public servants' positions were held largely by the expatriates. In 1956, the establishment of an Auxiliary Division was effected under a Public Service Ordinance (Development of the Administrative College Reference Group 1990 p.1). The division's objective was to train and educate the indigenous people for entry into the public service. The jobs in the public service then were mainly sub-professional, such as agricultural field-worker, cooperative assistants and laboratory assistants. The training and education received would enable the selected few of the indigenous people to qualify for entry into the public service. The political climate at that time dictated the need for more indigenous people to be trained. There was a move towards localisation of positions in the public service.

In 1962, the Foot Report caused quite a stir in the administration as well as in Australia. Sir Hugh Foot, the Chairman of the United Nations Visiting Mission of 1962 and his delegation

made some critical comments on the education system in place. The Foot Report asserted that the education system was not providing knowledge and skills necessary to train the indigenous people to replace the expatriates in professional and administrative positions. The report stated that the existing system did not:

provide university education; produce individual capable of replacing Australians in other than skilled or semi-skilled positions; give a level of knowledge required to exercise responsibility in the field of commerce and industry; makes provision for senior administrative and professional staff; adequately generate political confidence and leadership (Smith 1987, p.224-225).

The Mission recommended as well as emphasised, that both the planning and operation of such a programme should immediately begin. The Mission's critical assertions resulted in a flurry of changes in secondary and tertiary education. The report in fact, provided an impetus for action (Smith 1987, 224 -225). While the changes were being planned and implemented in the secondary and tertiary level as recommended by the Foot Report of 1962, the indigenous population already in the Public Service also had to be educated and trained to meet the same need. This localisation process, coupled with the rapid expansion of government and commercial activities, began to place strain on the existing education and training facilities provided by the administration (Smith, 1897, p.223). In an effort to ease the strain of the localisation process on the existing education and training facilities, the Committee of the Development of Tertiary Education and Higher Training in the Territory of Papua New Guinea resolved that a central training institute be established. This decision led to the establishment of such a training Institute (Turner 1985, p.138). Thus, the Administrative College of Papua New Guinea (ADCOL) was established. ADCOL's objectives was clearly to assist and promote localisation. With the approach of independence the role shifted, the Institute became more and more involved in the expansion of its training facilities to accommodate the quick increase in the enrolment of public servants. There were more new courses introduced with the aim of training more nationals to replace expatriate staff before and after independence. These courses catered for the various needs of the government departments, the public servants and other organisations. Table 7 illustrated the type of courses offered prior to independence.

Table 7

**Courses before Independence**

( Dwivedi and Paulias 1984, p.134)

<b>Long Diploma &amp; Certificate Courses</b>	<b>Short Skilled-Based Courses</b>
Public Service Certificate	Introductory Management
Public Service Higher Certificate (PSHC)	Middle Management
Certificate in Local Government	Accounting and Budgeting
Diploma in Public Administration	
Library Officers Certificates	
Library Assistants' Certificate	

The longer courses were both academic and practical. The academic aspect of the long courses served to bridge the gap between the actual knowledge and skills of the public servants prior to independence and the expected knowledge and skills to perform in the job after independence. It was evident at that time that most public servants needed to bridge that gap in order to perform efficiently in the job after independence. In the mid 1960s and 1970s the highest entry educational qualifications for most clerical and sub-professional jobs in the Public Service were Form Three Intermediate Certificate (equivalent to grade nine) and later Form Four School Certificate (grade ten), (Dwivedi and Paulias 1984, p.32). Then in 1969 the Public Service Commission established the three regional training centres in Rabaul, Madang and Boroko. Later in 1975 it opened up another training centre in Kundiawa (Barr 1980, p.32). The Administrative College was established to train middle and high level public servants while the regional training centres were established to train low level public servants. Prior to the amalgamation of the regional training centres to PNGIPA main campus, these training centres were called the Public Service Training Centres (Paulias 1986, p.144). As a result of the decentralisation process for the national functions to the provincial level, it became necessary for the government to convert the Public Service Training Centres into integral parts of PNGIPA which are now called the Regional Training Centres. In 1982, these regional training centres were abolished by the government however, as the need for training increased a lot of



pressure was placed on the government forcing it to reverse its decision in 1983. Three of the regional training centres, SRTC, NRTC, and IRTC were officially re-opened in 1985.

Within the same period, the Institute also developed a Senior Executive Programme (SEP). The main aim of SEP was to help prepare potential nationals to take up senior positions as heads of government departments in the public service. The SEP training was centred around topics related to the responsibilities of the senior public servants in government departments and agencies and was delivered through a couple of days workshop. The main participants to this workshop were Assistant Secretaries and First Assistant Secretaries for a number of government departments. Most of those who attended this workshop were appointed to senior positions upon Independence. A year later 1976, this programmes was phased out because it was thought that it had served its purpose and that there were already a sufficient number of public servants trained (Dwivedi and Paulias. 1984. p.135).

All these changes were geared towards localising expatriate held positions within the public service. The two determining factors as to the type of training delivered were dependant on the ideals of the government of the day as well as the nation's needs especially as it approached self-government, independence and post independence. According to Dwivedi (1986, p.74) the Institute has performed remarkably in that respect.

In 1971, when a submission requesting autonomy was presented to the Commission of Enquiry into Higher Education, the Commission in its opinion felt that ADCOL was not ready for autonomy (Turner 1985, P. 46). The Commission of Enquiry into Higher Education identified ADCOL as playing the key role in implementing localisation policy of the government. It further identified ADCOL to be public service oriented and under direct government control. The Council resolved that ADCOL should remain a Branch of the Public Service Board for the next couple of years (Re.ly 1976, p.208). It did also recommend that ADCOL needed to work within the framework of its own ordinance under the guidance of its own council. Thus, upon the recommendator of this committee a College Council was

established and became embodied in the 1973 Public Service Interim Act. The College Council was expected to perform these duties: 'plan and supervise the development of the College; advice on course education and training; advice on other matters affecting the College' (Reily 1976, p.208 -209).

The Council immediately set to work in defining the role ADCOL would be playing in the years ahead. Several working groups were established to discuss and recommend possible changes. Among the issues discussed was the issue of autonomy. Once again the proposal fell through on the basis that the Council was not satisfied with the current performance to grant autonomy. The campaign for autonomy continued until 1978 then it disappeared for a while.

Concurrently, the Council offered no clear guidelines for ADCOL to take in the implementation of its role as a training institute, ADCOL was indeed frustrated in reassessing itself and its role in training as well as establishing priorities for independence and post independence years (Turner 1985). ADCOL was able to reassert its role in 1974. It was noted that there were differences in determining where the emphasis lay in specific courses, that is, on the academic or on the vocational skills and training. It seemed that for every course there were different criteria attached and the criteria applied differ from year to year. These difference contributed to the lack of overall direction. The implication seemed to be that the courses delivered by ADCOL have been seen as 'indicators of promotion' rather than addressing the question of efficiency in the public service (Development of the Administrative Reference Group 1990, p.3-4).

Meanwhile, ADCOL's status remained as it was a division of a government department. This position subjects ADCOL to changes within the government. With independence came changes which manifested themselves in the reorganisation and restructuring of the parent department. New functions were added to the existing ones within the government departments as well as the establishment of extra organisations with entirely new functions. This affected the operations of ADCOL. In 1975, a number of new training courses were developed and introduced to accommodate the introduction of additional functions of existing government

departments and agencies. Further, the identification of new training needs of personnel were conducted in direct response to new organisational function.

As the changes were implemented in the Public Service, the demand for more trained nationals in specialised technical and professional fields grew. In response, as the principle government training institute, ADCOL took the responsibility of developing in-service courses to train qualified and competent national public servants who could promote socio-economic and cultural development and ensure provision of more effective delivery of services to Papua New Guineans. Table 8 indicates that seven additional courses were developed and introduced to fulfil this requirement (Dwivedi and Paulias 1984, p.135). Put together, ADCOL was conducting a total of 16 courses. Within these courses were specific subjects taught. For example, the course in Diploma in Business Development had these subjects, Business Organisation and Development, Business Laws, Commercial and Taxation Practices, Business Mathematics and Applications, Project Appraisals and Evaluation and Business Communication.

With the emergence of the Public Service (Management) Act of 1986, all training responsibilities were delegated to the Head of a new department, the Department of Personnel Management. ADCOL became a division of the Department of Personnel Management.

Table 8

**New Courses after Independence** (Dwivedi and Paulias 1984, p.135 -141)

<b>Courses Offered</b>	<b>Courses Offered</b>
Diploma in Social Development	Library Technician Programme
Diploma in Public Finance and Accounting	Diploma in Library Science Program
Certificate in Accounting	Certificate in Business Development
Diploma in Business Development	

The issue of autonomy surfaced again in 1993 followed by a policy submission requesting partial autonomy. Up until 1989, ADCOL operated in much the same manner. With the establishment of the 1989 National Training Policy, major changes began to occur within the training cycle of PNGIPA. The aims and objectives, roles and functions were revised to accommodate the new direction dictated by the National Training Policy.

In March of 1993, ADCOL finally but only partially severed its ties with its government department and gained some level of autonomy as an independent training body, the Papua New Guinea Institute of Public Administration (PNGIPA).

### **Aims and Objectives**

The Institute's education and training programmes are governed and directed by 1989 National Training Policy (NTP) which had mandated it to deliver relevant training to the bulk of the workforce to upgrade the workforces' motivation, performance and productivity (NTP 1989, p.3).

### **Roles and Functions**

With particular reference made to Section 3, clauses (a) and (b) of the PNGIPA Act of September 1993, the dictated functions of the Institute are:

- (a) to plan, organise, conduct, and assess a wide range of practical and relevant training programmes to meet the needs of the public and private sectors in the country; if applicable, in the South Pacific Region; and
- (b) to undertake relevant research and consultancies on issues and problems of management and administration (PNGIPA Act, September 1993).

In the implementation of its functions, the Institute had provided Consultancy Services to Government Departments and Agencies wherever the need arose. It had organised and conducted conferences, seminars and workshops for senior public servants on the theme of PNG's progress and development. Moreover, it had offered both certificate and diploma

courses in the various disciplines in response to the training needs of the government departments and any other organisations who had sought its expertise (Dwivedi and Paulias 1986, p.135 -136).

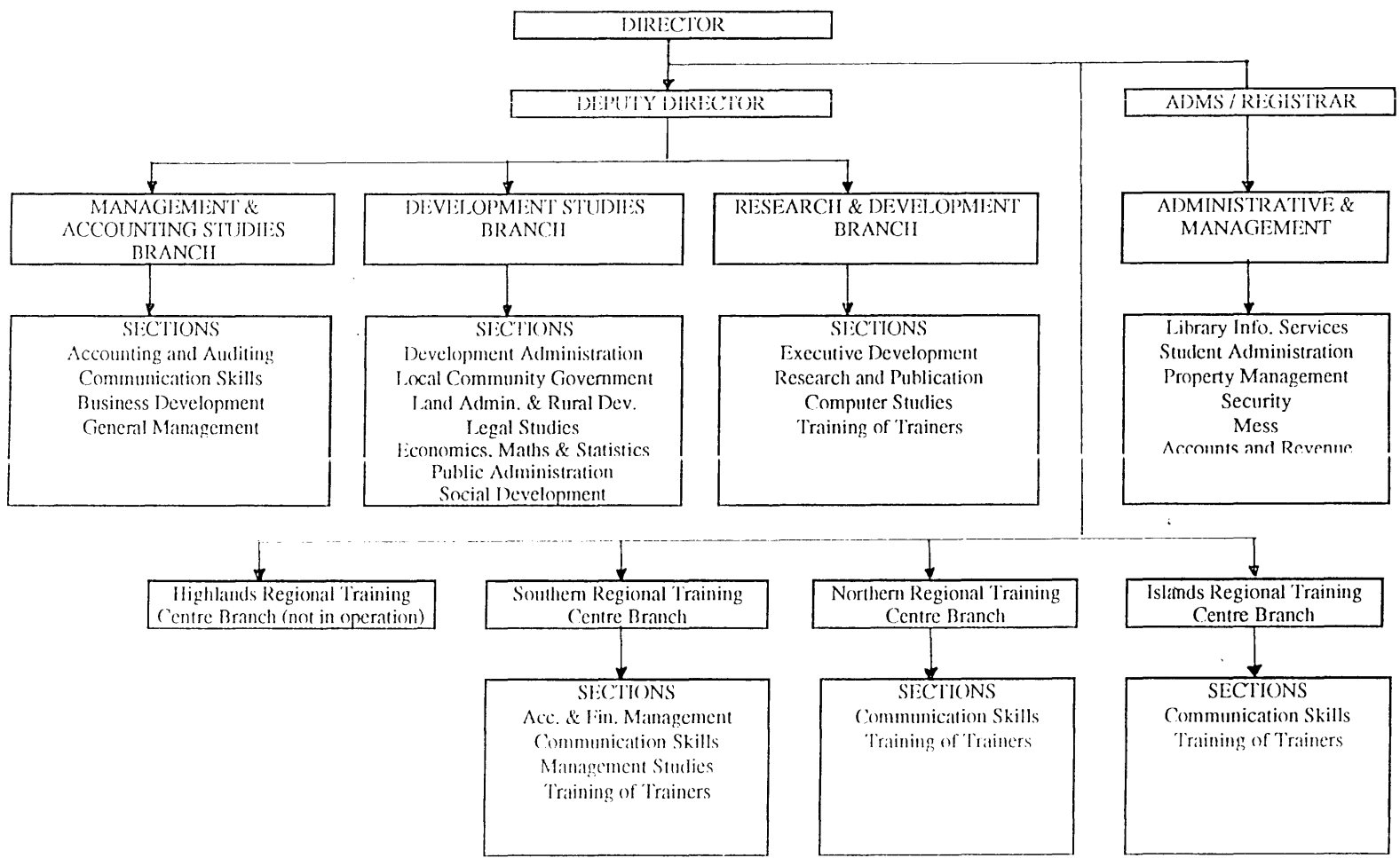
### **Organisational Structure**

The hierarchy of the Institute begins with Governing Council then the Office of the Director under whose responsibility it was to oversee operations of the entire Institute. The Director was assisted by a Deputy Director whose responsibility encompasses the three main academic branches located within the main campus of the Institute. The regional training centres report directly to the Office of the Director.

Apart from the training aspects of the Institute, there was also the Administrative and Management Services headed by the Assistant Director Management Services (ADMS). The ADMS oversaw the functions of Accounts and Revenue Offices, Library and Information Services, Student Administration, Property Management, Security Services and Catering Services. Figure 1 gives an outline of the organisational structure of PNGIPA.

### **Academic Functions**

The main campus offers training in three broad academic branches: Management and Accounting Branch, Development Studies Branch and Research and Development Branch. These three academic branches were each headed by the Principal Lecturer otherwise known as the Branch Head. The branch heads have dual roles to play in the Institute. Not only were they members of the senior management team of the Institute (those involved in the decision making) but were also active members of the teaching staff. The branch head oversaw a number of specific disciplines which were called sections. The number of sections varied from branch to branch. For example, these four sections, Executive Development Section, Research and Publication Section, Computer Studies Section and Training of Trainers Sections were directly under the responsibility of the Research and Development Branch Head. Each had its own section head. All other lecturers belonged to sections depending on their speciality in the



PNGIPA Organisational Structure

Figure 1

academic discipline. Each of the sections offered both theoretical and practical courses which often varied in their duration. The bulk of the enrolments came from the government departments while the rest were from other organisations. Courses offered within each of these branches were dependent on the availability of expertise coupled with the need of the client organisations.

Although the regional training centres were initially established to train low level public servants, the amalgamation of the training centres with the Institute have now changed their status to branches. They had been delegated the responsibility to cater for the training needs of their regions by running short skill-based intensive certificate courses which runs from anything between 1 week to 10 weeks. As in the case of other branches, the regional training centres were headed by a branch head under whose supervision come the sections. Take the Southern Regional Centre for example, it has four sections, Accounting and Financial Management, Communication Skills, Management Studies and Training of Trainers. Each section was responsible for a number of short courses designed and offered by the sections. For example, Communication Skills runs week long courses in Public Service Correspondence Writing, Report Writing, Critical Thinking for Decision Making, Interviewing Techniques, Meeting Management Procedures, English Skills, and Oral Presentations. In short, the general emphasis in the Regional Training Centres was on short courses, directly related to procedural, on-the-job skills (Barr 1981 p.33). PNGIPA and its regional training centres were also involved in in-house training, facilitating workshops, and other tailor-made courses to meet specific needs of its clients. Tables 9 and 10 illustrates the academic disciplines and the kind of courses offered in these fields by the Institute.

### **Conclusion**

PNGIPA has since its inception in 1963, undergone a lot of changes. Prior to independence its role was one of maintaining the colonial status quo. With independence the role shifted to developmental roles. The training delivered is to promote productivity aimed at enhancing specialisation and competency within the workforce.

Table 9

## PNGIPA Teaching Staff

Branch	Staffing	Designation	Section
Development Studies	Russel Purai	Principal Lecturer	Development and Administration Local Community Government Land Administration & Rural Development Legal Studies Economics, Maths & Statistics Social Development Public Administration Economics, Maths & Statistics Economics, Maths & Statistics Economics, Maths & Statistics Social Development Social Development
	Ngen Isana	a/Section Head	
	Noah Seiyari	Section Head	
	Joseph Gerenge	a/Section Head	
	Yuatha Kapa (has left PNGIPA)	a/Section Head (currently Vacant)	
	Dr. Jigo Oti	Section Head	
	Soanin Kilangit	Section Head	
	Jack Kamalap	Lecturer	
	Tau Bari (has left PNGIPA)	Lecturer (Currently Vacant)	
	Urban Ganavi	Lecturer	
	John Silikara	Lecturer	
Management and Accounting Studies	Louise Aitsi	Lecturer	Personnel Management, Industrial Relations Accounting and Auditing Communication Skills Business Development General Management Accounting and Auditing Communication Skills Communication Skills Communication Skills Communication Skills
	Jalaja Pillai (has left PNGIPA)	Lecturer (Currently Vacant)	
	Ovia Tarube	Principal Lecturer	
	Govinda Pillai (has left PNGIPA)	Section Head (Currently Vacant)	
	Miriam Moi-he	Section Head	
	Tokunbo Ogunbanjo	a/Section Head	
	John Sevese	a/Section Head	
	Yala Yatu	Lecturer	
	Nou Iemo (Unavailable)	Lecturer (Currently Vacant)	
Fin Fadri (has left PNGIPA)	Lecturer (Currently Vacant)		
Reserach and Development	Laureka Eka Roleas	Lecturer	Executive Development Research and Publication Computer Studies Training of Trainers Computer Studies Training of Trainers
	Tessy Tai	Lecturer	
	Pensa Roleas	Principal Lecturer	
	Alenjandro Ibay	Section Head	
	Kojo Saffu (has left PNGIPA)	Section Head (Currently Vacant)	
	Caroline Kitcher	Section Head	
	Veronica Bagasel	Section Head	
Simon Emmanuel(Unavailable)	Lecturer (On Study Leave)		
Avis Lina (has left PNGIPA)	Lecturer (Currently Vacant)		



Branch	Staffing	Designation	Section
Southern Regional Training Centre	Moale Vagikap (Unavailable)	Principal Lecturer (Study Leave)	
	Anael Nnko	Section Head	Financial Management and Accounting
	Leonidas Duque	Section Head	Communication Skills
	Dr. Christain Nkemeh	Section Head	Management Studies
	Liwliwa Jose	Section Head	Training of Trainers
	Peter Marise	Lecturer	Financial Management & Accounting
	Zita Pushai	Lecturer	Training of Trainers
Guma Kanimba	Lecturer (Study Leave)	Communication Skills	
Northern Regional Training Centre	Henry Sabub-Kanai	Principal Lecturer	Management Studies
	Salbung Sei	Section Head	Training of Trainers
	Anton Aimo	a/Section Head	Communication Skills
Island Regional Training Centre	Bruce. Joudrey	Principal Lecturer	
	Michael Orim	Lecturer	Training of Trainers
	Steven Kilang	Lecturer	
Highlands Regional Training Centre	Not in operation	Not in Operation	Not in Operation
Administration	Gei Ilagi	Director	
	Simon Takaboy	Deputy Director	

Table 10

PNGIPA's Branches and Sections and their Training Programmes

<u>Branches</u>	<u>Sections</u>	<u>Courses Offered</u>
MANAGEMENT  AND	General Management	Principle of Management Middle Management Human Relations for Middle Managers Team Development Leadership Workshop
	Financial Management and Project Management	Budget Preparation and Expenditure Monitoring Financial Management Project Management Network Analysis
ACCOUNTING  STUDIES	Personnel and Industrial Relations	Principles of Personnel Management Recruitment and Selection Performance appraisals and Management by Objectives Industrial and Labour Relations
	Business Development	Business Development Small Business Management
	Accounting and Auditing	Public Finance and Accounting: Basic to Advance Professional Accounting Taxation Conversion Introductory Audit Advanced Audit Government Stores Accounting and Control
DEVELOPMENT  STUDIES	Communication Skills	Report Writing Public Service Correspondence Meeting Procedures and Chairmanship Critical Thinking Interviewing Techniques
	Social Development	Community and Fieldwork: Basic to Advance Interpersonal Skills Basic Research Skills Research Methods Extension Work Counselling Skills Child Welfare
	Local Government and Urban Development	Basic Local Level Government Local Level Government Administration Advance Local Level Government and Urban Admin.

DEVELOPMENT STUDIES continue	Mathematics, Economics and Statistics	Statistics Development Project Planning and Control Practical Numeracy Skills
	Land Administration and Rural Development	Land Disputes and Settlement Land Acquisition and Investigation
RESEARCH  AND  DEVELOPMENT	Executive Development	Enrichment Seminar on Development Administration In-house Departmental Executive Course
	Computer Studies	Computer Appreciation with Basic Units Spreadsheet Skills with Lotus: Basic Introduction to Provincial Government Accounting System
	Training of Trainers	Training Skills for Trainers and Instructors Training Skills Course for Extension Officers Up-Dating Training Skills for Managers Training Skills Course for First and Middle Line Supervisors Interpersonal Skills for Trainers and Instructors Workshop on Identifying Training Needs
EXISTING REGIONAL TRAINING CENTRES  SRTC  IRTC  NRTC		Public Service Correspondence Basic and Advanced Report Writing Bank Reconciliation Procedures Claims Examination Procedures Outstation Cash Office Procedures Management Skills Training Programmes Training Skills for Instructors and Extensions Workers Integrated Village Development Training Needs Workshop Cash Accounting Procedures Bookkeeping Budgeting Financial Interpretation Procurement Procedures Cost Accounting Project Management Small Business Management