

**AN EXPLORATORY ANALYSIS OF ALTERNATIVE  
APPROACHES IN DISTANCE LEARNING  
PROGRAMMES FOR NURSES**

**BY**

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(i)

## DECLARATION

UNLESS INDICATED TO THE CONTRARY IN THE TEXT, THIS WORK IS  
THE CANDIDATES OWN ORIGINAL WORK.

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March 1995.

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DATE

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## ABSTRACT

An exploratory retrospective study conducted on two differing educational programmes, both of which were for the diploma in community health nursing.

The aims of the study were:

- i) To propose a conceptual framework in order to compare distance learning programmes in community health nursing.
- ii) To describe and compare two such programmes based on this framework : one content-based and the other community / problem based.

The research design used case study methodology, after the development of a model for the education of professional nurses which was derived from literature. The constructs of the model were used as propositions in a case study protocol. The four constructs were each made up of two elements and each element consisted of the poles of a continuum by which that feature in a programme could be identified. The constructs were:

- a) The Conceptual Programme which included the elements of Base and Structure; Base being either institution or community and structure either content or process.

(iv)

- b) The Student with elements of Professional or Personal attributes. Professional attributes were either empowered or disempowered and personal either self-directing or passive.
- c) The Context which had Components and Relationships as elements. The former comprised either limited formal health services or all-embracing health related sectors, whilst the latter specified relationships would either be seen as linkages with unilateral formal communications or partnerships where collegial relations impacted on both parties involved.
- d) The Concrete Resources included both human and material resources. Human resources were either limited or additional and material either limited or varied.

Application of the Conceptual Programme analysis demonstrated that programme A was institution and content based whilst programme B was community / problem (process) based.

Programme documentation and student assignment and projects were analyzed in terms of the remaining three constructs. An interview with a tutor for each programme followed after they had read the case reports. A third interview was then held with a key person who had overseen both programmes and read case and interview reports in order to validate both content and the use of the model as framework for analysis.

The following trends emerged:

- i) The content programme was associated with more disempowered and passive students as those were defined in this study.
- ii) The content programme also used more limited formal health sector settings for learning and in this linkage type relationships dominated although three instances of partnerships did occur, and some community based groups were used by students.
- iii) The content programme used one tutor per contact session for lectures with students and, cost, in 1991 currency, R150 per student to deliver.
- iv) The community / problem based programme showed a stronger trend to empowered and self directing students with several clear instances being documented.
- v) There was a greater variety of settings used for learning in this programme.
- vi) Several instances of partnership relationships occurred despite the limited contact time between students and communities or health settings.
- vii) The community / problem-based programme needed two facilitators per contact session at a cost of R1130 (1991) as small group discussions were the main strategy for learning.

- viii) Student evaluations of both programmes showed that students viewed them in much the same way despite the differences that were found. This indicates that student evaluations on their own provided insufficient evidence about the nature of a programme.
- ix) The community / problem based programme cost about 20% more to deliver than the content programme out of a total expenditure of R186 000 (1991 value).
- x) The model was revised to collapse professional and personal attributes into one element and to add another element 'metacognition' to the construct student. 'Access' was also recommended as an additional construct with elements of barriers and supports.

This new model needs to be tested and reviewed by peers. The revised model for the education of professional nurses could be a useful yardstick for evaluating existing educational programmes, selecting newly proposed programmes and guiding policy formation.

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## **CHAPTER ONE**

# **AN EXPLORATORY ANALYSIS OF ALTERNATIVE APPROACHES IN DISTANCE LEARNING PROGRAMMES FOR NURSES**

### **1.1. BACKGROUND**

In 1990, it was recognised by the staff of the department of nursing at the University of Natal, that a structure was required which could facilitate the delivery of programmes that did not fall within the ambit of university functions.

The impetus for this derived from a number of sources. The World Health Organisation's (WHO) recommendations for re-orienting nurse education, led to the recognition, by the researcher, that access issues should be addressed (Kortenbout, 1989; WHO 1984, 1986). Recognition of student needs grew as she worked within the clinical course work masters programme with students from all over Natal, Kwazulu and Transkei.

It was noted furthermore, that many professional nurses had been working in isolation for several years at a time. Most nurses are women and perform dual roles at home and in the work force; the need is thus for them to be available in their communities to fulfil these responsibilities.

Another factor was that health care services were no longer able to release staff for periods of study leave, due to the reduced post structure and the cost factor (although some staff would be reluctant to leave home for a year anyway).

Furthermore, it was realised that the existing structures for delivery of care and the preparation of practitioners, have not resulted in improved health status (WHO, 1990 : Sanders, 1985). Yet another factor was the enormous attendance by nurses from far afield at symposia and study days organised by the Department of Nursing in the past.

After a short course in community health nursing had been arranged by the researcher for former Bachelor of Social Science Nursing students, several specific requests for outreach programmes were received. Former students resident in northern Natal carried out a needs assessment to establish the viability of decentralized sites. From the above, it became clear that the type of programme contemplated would need to have a distance education format.

By implication, there is then separation of learner and teacher in space and time which would require specific measures to overcome (Robinson, 1989). As a result of these issues, it was decided by a group of nurse educators at the University of Natal to initiate distance learning programmes. In order to deliver such programmes, however, a new structure had to be created - this was the Institute for Nursing, which was established with a constitution and a governing board to oversee its functions.

## 1.2. PROBLEM STATEMENT

It was not immediately obvious what kind of curriculum would be appropriate. While educational theory suggested that a more process based curriculum might be desirable, a whole range of factors had to be considered.

Firstly, the influence of the general education system has been described by Hartshorne (1985). He documented the particular effects of poor education facilities in the rural areas, which is the situation from which many nurses come. Mashaba (1986) examined the influence of general education on nursing education; she associated problems in nursing education with lack of science subjects in school.

Secondly, the level of violence in rural communities in Kwazulu / Natal was quite high. The issue of community violence impacts not only from a humanitarian perspective, but also at a practical level, so that nurses who are studying, and working in such a climate, have to deal with the inevitable mobility of people and also the closure of clinics and other services.

The type of infrastructure and social dynamics in which educational programmes were delivered also has an influence.

There is an average population growth rate of 2.7%, being even higher in some sub-regions! The gender ratio is disturbed, mostly due to the migrant labour system (Erasmus, 1991). Forty-three percent of the population is under 15 years of age, which will extend the period of high growth rate. Other existing health problems will also relate to population dynamics; for example,

morbidity and mortality from road traffic accidents, the violence referred to, the probable rapid increase of Human Immuno Deficiency Virus (HIV) positivity, other sexually transmitted diseases and conditions such as mental ill health, including alcohol related problems.

Sixty-two percent of the economically active population have no formal education, whilst only 35% of those available for employment in 1991 were employed (Erasmus, 1991). In Kwazulu, only 25% of the population have access to drinking water, and 10% have sanitation. The problems with housing, energy supply and communication systems are also typical of an underdeveloped country in the main. These issues have been documented by authors such as Wilson and Rhamphela (1989); Erasmus (1991); and the MRC (1991).

Another issue which had a bearing on the proposed distance learning programme was the health manpower situation. This is dealt with in the review of literature. Suffice it to say at this point that, according to Erasmus (1991), WHO recommends a hospital bed : population ratio of 1 : 200, but in this region, it is 1 : 500. Although there is a focus on Primary Health Care (PHC) as the system of choice at this stage on policy level, this had not permeated into fiscal and infrastructural decisions.

From the foregoing discussion the need for greater access to formal professional education for nurses was recognised. This was particularly so for nurses in rural areas where there were a range of environmental features affecting the whole population (nurses and their clients). The population characteristics also determined the need for professional community health

nurses, whilst manpower and health care system needs for appropriately prepared nurses were identified as well. The research problem thus stems from health and social profiles, described above, in a country with poor infrastructure, and a need for appropriately educated nurses.

The question the researcher set out to answer was how different types of curricula would address this need, given the complex South African situation.

### **1.3. RESEARCH OBJECTIVES**

In view of the issues given above, these are:

- \* To propose a conceptual framework in order to compare distance learning programmes in community health nursing.
- \* To describe and compare two distance learning programmes based on this framework : one content-based and the other community / problem-based.

### **1.4. RESEARCH QUESTIONS**

These research objectives can be addressed by the following research questions:



**Objective One**

- \* Which concepts play a role in the education of community health nurses?
- \* What are the assumptions underlying such education?
- \* What are the relationships between such concepts?

**Objective Two**

- \* Has a community / problem based programme and a content based programme actually been established?
- \* What is the influence of each of these two programme types on the students of each programme?
- \* What is the influence of each of these two programme types on the context used for the programme delivery?
- \* What is the influence of each of the two programme types on the resources needed for education in community health nursing?

**1.5. SIGNIFICANCE AND JUSTIFICATION OF THE STUDY**

The need for this study thus emerges, as the efficient and appropriate

preparation of professional nurses is of fundamental concern in the setting described. Educational initiatives which will assist in the preparation of practitioners who are able to function in the proposed format where responsibility is devolved to the lowest level of ability possible, are currently being promoted by an emphasis on primary health care (Strategy for Primary Health Care, 1992). The unique nature of the influences described above and the limited resources available, dictate that all efforts should provide the maximum desirable effects.

Narayanasamy (1991) examined performance indicators that are of value in assessing nursing education efforts. Some indicators are well developed, such as those of staff performance, which can also elucidate items such as human resource management and quality of teaching.

The evaluation of teaching methods has also been documented (Narayanasamy, 1991; Harvey and Vaughan, 1990). However, the former author went on to discuss the need for unit cost, value-added scores, wastage and completion rates.

Many pertinent issues that relate to the preparation of appropriately educated health workers have been documented (Gerrish, 1990; Burnard, 1989; McMillan and Dwyer, 1989, 1990). However, the issue of educational accountability has been neglected so far. Champion (1991) has raised this issue at two levels: viz. the institutional level and the individual tutor level. In terms of accountability, it is necessary to explore the effects of educational efforts on participants, health care providers and wider communities. This then raises the question of whether this type of investigation can justly be seen

as research, rather than routine monitoring. Abruzzese (1989) recommends that if rigorous research design and methods are included with problem-solving and audit activities, the procedure takes on a research format.

## 1.6. DEFINITIONS

Course - this is a component making up a subsection of a programme.

Programme - the totality of educational activities required to meet a prescribed qualification.

Content-Based Curriculum - this is a curriculum for which content has been selected prior to commencement, and topics had been organised into teaching/learning units and unit objectives.

Community / Problem-Based Curriculum - this is a curriculum for which only major themes are selected prior to commencement and learning objectives are driven by issues identified in and with community members. These are the health issues to which problem-solving and learning process is applied.

Clinical Practice - this embraces not only psychomotor skills, but the entire range of practice components including psychosocial, affective and other attributes as relevant.

University - this refers to the University of Natal unless otherwise specified.

**Institute** - this is the Institute for Nursing based at the University of Natal.

**Distance-Learning** - refers to a decentralized educational situation where there is some intermittent contact between student and educator but this is not located at the educational base, and the student lives works and studies some distance from the base.

**Community Health Nursing** - a sub-discipline of nursing recognised as such by the S.A. Nursing Council for which a formal educational programme is followed.

**Criterion Variables** - will be given in Chapter Three as constructs making up the model and will be derived from the literature review that follows in the next chapter.

### **Abbreviations**

Community involvement in health	-	CIH
Primary health care	-	PHC
South Africa	-	SA
South African Nursing Council	-	SANC
World Health Organisation	-	WHO

## CHAPTER TWO

### REVIEW OF LITERATURE

The broad areas of literature to emerge were trends in community health nursing and public health; the nature of the educative process in this regard and curriculum options that would address these issues. It also became clear that several factors broadly related to cognitive development would be relevant to the area of study and these emerged as themes underpinning curriculum. Literature has been categorised as far as possible into these major trends / concepts and debates. However, there are many aspects that are interrelated, so that the review of literature as a whole reflects the field of study and the following sections should be read together to gain a composite view of this.

The literature on distance education is not given here as both programmes studied were of this type. Useful sources in the development of both programmes were de Jonge and McDougal (1989), Kline and Emerson (1989), McClelland and Harrison (1992). A literature review of continuing professional education was given by Barribal, White and Norman (1992).

#### **2.1. TRENDS IN COMMUNITY HEALTH NURSING**

An examination of literature revealed that this practice area must be underpinned by an eclectic scientific base. Williams (1988) for instance,

referred to the need for the inclusion of the following: epidemiology, biostatistics, nursing theory, economics, politics, public health administration, research and issues in public health. These were supported by Clemen-Stone, Eigsti and McGuire (1987). Archer and Fleshman (1985) included psychosocial and environmental sciences. Policy formation and communication were important to Maglacas (1988).

Based on the literature, the practice of community health nursing had certain characteristics and any educational endeavour should include these. The first is that a health focus should dominate over a disease approach. This entails assisting clients to achieve optimal levels of functioning - Maglacas (1988), included increasing client control over health matters in this, so there are also self-care and environmental aspects involved.

People must be accepted as the main health resource and the World Health Organisation (1974) indicated that this would be achieved by a people orientated curriculum, not one that is institution centred.

The above two aspects showed that there should be a focus on health promotion, disease prevention, and a need to address health related issues pro-actively (Logan and Dawkins, 1986) in carrying out community health nursing.

Another aspect is that of the client as it is the inter-relationship between client and environment that is the focus for care (Clemen-Stone et al, 1987). It is this that sets client care priorities. Successful outcomes are therefore appropriate interventions that are acceptable to the client, the client being an

equal negotiator in the interaction. Tansey and Lentz (1988) maintained that these factors meant that an ability in independent practice is important.

The client is also seen as individuals, families, groups and communities (Williams, 1988; Schoolcraft, 1984). However, in community health nursing there is an emphasis on the community as client - the main focus is on aggregate level care (Archer and Flesman, 1985). These aggregates being both those already in the care system and those outside of this arena, needing to be identified and suitably responded to.

Clark (1985) said that it is continuous and not episodic care that occurs and characterises community health nursing. This continuity spans time but also all life-stages and the wellness / illness spectrum.

Multi-disciplinary and intersectoral needs in community health nursing practice mean that team functioning is essential as well (Clemen-Stone et al, 1987; Schoolcraft, 1984).

Community health nursing derives from a synthesis of nursing and public health practice - hence the need for the following section.

## **2.2. TRENDS IN PUBLIC HEALTH**

There are several major global trends in the provision of public health care that impact on the functions (and therefore the education) of community health nurses. There is also congruence between these two fields of practice, the

nature of community health nursing being derived in part from that of public health. These trends are consistent with the philosophy of PHC, and are inter-related with one another as well. The first to be examined is that of community participation or partnership.

This is also now referred to as *community involvement in health development* (MacCormack, 1983).

Advantages of public participation in development given recently by World Health Organisation (1991) coincide with those of MacCormack (1983) but are described as coverage enhancement, efficiency, effectiveness, equity and self-reliance being encouraged.

As far as terminology is concerned, Oakley (1989) proposed that of involvement in preference to participation as the former implies a deeper, more personal identification of community members with the issue of primary health care.

Stanhope and Lancaster (1989 : 257), in dealing with the community as client, operationalized the World Health Organisation community involvement / participation idea as partnership, which was defined as the "informed flexible and negotiated distribution (and re-distribution) of power among all participants in the processes of change for improved community health".

The basic tenet of this definition is that health is not given, rather it is generated through new and increasingly effective forms of lay-professional collaboration.



This perspective was inherent within the dimensions of the currently proposed form from World Health Organisation, viz. community involvement in health development (CIH). Health development is recognised as essential within the 'development process' and this in turn, must encourage active participation within this process.

Kingima (1983:2), reflected "participation obviously means much more than simply getting the population to be served to agree with a proposed health care programme. It involves a true shift in the way decisions are made and in the distribution of power, control and accountability. It has many implications for the traditional holders of that power and control, be they health professionals, programme managers, politicians, community or church leaders".

World Health Organisation (1991:8) also suggested that community involvement is a broader and more action-orientated concept than participation and proposed the following statement:

"Community involvement in health is essentially a process whereby people, both individually and in groups, exercise their right to play an active and direct role in the development of appropriate health services, in ensuring the conditions for sustained better health, and in supporting the empowerment of communities for health development".

Bracht (1990:110) described strategies for citizen partnerships / participation "... as the social process of taking part (voluntarily) in formal or informal

activities, programmes, and/or discussions to bring about a planned change or improvement in community life, services and/or resources".

He cautioned against taking a North American or Western European view only, and also referred to the benefits for community health outcomes where citizens have been involved.

World Health Organisation (1991) quoted a study in Peru that distinguished between direct participation which mobilized the community's resources and social participation which increased people's control over social, political, economic, environmental and health issues.

The idea of community participation has also given rise to many assumptions, for example, that a large untapped source of manpower exists that will make up for current deficiencies (Rifkin, 1983). Also that communities are homogenous entities which are all agreeable to a course of action. MacCormack (1983) pointed out that while there are some cohesive moral communities, in others there is great exploitation of the landless by landowners and shopkeepers for example. Caste and ethnic divisions also occurred and national political rivalries may also be played out at local level.

It should not be assumed either, that health is valued or that people wish to contribute to health-related activities (Rifkin, 1983). This was also borne out in studies by De Malseneer and Debunne (1988), Waterworth and Luker (1990) and Weiss (1986).

However, Oakley (1989) pointed out that there is no universally acceptable definition of the concept of participation and that several interpretations exist. These aspects were explored here because the interpretation selected thus gives meaning to any programme where community relationship are applied.

World Health Organisation (1991) suggested three different interpretations of participation, namely:

- \* **As Contribution** : voluntary or other contributions by people to pre-determined programmes and projects, for example, materials and voluntary labour.
- \* **As Organisation** : where representation of the community's interests is more important than the type of structure through which this is facilitated.
- \* **As Empowerment** : which may entail the development of skills and abilities that enable people to manage more effectively, have a say in development matters, or it may be more fundamentally concerned with enabling people to decide on, or take, the action they believe necessary for their development.

This notion also implied partnership between individuals, groups, organisations and health professionals in which all parties examine the roots of health issues and agree on approaches to them.

Closely aligned with the previous issues is that of the *intersectoral approach*.

Ebrahim and Ranken (1988) stated that health is the product of many things of which health care is only one, the multi-sectoral approach also means that inequalities in other services need to be corrected as much as in health.

They also included the issue of community organisation here for countries with problematic political systems, as it would substitute for the lack of administrative network at the periphery.

Senghor (1987) examined the health / development issue and showed that not only is the involvement of a number of sectors essential, but that those are inseparably linked to economic, social and cultural development. It should be noted that other sectors perceive health solely in terms of traditional medical services, according to this source.

This meant that a more holistic approach to development and health strategy needed to be engendered.

Much of the initiative in collaboration should be set in motion at grassroots level. This also implied collaboration with lay organisations and the ability for nurses practising at this level to be skilled in making this happen.

At the community level, people see themselves in holistic terms and not made up of inputs from discrete sectors, it should also be noted that changes in one sphere will often affect others.

A further point made was the intersectoral activities with realistic achievable goals, should be attempted firstly. In all initiatives, self-reliance should be

promoted / preserved, with people trained to work across sectoral boundaries, and to create and manage their own participatory structures (Senghor, 1987).

The third trend that has manifested globally and that is also relevant here is that of *democratisation and empowerment*, which is also closely allied to the issues commented on so far. If communities accept responsibilities and develop decision-making abilities, they become the agents of their own development rather than passive beneficiaries of services (Watts, 1990). This type of democracy has broader political, social and economic implications than the more narrowly understood political only sense of democracy. Watts gave Dewey's (1917) purpose of democracy as the creation of a new human potential through the creation of a freer and more humane experience to which all contribute and in which all share.

Features of the understanding of democracy as proposed by Watts (1990) that related to health care, are, for example,

- \* responsibility to others as well as self;
- \* equality of opportunity to realise potential;
- \* emphasis on collective rights.
- \* participation in decision-making;
- \* the placement of decision-making as close as possible to those affected;

- \* public debate and protection against abuse of power (such as professional control of knowledge).

Watts (1990) also posed the question of what, if anything, needed to be strengthened or changed if nursing is to contribute to the democratisation of health care. As nursing becomes more involved with primary health care, it must be accepted that primary health care is concerned with the re-distribution of power.

All nursing relationships need examination in this context and this examination should also embody the types of participation / citizen involvement, referred to earlier.

A further issue for nursing is that there exists a tension between professionalisation and democratisation that will need to be debated and resolved. This may be assisted by examining the practice virtues identified by MacIntyre (1981) and described by Watts (1990), viz. openness, tolerance, appreciation of diversity, co-operativeness, willingness to compromise and involvement with public debate as well as the knowledge and skills of community organisation / development being necessary.

McMurray (1991) described various advocacy functions as the nurse acts as a community partner in the self-empowerment process. She saw these as social, political and professional advocacy which are inextricably convergent strategies in the primary health care movement. She followed Maglacas' (1988) view that the process of enabling people to control their health, entails a mediating strategy between people and their environments, the social

advocacy role directs social change which is aimed at, for example, preservation of the planet and its resources, health, safe families and communities, equitable and accessible health care, healthy ageing, overcoming epidemics, meeting the needs of vulnerable groups.

These aims could entail the need to redirect programme priorities. This function would constitute political advocacy, which also entails seeking public sanction for mediating strategies. The political and economic processes governing resource allocation must be understood to do this, as well as the mechanisms for developing public policy and that needed to effect social change.

The purpose of advocacy functions is to facilitate community self-empowerment, this state is reached, according to McMurray (1991), when a community is able to choose strategies for health based on appropriate information, local resources, accessible support and institutional, organisational and social approval, which ensures self-determination.

The essence of this coincided with Werner's (1988) description of the nature of empowerment, but he went further to include the movement towards the equalising of power and basic rights.

He pointed out that the greatest obstacles to health for all were not technical, but social and political, with the equitable distribution of land, resources, knowledge and power.



Rubin and Rubin (1986) described community organisation as the means for bringing people together to combat shared problems, it was a political process to determine who decided what about which issues, and it increased the power of those who currently have little say about the decisions that affect their lives.

The extension of this is community development that occurs when people form their own organisations to provide themselves a long-term capacity for problem-solving. It was thus the manifestation of empowerment which Werner said is the process by which disadvantaged people work together to increase control over events that determine their lives in a combined personal and group way.

Empowerment then, is something people do for themselves, it cannot be taught or even given, it can only be taken, but may be facilitated and supported in the form of expressions of solidarity. Successful primary health care thus encourages people to take positive action for their own well-being. Nurses too could be regarded as a group to which empowerment principles could be applied.

The background of macro-economic issues, including the 'adjustment policies', must be considered in this context too, as well as the possible contribution of a policy choice emphasizing either comprehensive or selective primary health care. Economic and development responses, such as the encouragement of informal and small business development particularly relevant to South Africa at present, should be examined for their enabling and empowering potential.



*Equity and health* is the final trend to be examined in this section. Health became a universal human right when 'health for all' was included in the International Covenant on Economic, Social and Cultural Rights (WHO, 1986). Equity was fundamental to health for all and can only be addressed by examining health within the broader development issues in any country.

The disparities between countries have been well documented, illustrating the extent of equity issues. For example, in Bangladesh, one in eight children die before reaching one year of age, while in Japan it is one in 142.

The life span of approximately 50 years in developing countries is two-thirds that of Western Europe and North America (WHO, 1986a). Demographic differences that exist also reflect equity issues. For example, in developed regions 78% of the population is found in urban areas, fertility is low and populations grow at less 0.5% per annum and consequently, health status, especially of women and children, is good.

By contrast, in the developing regions where 22% of the population is urbanised, per capita income is generally less than U.S. \$400, population growth exceeds 2% and particularly the young and reproductive women have health risks. Most are also found rurally where the greatest infrastructure problems exist (Grant, 1992).

It would seem that in both circumstances, political and administrative processes that adequately decentralise power and decision-making is needed, yet differing sets of public policies are required. In developed areas health

risks stem from health endangering behaviour, often with an individualised focus, whilst in developing areas it is external forces that impact on health, for example, poverty, unemployment / economic aspects.

Within countries it was most often the urban / rural divide that is associated with disparate health care, but differences within rural areas, for example, must be recognised too (see below).

Globally, in 1982, the daily energy supply per capita was below the required level in no less than 43 countries, that is, 30% of the world's population. Caution must be exercised in interpreting such data, since highly skewed income distribution may occur, with some families being far worse off than others (Grant, 1992).

World Health Organisation (1986 a), analyzed Kerala (India), Sri Lanka and China as low income countries that have made inroads regarding equity in health. This identified three health-related sectors in which equity orientated approaches have been critical for health, viz. food and agriculture, education, and the infrastructure related to environment and living conditions.

Monitoring improvement in the health status of vulnerable groups is one way of evaluating the effectiveness of health strategies - configurations of health status can be mapped, disparities identified and addressed and follow-up done:- interesting phenomena not otherwise expected may be uncovered. For example, fishermen in Norway with average incomes higher than those of farmers, had higher rates of morbidity and lower life expectancy (WHO, 1986a).

Yach, Zwarenstein and Chetty (1989) analyzed infant and perinatal mortality rates in South Africa and documented disparities and changes over time.

Another area where disparities in health exists is in gender. The life span of women is generally 5 - 7% greater than that of the male. In developed countries this may be 10% and in low income countries, 3%. However, in early childhood and during reproductive years, an excess of female mortality was found in many developing countries, low value of females and lack of relevant care is reflected (WHO, 1986a).

In the South African context, equity issues are amongst the most complex and unless one considers these from a multi-factorial (that is intersectoral) perspective, they cannot be adequately understood.

Wilson and Ramphela (1989:258) also pointed out that many dimensions of poverty and its 'interlocking causes' required a multiple strategy attack. They maintained that power lies at the heart of the problem of poverty in South Africa, obviously the distribution / mal-distribution of power and the struggle for correction is central to the issue of equity.

Krafchik (1992) said that there were no successful cases of countries which were compelled to deal with political and economic democratisation simultaneously as was the case with S.A. According to Krafchik, 42% (17 million) South Africans lived below the minimum living level in 1990. (That is, where there is only subsistence and no allowance for discretionary savings or health expenditures).

Disparities were particularly obvious along racial as well as geographical lines. Of those below the minimum living level, 94% were Black and 65% (11 million) resided in rural areas.

Furthermore, the disparity between the country's growth and population growth levels further complicates the situation.

Figures given by Krafchik (1992) showed a growth decrease of 6% in the 1960s, 3.5% in the 1970s, 1.5% in the 1980s and for 1991 and 1992, a strongly negative growth rate occurred.

The 1992 population growth rate was still 2.5% per annum. This has resulted in an average fall in per capita income of more than 1% per annum over the past 12 years. Krafchik gives a rate of 30% of the potential labour force being unemployed. Inflation was estimated at 15% by this source, compared with 5% in Northern Europe.

Clearly then, economic transformation was essential and particularly urgent as there is a time lag between implementation of initiatives and visible benefits.

The need for these initiatives is further underscored by that data which is available and relevant to the health sector. Van Rensburg, Fourie and Pretorius (1992:354) have documented a number of those issues.

"The crux of the problems in South African health care is the highly problematic and inapplicable supply / provision structure which meets the

health care needs of the population in an unequal and discriminatory fashion". They asserted that there were primary shortages of all the components in the health sector, but that secondary shortages were more problematic as, within the limited supply situation, certain areas were over-served, thus further depleting under-served areas.

This happened due to high expectations and unjustified demand for certain things, for example, over-hospitalisation, expensive, unnecessary diagnostic and treatment modes, excessive medication. This disparity tends to occur on an urban-rural basis also (as predicted by WHO 1986a, earlier).

They divided fragmentation into a number of categories, all of which exist simultaneously:

- \* structural (for example, private / public sector);
- \* functional (for example, tasks of different levels of provision such as local, regional, national), racial (10 departments of health for bantustans and homelands, separate (racial) facilities and division of purchasing power that tends to coincide generally with racial divisions), and
- \* geographical fragmentation (10 bantustans and 4 provinces, some of the former being geographically fragmented).

Inequality is made up of a number of different issues and this too supports the need for an intersectoral approach to health issues, with community

involvement.

The '*new public health*' is a term that is starting to come into use to indicate the influence of the trends in public health that were described above. "The proper focus of public health is the restructuring of the social relations of production" (Turshen, 1989:50). These implications are further described by Badura and Kickbusch (1991:7) as well as Beattie, Gott, Jones and Sidell (1993:102).

### **2.3. EDUCATIONAL IMPLICATIONS**

In order to develop the kind of practitioner who would be able to comply with the above practice features it would be necessary to ensure that learning opportunities had a community base, that they were structured so as to allow for experience in the features of community health nursing given, and that PHC needs are included. Educational preparation should also take the ability to function as team members and leaders into account (Clemen-Stone et al, 1987; Schoolcraft, 1984).

Also, community involvement in health must be developed at a local level and therefore must be the responsibility of a community based worker or other person who is capable of supporting community involvement in health.

It has also been suggested that community involvement in health has a group focus. This is, in fact, the case for community health nursing. Group related skills would need to be considered, for example, leadership, membership and

dynamics.

Educational inputs that create a basis for people's sustained involvement are also necessary and should consider the well-known principles of adult education for CIH to develop. According to World Health Organisation (1991:20), "There is not much evidence that the education of health personnel has changed in ways that will allow them to understand and be committed to community involvement in health as part of their professional activities". In particular, the relationship between health personnel and their clients will have to reflect the notion of partnership.

Besides the relationship issues, health personnel need an in-depth understanding of communities and this is derived from the social sciences. Western medicine cannot be accepted as the norm, standard or only possibility. A holistic understanding of health is necessary (Bracht, 1990).

Earlier, Elliot and Cole-King (1981:575), in examining the health / development issue, also concluded that intersectoral collaboration was essential, but that it called for two major moves, viz. the re-orientation and retraining of health workers and the creation of a small cadre of 'health development professionals'.

Educational efforts for the preparation of suitable health practitioners must entail a full understanding of the original concepts of primary health care (as opposed to primary medical care).

All this would seem to require close contact with a community, this



community experience being recognised as an essential and integral component of the educational process. Theoretical learning must be closely linked to learning with the community about their health situation and problems, as well as jointly investigating plans for suitable interventions.

This partnership practice should allow the students to contribute their knowledge, but also to draw on that of the community and to mobilise relevant action together. Educational needs of existing staff should also be considered and these could be difficult to deal with, especially in the local context, where in-service education in some sectors of the health service has been scanty for some time, due to financial constraints.

The global trend is to enhance district level care and at this level particularly, it will be necessary to ensure health personnel are able to deal with the inherent issues and concepts of community involvement in health (for example, health focus rather than disease orientation, skills for working with communities as opposed to purely "clinical" skills, intersectoral skills).

District level care will be strengthened in South Africa in terms of the primary health care emphasis and structures being proposed by the current government and alternative health organisations.

The issue of community involvement in health and partnership can be seen to be not only integral to the delivery of acceptable health care, but of direct relevance in the educational preparation of health personnel and particularly nurses, who make up the largest cadre.



Skills developed for professional workers in this area included aspects such as organisational development techniques to ensure organisational co-operation and also team-building and group work ability. These issues are well described by Iles and Auluk (1990). The concept can be enhanced by ensuring student experience of programme / learning participation.

Strengthening of communities for community involvement in health must be recognised as necessary if this process is to evolve, the educational inputs, for example, may need to strengthen certain skills and knowledge in the community and health workers.

Mechanisms that can be used to strengthen communities include: participatory action research, indigenous communications systems; for example, markets, social gatherings, simulation games, review meetings at village or inter-village level, and campaigns. Activities to do this include evaluating / monitoring programmes, participating in consumer groups, lobbying public officials, joining interest groups and participating in policy-making. Familiarity with the political and economic situation which influences policies and decisions becomes a necessary part of education.

In her mediating position, the nurse must interpret government priorities to communities and convey community priorities to government sectors.

She will have to reconcile government policy with public need and will have to have a good knowledge of the global and local issues of the day, for example, poverty, unemployment, food production and energy issues.

When it comes to professional advocacy, the first issue proposed by McMurray (1991) is that of accountability which included both maintaining competencies and socialising young professionals.

It was also necessary to develop and refine skills for participating in professional organisations, develop standards of care / practice and linking practice with education by developing skills for critical thinking, decision-making and creative management.

Networking (giving and taking of one another's energies and contacts), should be developed and further, the profession should be shifted from a goal-driven to a resource-driven one, with interventions based on the characteristics of society rather than on the currently limited basis of available technology (McMurray, 1991). The values of social justice, humanism and self-empowerment are developed as part of the professional advocacy function and these coincide well with those advocated by Watts (1990) in the democratisation process.

The provision for students to experience adult learning approaches could assist them when needing to use congruent approaches in community settings.

An understanding of cognitive issues is fundamental to this. In the South African situation many students are regarded as 'underprepared' at entry to tertiary education, and in the light of this, Craig (undated) argued for a cognitive infrastructure for change in South Africa (which does not replace the social level of infrastructural change). This would entail the educator's role of deliberately creating cognitive conflict and then the provision of resources

for surmounting that conflict (citing Piaget, 1977 and citing Vygotsky, 1978, respectively).

Miller's (1989) discussion on cognition and the response to conceptual issues relating to cognition, provided a useful background to the problem. He discussed the learning / teaching paradox (one does not know what is not known, and the known is not inquired after), as well as the construction and social origins of knowledge in an attempt to clarify universities' responses to the so-called underprepared student.

A process should occur where students can carry out their unique ability to construct knowledge from their interaction with the objects of knowledge contained in typical university (or other) tasks (Craig, 1989).

These educational needs imply a curriculum that would address them. Traditionally the community health nursing curricula have had a content focus and a conventional subject matter for both theory and practise components. This content was based on convention and had been perpetuated for many years (Crew, 1949 and Clark, 1992). Further exploration of literature was carried out to identify alternatives.

#### **2.4. SELECTED CURRICULUM ALTERNATIVES**

Two main options are the content approach and the community / problem based approach, which has a process focus.

#### 2.4.1. CONTENT CURRICULUM

The issue of curriculum as content, education as transmission, was dealt with by Kelly (1989) who analyzed the philosophical approaches that have developed as the basis for decisions about the nature of knowledge in a curriculum.

It was shown that the content-driven curriculum offered no scope for consideration of the purposes for which particular subjects had been included in a curriculum, the inter-relatedness of the subject matter and learners was not considered at all. However, a 'list' of content is provided for knowledge and skills to be learnt. This has been called the subject curriculum where subject content is arranged in a pre-determined order (Ogundeyin, 1976). The task of students is to learn effectively what is presented to them. It is this content that provides the focus for all that occurs in the learning situation. There is no concern with any process aspect. The philosophical background is that of a rationalist epistemology on the basis of which such a curriculum must give priority to the transmission of knowledge (Kelly, 1986:90).

The content approach can also be contrasted with the product-focused curriculum where behavioural objectives establish what will be the outcome of an educational endeavour. This is parallel with an instrumental view of education where again the emphasis is on the result.

Knowles (1978) described the traditional teacher who decided in advance what knowledge or skill needs to be transmitted, arranges this into logical units, and selects ways of presenting this as lectures, readings or exercises. He specified this as the content model and contrasted it with the andragogical approach which he equated with a process model of education (Knowles, 1978:108).

#### **2.4.2. COMMUNITY / PROBLEM BASED CURRICULUM**

In contrast to the content approach, the process model saw the concept of learning in terms of the development of understanding rather than the acquisition of knowledge. This is closely linked to the understanding of a community base for the curriculum (described below) and implied three things:

- \* Knowledge as the basis for a curriculum is rejected.
- \* Educational planning must be based on clear statements of its underlying principles or the process it seeks to promote, rather than the goals it is concerned to attain.
- \* Education should be seen not just as any process, but as a process of development.

This meant that, that which is derived from overall aims, is the principles which are inherent in those aims, these would inform and

guide the implementation of education so that any content emanates from those principles inherent in the aims (expressive activities, or process 'objectives', given by Pendleton, 1991).

According to Goodall (1985), direct teaching of concepts does not occur. Active learner participation is needed as new concepts are acquired more readily if they are personalised. This is supported by the problem-based approach which ensures that learners engage with the issue under study.

Kinghorn (1990) suggested that transmission methods of teaching run the risk of concepts being altered to fit student's existing conceptions. The constructivist approach entailed students in constructing their own knowledge in agreement with Goodall (1985).

It was held that adults are not shaped by circumstances beyond their control - they self-construct in that they give meaning to their own reality independently of any observation. A process is thus devised in which the facilitator listens actively to group discussion of a concept, questioning, summarising, clarifying and reflecting.

Students thus create new meaning and own it. This does take longer than transmission methods and sufficient and appropriate contact is necessary to ensure that the concept has been learned by the end of the session. Small group discussions focused on community based problems could do this.

Heims and Boyd (1990) reported on efficacy in use of clinical time, and recognition of the student as a capable learner. Classes and clinical conferences were structured around concepts. Learning objectives were written specific to each concept; concept-based learning activities were then designed to facilitate enquiry, students were asked questions rather than being given results, as learners should be assisted to recreate the process of enquiry. Students were recognised as self-directed adults capable of learning independently and in groups.

The evaluation of these efforts showed statistically significant results when staff use groups who used concept-based learning activities which were compared with those who did not.

Schank (1990), maintained that students learn more when actively involved in a task than as passive recipients of instruction, and also gave evidence that academic performance rises to meet expectations.

In order to develop community-based education, the learning activities used the community extensively and students, teachers, members of the community and representatives of other sectors are all actively engaged throughout the educational experience. This may be in an urban, suburban, rural or other area where people live and wherever it can be organised. Examples of these learning activities include:-

- \* assignment to a family whose health related issues are observed over a period of time;

- \* work in a community designed to enable the student to gain an understanding of the relationship of the health sector to other sectors engaged in community development and of the social system, including the dominance of special interest and elite groups;
- \* participation in a community-orientated programme such as nutrition, immunisation or child care;
- \* supervised work at a primary health care facility.

The difference from traditional field work is that of the degree to which the important elements of community life and the relationship of those elements to health-related factors and activities, are understood and acted on. By implication, community members must be actively involved in the educational programme. It can be seen that these principles may be difficult to ensure and, indeed, World Health Organisation (1987) has documented a number of constraints that exist with this type of programme.

It is noted that learning activities in large scale, specialised medical care facilities are not considered community-based although it is necessary to identify all the resources available in an area of which tertiary care is a part (WHO, 1987).



The curriculum is considered community-based only if, for its entire duration, it consists of an appropriate number of learning activities in a variety of settings and levels of care.

### **Assumptions Regarding Community / Problem Base:**

The following are more appropriately regarded as assumptions, although WHO (1987) gave these reasons in support of community-based education:

- \* students gain a sense of social responsibility by being enabled to understand clearly the needs of a local community;
- \* relating theory to practice in a real life situation prepares for integration into the working environment;
- \* barriers between professionals and the lay public can be crossed;
- \* students confronted with reality helps to keep the educational process up to date;
- \* competency relevant to community needs must be acquired while utilising those resources available;

- \* quality of community health services is improved where they are linked to educational activities.

However, to achieve these benefits, WHO (1987) have identified several underlying principles that should guide the programme:-

- \* students and teachers must have a clear understanding of the purpose of the activities and expected results;
- \* activities should be introduced very early on in the programme and must continue throughout the programme;
- \* they must be viewed as a standard integral and continuing part of the programme and not seen as incidental, peripheral or casual;
- \* the activities must constitute 'real work' that is related to educational needs.

There has been no evidence that the quality of care is reduced, but it is also not a straightforward matter to arrange student evaluation (besides the programme evaluation that is essential).

Further assumptions are derived from the shift from a didactic theory of knowledge, learning and literacy, to a critical theory, which is slowly taking place (Paul, 1990 in Engel, Schmidt and Vluggen,

1990:117). It was in response to this that the move to problem-based learning gained momentum.

Some of the characteristics of problem-based learning that are assumed are the following:-

- \* that while essential content is dealt with, the focus is on how, not what to think;
- \* gaining knowledge entails engagement in thinking (not all things thought about have the same value or are even significant and useful);
- \* an educated literate person is fundamentally a 'repository of strategies, principles, concepts and insights embedded in process of thought' (Paul, 1990 in Engel et al., 1990);
- \* learning or what has been learnt cannot be directly given, conditions that facilitate what people can learn for themselves can be created;
- \* knowledge and truth can be rarely transmitted, and insight never conveyed by verbal statements;
- \* an active skilled process of learning to listen critically occurs gradually;

- \* the basic skills of reading and writing are inferential skills requiring critical thinking;
- \* dialogical processes involving questioning need to take place;
- \* lively focused discussion is a sign of learning;
- \* ongoing acts of synthesis with movement between wholes and parts, back and forth, are needed for learning;
- \* people gain only what they seek and value, people need insight into how subject matter is processed in learning;
- \* students must reason their way dialogically and dialectically out of their prejudices, biases and misconceptions, safe opportunities are thus needed;
- \* rational assent is essential to learning, in-depth understanding of root concepts and principles should be used as organisers for learning within and across subject matter domains;
- \* a lesser amount covered in greater depth is more beneficial;
- \* learning is done best by explaining to others, therefore this should occur;
- \* self-directed recognition of ignorance is necessary to learning;

- \* students need to graduate to understanding that for learning to occur, they must actively and willingly engage themselves in the process;
- \* learning that focuses on meaningful experiences to students achieves transfer;
- \* the personal experience of the student is a crucial part of the content to be processed;
- \* proof of understanding can only be found in the students' ability to explain and apply to example and in being able to spontaneously recall and relevantly use knowledge.

This type of learning then "replaces authoritative answers with authoritative standards for engagement in the communal dialogical process of enquiry" (Paul in Engel et al, 1990:118). Opportunity for many of these features of learning could be gained in a community based curriculum.

### **Integration Of Theory And Practice**

An integral community / problem based curriculum would enable the operationalisation of the integration of theory and practice. This was discussed in by Jarvis (1987, 1992a), Townsend (1990) and Smith and Russell (1991). They made the following case for this integration.

Jarvis (1987) pointed to the importance of Schon's (1983) work, which identified reflection-in-action as occurring; so practice generates new knowledge about practice rather than being a simple application of theory to practice - this implied that theoretical knowledge is generated from the practical situation.

As a result of the work of Shon (1983), (cited in Jarvis, 1992b) in adult education, there has been a move towards locating theory in practice. According to Jarvis (1992a), Cervero said that theory and practice are indivisible since they are part of a single social reality that is socially constructed.

Jarvis went on to examine education and nursing as fields of practice and as fields of study. He maintained that the field of practice became the field of study, as it is practice that drives the curriculum construction.

Townsend (1990) also said that theory and practice should not be seen as two separate activities but as arising from a single source, this is supported by a problem-based learning approach which could be seen as a curriculum design model, according to him.

Smith and Russell (1991) too were concerned with the need to establish a process of education which facilitated the integration of theory and practice. They noted Schon's (1987) assertion that students need to learn how to make decisions under conditions of uncertainty which can be best achieved through reflection with an experienced coach, which

is more complex than problem-solving, in that it entails definition with re-definition of problems. This could be accomplished through a community / problem-based curriculum.

Clinical knowledge, it was asserted, develops as a practical experience and is combined with the application of theoretical knowledge which is further re-defined and extended within practice.

Quinn (1988) set out the educational process entailed in experiential learning in nursing, pointing out that simply undergoing experience is not the same as experiential learning. Experiential learning could be seen as the link between community and problem based learning. It is associated with a curriculum that emphasises the process of learning rather than the product, and is therefore consistent with community/ problem based learning, where community contact is established and health problems as the focus for the learning are derived.

### **Techniques Associated With Community / Problem Based Learning:**

Reilly (1985) documented principles for teaching problem-solving in the field. These were:

- \* Compatibility with the level of the learner.

- \* Identification of problems. (In which students describe the problem reflecting their levels of understanding and providing supporting data).
- \* Identification of multiple solutions. This should promote divergent thinking and examination of own biases.
- \* Integrity of process. The entire process is experienced, although real problems are often not dealt with in a linear manner.
- \* Focus on process, rather than outcomes.
- \* Use of intuitive thinking. The analytic process is used, however, students should identify the importance of hunches or unsubstantiated insights and then search for any supportive evidence.
- \* Acceptance of individual differences among learners; field-dependent learners (unlike field-independent learners) do not readily use a hypothesis testing approach in problem-solving and so will need extra support in analyzing clinical situations, identifying problems and proposing and testing solutions for them. It was necessary to generate several possible hypotheses in order to identify either the correct one or those that are pertinent. These principles are useful for learning in a community based situation.



As the experiential learning approach is not consistent with behavioural objectives, the taxonomy of Skinner and Bell (cited in Quinn, 1988) was suggested:

Exposure	-	consciousness of an experience.
Participation	-	deciding to become part of an experience.
Identification	-	union of the learner with what is to be learned.
Internalisation	-	experience continues to influence lifestyles.
Dissemination	-	attempt to influence others.

For each of these, the appropriate role of the teacher would be as follows:

Exposure	-	motivator
Participation	-	catalyst
Identification	-	moderator
Internalisation	-	sustainer
Dissemination	-	critic and evaluator.

Burnard (1992a) described experiential learning and followed up with nurse tutors' perceptions. He referred to the four 'villages' (scenarios) of experiential learning described by Weil and McGill (1989). This is a categorisation in which he gives firstly, learning from life experience, then experiential learning, as closely related to adult

learning theory and learner-centred approaches. The third view is of experiential learning as a radical process concerned with helping people to change their circumstances (similar to Freire's problem-posing approach). The last view is of the individuals' learning process as personal growth and development being central to experiential learning. Burnard's findings of nurse tutor's perceptions was that there is no consistency and generally the area is poorly understood.

Boydell (1976), in Merchant (1989) described three types of experiential learning.

**Type 1:**

Gestalt - Insight theories where the student restructures his perceptions to make sense of them - goals are set by the teacher and skilful lectures can be used to enhance insight.

**Type 2:**

Autonomous learning theory as the basis of experiential learning uses a phenomenological approach and Boydell draws attention to the similarity between self-actualization and autonomous learning such as; trust in oneself, ability to set own goals, learning by doing, learner responsible for learning and individuals discovering meaning for themselves. The role of the teacher differs accordingly and entails helping learners identify goals, generate and select resources, create a climate of acceptance, respect, risk-taking, mutual support and generating insight in learners.

**Type 3:**

Experiential learning entails learning from everyday experiences - there must be four components; the individual, formal learning structures (job description, objectives), opportunities to learn and the learning climate - there must be definitive effort in each of these areas.

Burnard's scenario's and those given in Merchant have some commonalities. Burnard's first and Boydell's third category refer to learning from life experience. Their second categories too are similar in that they accept adult learning theory (Burnard) and self-actualization with autonomous learning (Boydell) as the approach to experiential learning. There is a difference in Burnard's scenario of 'village three' in which experiential learning is seen as a process with a 'political' aspect to it because here experiential learning entails "helping people to change the circumstances in which they find themselves" (Burnard, 1992:30). This conceptualisation would be useful where community / problem based learning is interpreted to have an empowering effect on both students and clients. A similar theme was present in the workshop on experiential learning in South Africa held at the University of Natal, Durban in August 1988. Discussion and papers centred on the origins and application of experiential learning and particularly focused on this in relation to the transformation of South African society. It must be emphasized that these issues too, are pertinent for nursing education.

Jarvis (1992a) made a contribution to the study of learning issues by presenting a theory of action which illustrated that certain forms of

action are ones from which learning is not possible, but when the form of action is experiential or creative, then learning from it follows as a result of monitoring and reflecting. He provided a model to do this. This would enable Burnard's (1992) and Merchant's (1989) approaches to be operationalized.

He referred to the use of selected strategies to enhance this, for example, learning log (more than a diary, as it involves analysis), learning contract and learning partnerships. These were similar to Quinn's (1988) suggestions. He also included role-play, guided imagery and case studies.

In field / practice situations, experiential learning can be enhanced by interactive reports, nursing care conferences, ward-based seminars, ward or client rounds, reflective seminars and mentorship and preceptorship systems. The activities of community based learning can also be included here, such as focus group discussions which include community members.

Isasiw and Sleightholm-Cairns (1990) stressed the use of conference as a learning strategy. Raichura (1987) also provided an overview of experiential learning with notes on the practical application. All of these activities are consistent with a community / problem based curriculum.

### **Results Associated With Community / Problem Based Learning:**

The community base does enhance learning related to inter-sectoral care, team work and community involvement, which have been identified as crucial to the improvement of health care delivery (WHO, 1987).

Moore (1991) carried out a study at Harvard University Medical School comparing a group of students who had chosen problem-based learning with a group that had not, but followed a curriculum containing both problem-based learning and lecture-based learning. While the structure of learning method did not influence performance in the short term, a significantly larger proportion of students shifted their preference from the lecture-based learning to problem-based learning than vice versa.

### **An Examples Of Community Based Education**

There is some literature which briefly describes how community based education has been implemented (Richards and Fulop, 1987 and Engel et al (1990). These refer specifically to medical education. An example was also given by Alausa, cited in Schmidt, Lipkin, de Vries and Greep (1989). This was an account of the community-based medical education at Bayero University, Nigeria. The aims of this were to produce a medical practitioner who could; practice as a general practitioner in an urban or rural community, perform professional

services within the concept of a Primary Health Care System, develop personal characteristics required of a professional doctor and undertake post-graduate or continuing medical education.

These broad aims were achieved by using a student-centred learning approach with training in self-education. The community base was derived from thirty-two weeks of a five year period, that were divided into six clerkships in various communities, the first of which entailed a community diagnosis following a standard type guide. Later clerkships involve planning and provision of primary health care. Evaluation of students was based on observation of skills and attitudes during field activities, oral presentations and written reports presented by students and written examinations at the end of each posting.

### **Problems Associated With A Community-Based Curriculum:**

One of these is the close collaboration it demands between health service and educational administrations. This in itself, is a major stumbling block in South Africa, as the number of departments involved is astronomical! Students, although they perform work, are not remunerated; sometimes travel and extra subsistence requirements are met as well as insurance cover, equipment and educational materials. These can be quite expensive where logistic problems exist as communication and housing requirements are also needed.

Furthermore, this type of programme is faculty-intensive. WHO (1987) even suggesting one teacher per student!

Planning and co-ordination are essential and often complicated. The choice of activities and tasks, the nature of the community and the balance of periods of study and periods of service with student participation, are all difficult; probably more so in South Africa where a culture of poverty, violence and social disintegration existed.

Teachers usually require special preparation too. Relationship issues are complex - many varied people are involved and whether or not an established liaison between service staff and community members exists, it is often difficult for students to establish a direct relationship with the community.

Des Marchais and Dumais (in Engel et al., 1990) pointed out that medical education has yet to prove that problem-based learning is worth the effort and yields a better product - this needs support this investigation.

Similarly, Mitchell's (1988) presentation of the use of problem-based learning in physiology at the University of Witwatersrand Medical School had a bias towards physiological and biochemical explanations of clinical phenomena, but he maintained they achieved self-directed learners accomplished in problem-solving skills, with the ability to organise knowledge in a way which later facilitate clinical problem solving.

Campbell (1992) warned against only using a reductionist approach to solving patient care problems and suggested that this was still used as it is conventional (its use was seen in the approach of both Neame, 1981 and Mitchell, 1988), but that in addition, a holistic approach should be used as this ensured not just, for example, a pathologic explanation, but also the effect on the person as a whole.

Merchant (1989), in referring to the complex activity that is clinical nursing, showed that different grades of nurses have varying ability in arriving at the diagnosis of patient problems via concept attainment and the self-discovery of categories of objects based on their distinguishing features. Furthermore, evaluation strategies in Merchant's (1989) study had to ignore personal growth (self-actualization) which is in fact, part of professional competence as it was said to be too complex to deal with. Also, if experiential learning is more student-centred education, then unilateral teacher assessment is no longer acceptable in experiential learning.

Kelly (1989) referred to Peter's (1965) statement that it is the manner rather than the matter that is of concern. The outcome of the process approach is dealt with in terms of intellectual development and cognitive functioning rather than quantities of knowledge absorbed or change in behavioural performance.

A process-driven curriculum would be supportive of student-centred learning, problem-solving skills and development of critical judgement, all identified as important for the professional nurse's function. It is



the main aim of a programme that distinguishes its nature; that is, whether it is evidently content based to achieve selected knowledge and skills or process-based, where it is development within learners that is the focus.

A community / problem-based curriculum therefore is process focused. It integrates community and problem-based principles via those of experiential learning. As a result the focus of learning derives from issues identified with and in communities. These foci are dealt with using learning strategies consistent with a process approach, such as learning in groups. Further support for this type of curriculum is given in the following section.

### **In Conclusion**

The principles of community and problem based education are congruent with one another and both of these are consistent with the features of experiential learning. Together these principles would underpin a community / problem based curriculum, that has a process approach.

#### **2.4.3. ISSUES RELATED TO A PROFESSIONAL CURRICULUM**

The literature gave rise to various issues that emerged when several relevant and seminal sources were consulted, in order to identify

factors that would support either a content or a process curriculum.

### **Critical Thinking And Metacognition**

Individualised and primary health care, demands nursing with problem-solving ability and needs nurses to demonstrate both convergent and divergent thinking as would be found with critical thinking.

When Brooks and Shepherd (1990) investigated the relationship between clinical decision-making skills and general critical thinking abilities, they reported that baccalaureate prepared nurses scored higher than associate and hospital-based nurses in this regard and also referred to Kemp's (1985) work that suggested concept analysis is useful to develop critical thinking. They also referred to Sternberg (1985) who suggested a number of points to consider when teaching critical thinking skills that are to be applied to solve everyday problems.

For example, that sometimes the most difficult step is to recognise that a problem exists; problems tend to be ill-structured; it is not usually clear what information is needed or where it can be found; the solution depend on and interacts with the context in which the problem is presented; problems often have no one right solution and they are frequently complicated and persistent.

Further, a holistic approach that combines analytical thinking with communication is needed, as breaking critical thinking into discreet units can be confusing. The outcome of Brooks and Shepherd's research showed a weak but significant positive correlation between clinical decision-making and critical thinking across the four types of programmes studied.

Sweeney (1986) asserted that the emergence of research-based theory-linked nursing practice (away from perpetuation of doing culture), cultivates a questioning, rational attitude and critical thinking.

Andragogy is part of this too, because failure to develop independent, critical thinking affects the ability of practitioners to influence decision-making in a multi-disciplinary team setting and to substantiate their argument with a theoretical rationale (Sweeney, 1986). The practice of nursing is influenced by the thinking ability of nurses.

There has been some debate about whether critical thinking ability develops at a particular age or stage and Schank (1990) referred to Piaget's work, but appeared to support particularly Kitchener and King (1981) who found that reflective judgement begins in pre-teen years but with the final stage only being achieved after twenty-five years of age. Thus, it will be important to identify the students' potential here.

Basically critical thinking skills include the ability to pay attention, to copy accurately, to follow an argument, to detect ambiguity or false interferences, to test guesses by summoning up contrary instances and

to organise one's time and thoughts for study (Schank, 1990). Some of these features could be said to be metacognitive in nature (Worrell, 1990).

Schank (1990) recommended a number of teaching strategies that would encourage the development of critical thinking:

- raise questions about the issue; for example
- what evidence exists;
- identify gaps in available information;
- tolerate ambiguity and uncertainty;
- probe for assumptions behind a line of reasoning;
- draw inferences from evidence;
- recognise when firm inferences cannot be drawn.

In order to carry out this last item, it is necessary to be able to carry out syllogistic reasoning, that is, deal with 'if' (premise), then conclusion, or 'if' (condition), then (action) statements. Correlational reasoning is also needed, that is, recognising when relevant variables have not been controlled.

The latter involved the capacity to use, transform or recognise the relevance of declarative knowledge in new situations which is the transfer of learning. Schank (1990) implied that operative knowledge skills would be developed by focusing on the higher levels of cognitive functioning as suggested by Bloom's taxonomy; that is, application, analysis, synthesis and evaluation.

However, she pointed out that students do not learn critical thinking by acquiring increasingly complex layers of discipline content! The foregoing factors would then support a process approach to the curriculum rather than a content-driven one.

Metacognitive skills are those that implemented learning strategies to facilitate intentional learning. The origins of metacognition are uncertain, but Worrell (1990) asserts that metacognitive skills of college students continue to develop and can be enhanced by instruction, but this depends on clearly understood rationales, practice and feedback on performance; students must monitor their new metacognitive skills, so this would need to be built into educational strategies. First level cognition is those competencies that have already developed such as computing, memorising, reading, perceiving and using spoken / written language. Metacognition is the conscious monitoring of progress in learning or engaging in a task, while Epistemic cognition entails consciously interpreting the nature of a problem and defining the limits of any strategy to solving it. That is, it involves the nature and limits of knowing and knowledge (Kitchener in Craig, 1989).

Worrell (1990) assessed the implications for instruction in nursing of metacognition. She maintained that providing instruction on metacognitive skills is a preventive educational practice (to prevent learning deficits and failure). Metacognition implied developing self-regulated students who are active participants in the learning process.

The driving force for learning new things stems from the conflict between what the learner brings to the situation and what the task demands. Metacognition may need to be enhanced to enable students to monitor progress in task engagement.

Craig (1989) said though, that it is in epistemic cognition that the greatest challenge may lie for teachers who will have to reconsider what they mean by the tasks presented to students. For example, the certainty of knowledge or claims to knowledge that can be evaluated.

Worrell (1990) cited a number of sources regarding metacognition; for instance, Baker (1982), who stated its components as being awareness of what is needed to successfully perform a task and the ability to use strategies to complete the task.

Metacognition is comprised of both knowledge and skill dimensions; the knowledge area included beliefs about one's ability, the demand of the task, and potentially effective learning strategies, while the skill component included mental acts of self-regulation via planning, predicting, monitoring, regulating, evaluating and revising strategies.

An essential metacognitive skill is that of strategic reading, as learning from texts is not automatic. Less able readers enter a cycle of not understanding, failure to identify main points which further underpins lack of understanding. Strategic reading must include text analysis, self-questioning and summarising. A guide in the form of a checklist is presented by Worrell (1990) to assist in this.

Critical thinking is the overall thinking approach that is proposed as necessary in nursing. It is supported by an ability to learn and gain new meanings. This is dependent on metacognitive skills, that is, the ability to consciously and with focus learn and read effectively.

### **Intuition And Pattern-Matching**

Another aspect related to cognition is intuition. Gatley (1992) produced an interesting paper on the use of intuitive learning, particularly in district nurse education, which was linked to Benner's (1984) model.

Intuitive judgement was seen to be that which distinguishes expert human judgement from the offerings of beginners or machines. Dreyfuss and Dreyfuss (1985) were quoted regarding their five key aspects of intuitive judgement: viz.

pattern recognition, commonsense understanding, skilled know-how, sense of salience and deliberative rationality. Indeed, intuitive judgement was seen as legitimate knowledge.

This was supported by Urden (1989) who referred to Hill's (1961) citation of Bergson as he, (Bergson), said that intuition is genuinely reflective, grasps totality, is not precise but has no real limits. Intuition is an essential component in higher intellectual activities as the 'sensing' of an answer is intuiting truth or knowledge before it is clearly conceptualised.



Urden (1989) also included the idea of Polanyi (1962) who still valued traditional apprenticeships as it was here that implicit rules were communicated by example. This was extended to the idea that knowledge can only be attained by moving away from the particular and examining the whole situation.

Both objectives and subjective awareness is needed to produce a comprehensive understanding of an entity; the subjective aspect being intuition - it is this that is the mechanism for integration of knowledge according to Polanyi and Prosch (cited by Urden, 1989).

Kintgen-Andrews (1991) also discussed the importance of intuition which could even be part of an expanded construct of critical thinking.

Kriel, Hewson, Zietsman and Coles (1988) followed up on the educational implications of the theory of cognitive structures in relation to medical education. They suggested that recall and application was facilitated if aspects of the recall situation were encoded in memory when that information was being learned. Not only is knowledge structured in an ordered manner but information in memory is also stored in a structured manner.

It was on this basis that Kriel et al supported the view that assisting students with restructuring information as proposed by the contextual learning model, would facilitate recall and consequently improve clinical practice. This too would be consistent with a community / problem-based curriculum.



Reilly and Derman (1985) quoted Tanner (1984:71) that biomedical knowledge appeared to be "stored in a hierarchical manner wherein abstract concepts are linked with less abstract examples of that concept", but the researcher questions whether this will still pertain after the reorganisation of medical education and after a holistic concept of care and cure is introduced.

It may also account for difficulty in shifting out of a biomedical and into a socio-ecological paradigm.

In addition, Kriel et al (1988) referred to the accumulating evidence that the cognitive structures used by practitioners in their disciplines may differ greatly from the classical organisation of knowledge found in the textbooks of those disciplines. Kriel et al (1988), went on to provide evidence that the diagnostic process is in fact, pattern recognition rather than a process of problem-solving although it does include some problem-solving.

It was the recognition of prototypes (patterns or forceful clinical features) through which the relevant clinical material was accessed. Kriel et al (1988) proposed that medical students should learn to reverse or restructure the presentation of classical medical information.

Further, students needed to be able to search for and evaluate data that assisted in eliminating tentative hypotheses as well as that which facilitated confirmation - in other words, data collection should not be random, but directed at specific evidence for or against hypotheses;

relevant data must be distinguished from that which is irrelevant (Reilly, 1985). This would appear to support Kriel et al above. To do this, metacognitive skills and knowledge need to be in place.

The debate to emerge from the foregoing regards the nature of clinical problem-solving. From one perspective clear cut problem-solving steps should be followed. From another, pattern matching with an intuitive dimension is necessary. The latter gives some support to the apprenticeship approach which has been largely discarded. The former perspective could be incorporated with a content curriculum and the latter with a process approach where human development from experiential learning was encouraged.

### **Self-Directedness**

Self-directedness emerged as a central issue from the literature surveyed in that it combined several important aspects. Some of these are explored elsewhere in this section (for example, critical thinking). However, others such as student centredness are included here.

Knowles (1978), explained that self-directedness was closely linked to andragogy. Andragogy was a concept developed by Knowles (1978), (cited in Sweeney, 1986), as a philosophy of adult education, and defined as an organised and sustained effort to assist adults to learn in a way that enhances their capability to function as self-directed learners.

Sweeney (1986) investigated the issue of learner or teacher centredness in nurse education. He said Boydell (1976) used the term learner-centred education which embraces three concepts; that is, self-directed learning, which moved towards increasing personal responsibility for and autonomy in determining what should be learned and how according to individual needs; secondly, student-centred learning reflects the humanistic influence on education which stresses the importance of holistic learning, democratisation of teacher-learner relationship and the notion of personal growth for both through an interactive learning process. This is congruent with one of the categories of experiential learning described by Burnard (1992) and Merchant (1989). The third aspect is andragogy, which unites the first two concepts.

Gerrish also referred to the central work of Knowles (1978) in relation to adult learning. Knowles cited Linderman's (1926) features of adult learning (in Gerrish, 1990), these are:

- \* Adults are motivated to learn when they experience needs and interest that learning will satisfy.
- \* Adults orientation to learning is life-centred-life situations not subjects, is the appropriate organisational mechanism.
- \* Experience is the richest resource for adults learning, therefore the analysis of experience is the core methodology of choice.

- \* Adults need to be self-directing, therefore the role of the teacher is to enhance a process of mutual enquiry.
- \* Individual differences between people increase with age - therefore differences in style, time, place and pace of learning must be catered for.

Knowles' (1986) basic assumptions were:

- \* the need to know how education will benefit them;
- \* the need to be self-directing based on a self-concept of being responsible for himself;
- \* the need to have the learner's unique experiences considered, which includes different learning styles;
- \* the need to gear learning to the learner's readiness to learn, which is based on attitudes and problems in learning;
- \* the need to organise learning around life tasks or life problems which are relevant, as this results in better learning;
- \* the need to tap into intrinsic motivations such as self-esteem, creativity and self-fulfilment, (versus extrinsic motivators such as promotion or job opportunity, wage increases) (cited in Wuest, 1991). These are consistent with the features of

problem-based learning given earlier (Paul, in Engel et al., 1990).

Learning independently is needed to support the development of the notions of creative / critical thinking and decision-making.

Brookfield cited in Orr (1991) agreed with Knowles that the adult tendency to self-directedness is not automatically transferred to educational settings, so strategies should be put into place to do this.

Reidelbach, Willis, Konecky, Rasmussen and Stark (1988) described a partnership between educators and librarians to develop independent information seeking skills in which students were presented with typical problems for which information was required.

Whilst this was a valuable exercise and a useful example of one aspect of independent learning, O'Kell (1988) explored the issue from a wider perspective, which included developing self-sufficiency, independence of action and thought, self-evaluation and confidence. This could be influenced by learning style and learning preference.

O'Kell's (1988:202) research appeared to show that traditional teaching 'trains out the qualities for independence in students'.

Jolly and Ho-Ping-Kong (1991) reported success in fostering independent study (but not collaborative skills) by using a grand round in which small groups of students prepared and researched their

presentation in a more structured format than the less educational ward round format.

The facilitator thus creates the opportunity for self-directedness to occur. This is not enhanced by a rigid traditional setting. Orr in fact, questioned whether young adults can be expected to move towards autonomy when the profession is rooted in heteronomy.

Another who has followed up the implications of embracing andragogy as the fundamental approach in nurse education is Janhonen (1991). She found that 87% of nurse instructors in fact, based teaching on pre-set curricula, but 69% had said they aimed at students taking responsibility for their own learning. There was a discrepancy again for evaluation practice, where 66% recommended student participation including peer review, but 83% admitted to only using teaching-centred evaluation.

Knowles (1978) showed how all the considerations of andragogy should be translated into the practical situation. He described the use of learning contracts as well as the idea of life-long education in which he documented skills of learning needed for life roles. (This is of relevance to the personal and professional development of nurses).

Slavin and Lavery (1991) also dealt with the issue of self-directed learning as a balance is needed between students's control and the constraints of professional education. They dealt with the 'locus of control' issue at various stages of the learning process, so that self-

confidence and assertiveness are enhanced and the influence of learned helplessness (as described by Seligman, 1975 cited in Slevin and Lavery, 1991) was diminished.

Burnard (1989) presented an overview of experiential learning and andragogy and in combination, depicted a model showing a cyclical representation of this. This relates to student-centred learning. Of note was the fact that those students whose learning contracts employed open / expressive objectives to describe learning processes, enjoyed the learning experience more than those whose contracts were written in behavioural terms. Also workload, loss of confidence and confusion was reduced and students planned their own time-tables, negotiated ways of learning and what was gained was how to co-operate and share learning non-competitively; professional rivalry was diminished.

Richardson (1988) evaluated the self-directed independent study contract with basic nursing students. It was necessary to acknowledge the potential of each individual for personal growth via an interactive learning process - there must be increased personal responsibility of the learner; and this implied that any directives given by the teacher / facilitator must have a basis in the needs of the student for increasing his self-directedness.

Students must learn how to evaluate learning process, to limit the scope of learning activities and to gain access to resources. The facilitator needs to ensure information is provided, standards maintained (attainment of course requirements at each level does not



become

negotiable). It should be noted that there will be differences in students' dealing with self-directed learning.

Sweeney (1990) reported on the learner-centredness perceived by student nurses of two registered general nursing and two registered mental nursing courses in the third year.

First level nursing courses were perceived to be highly teacher-centred in terms of planning, direction, sequence, pace and evaluation of learning. The climate of learning was moderately learner-centred though student-teacher relations were seen as formal.

Both students and teachers expressed a slight preference for teacher-centred courses, despite the fact that students wanted more participation in determining learning objectives. While caution is advocated in interpreting the results due to methodological problems, the question still remained as to whether the profession wished to perpetuate dependence on teachers or to assist nursing students to develop increasing self-reliance for ongoing education.

Iwasiw (1987) assessed the role of the teacher in self-directed learning, self-directed learning being consistent with student-centredness. She pointed out that transition to self-directed learning took place with assuming responsibility for learning activities as a start. The teacher must however, ensure that the purposes and methodology of self-



directed learning are met.

Self-directed learning is a problem-based approach to learning. Boundaries exist in which self-directed learning takes place. (Professional, legal, institutional and other boundaries).

The structure of self-directed learning may extend from the least (for example, visual reading) to much more structured, where learning contracts and credit certification courses are used.

Students must have certainty about what is expected from them, so that they can focus on the process of learning and not spend time and energy trying to ascertain a hidden curriculum. Students must realise that they share the responsibility for finding suitable learning resources and for designing and completing learning experiences. To do this, they need clear learning goals and will have to learn that first. Iwasiw (1987) referred to behaviour-objectives, but as this is not compatible with a process orientation, objectives can be formulated accordingly. This can be accomplished via learning contracts.

Learner-centred education refers to a programme of learning which is self-directed, student-centred and which acknowledges individual variations in cognitive styles. The purpose is to assist learners and facilitators to discover knowledge and skills which lead to self-fulfilment and personal growth through the development of the critical, relativistic reasoning which is essential for self-motivated, life-long learning. Self-directedness in this widest sense could be influenced by

learning style and there is a school of thought that says that learning style and preference is important to consider (for example, O'Kell, 1988). Many of the assessments of students learning style preferences utilised Kolb's learning style inventory and in this, De Coux (1990) assessed its value and in fact, recommended it no longer be used. She also called for clarification of the terms used, as well as concepts that have been used in this type of research. Furthermore, McMillan and Dwyer (1990) also examined the issue of facilitating a match between teaching and learning styles, but questioned whether this was an exercise of any value.

Harvey and Vaughan (1990) and Vaughan (1990) reported that the least favoured method of learning for students was lectures, but of note was the fact that discovery learning and projects did not attract particularly favourable attitudes although they are student-centred.

The most favoured activities were those that were student-centred but also involved groups of students - the interaction within the group appeared to be important.

There are basically two approaches to self-directed learning:

- \* as instruction for conducting a set of activities which is independent of the remainder of the curriculum (e.g. Reidelbach et al, 1988);
- \* as integral to the process of participating in a curriculum

resulting in personal development in the student as predicted by

a humanistic view and supported by experiential learning approaches ( e.g. O'Kell (1988).

The second option would only possible in a process curriculum. The content curriculum would therefore not readily support this.

The issue of self-directedness is therefore central to the type of curriculum in place for a programme.

### **Learning In Groups**

In order to ensure that all the desirable features of education are put into practice, this strategy could be the most useful tool.

"If people are to participate in shaping their own lives, they need to speak their own words" (Hope, Timmel, Hodzi, 1983:3). This holds true for the educational process as much as it does for participating in wider social transformation - hence the value of small group work in relation to learning. Group skills can be used to help people become sensitive to how others see them and more realistic about how one sees oneself. Of course, domination and manipulation of groups would also occur and it is important to guard constantly against this (Hope, et al, 1984).

These authors also described Gibb's four needs of a group, viz.

acceptance, sharing information and concerns, and setting goals and organising for action.

Wilson and Kneisl (1988) stated that an effective group accomplishes its designated goals, maintains its own cohesion and develops and modifies its structure to improve effectiveness. They also pointed out that there are forces that modify and shape groups; one of which is the physical environment.

The learning climate is influenced by the room arrangement in that those who can see all the other faces are at an advantage and those who cannot, at a disadvantage. So if people are sitting in straight rows, it is unlikely that a good discussion could develop. One circle would thus be a good arrangement, unless it is so big that there are those who cannot see everyone else, when two concentric circles or two horseshoes would be better. Furthermore, there was evidence that the level of satisfaction after meetings was directly related to how much people feel that their ideas have been responded to and how much of a chance they have had to participate (Hope et al, 1984).

Other influences described by Wilson and Kneisl (1988:277) are territoriality, which is the "assumption of a propriety attitude toward a geographic area by a person or group - people defend their right to the territory despite the lack of legal sanction"; personal space - this is the space maintained around a person; cultural background, which

also influences the previous two influences, and spacial arrangements referred to above.

An attribute of groups that will influence their functioning is that of cohesion, where members have a spirit of common purpose and are attracted to the group. "An attractive group has explicit, mutual and attainable group goals, with clear paths to goal attainment. The members engage in a sort of inter-dependence that is co-operative rather than competitive" (Wilson, Kneisl, 1988:282).

Lassiter (1993) in Stanhope and Lancaster (1993), indicated that members' traits that increase group cohesion and productivity include; congruence between personal goals and those of the group, attraction to group goals, attraction to other selected members, distribution of leading and following skills and the existence of problem-solving skills.

On the other hand, cohesion and productivity could be decreased by: conflicts between personal and group goals, lack of interest in group goals and activities, poor problem-solving and communication abilities, lack of leadership skills, disagreement about types of leadership, aversion to other members and behaviours and attributes that are poorly understood by others.

Whilst many groups would establish rules for functioning at the outset, once these become part of the life of the group, independent of the facilitator, they may be regarded as norms. The group culture is a

composite of the norms.

The task function of a group means that certain norms keep the group focused on its task; that the commitment to central goals is maintained. Also, where members demonstrate task-directed abilities, they become more attractive to the group; these include cognitive ability in problem-solving, access to material resources and skills of directing.

Equally important are the maintenance functions which would assist with conflict resolution, provide encouragement, compromise and set standards for group members. Norms also support the maintenance function.

Working paper XIII (undated) of the University of Newcastle, documents the Learning-Through-Discussion Group. It is stressed that both students and tutors should agree as to its use and that study material must be prepared beforehand; responsibility for success then lies with all members and not only tutors.

It is also recommended that this method should contain a Group Cognitive Map, a list of Group Roles and Members Skills, and a List of Criteria; for example, in the Group Cognitive Map (which is a plan for the discussions), the following may be included:

- \* Identification of major themes of subtopics;
- \* Allocation of time;

- \* Discussion on major themes or subtopics;
- \* Integration of material with other knowledge;
- \* Application of material;
- \* Evaluation of data sources;
- \* Evaluation of group and individual performance.

Group roles and members' skills: These are task and maintenance functions.

**A. Sequence of task roles specific to discussion of topic**

- Initiating
- Giving and asking for information
- Giving and asking for reactions
- Restating and giving examples
- Confronting and reality testing
- Clarifying, synthesizing and summarizing.

**B Overall task roles required in learning through discussion method**

- Gatekeeping and expediting
- Timekeeping

- Evaluating and diagnosing
- Standard setting.

**C Group maintenance roles required in learning through discussion methods**

- Sponsoring and encouraging
- Group tension relieving

List of criteria to ensure effective learning through discussion:

- \* Prevalence of a warm, accepting, non-threatening group climate;
- \* Learning is approached as a co-operative enterprise;
- \* Learning is accepted as the raison d'être of the group;
- \* Everyone participates and interacts;
- \* Leadership functions are distributed;
- \* Group sessions and the learning task are enjoyable;
- \* The material is adequately and efficiently covered;



- \* Evaluation is accepted as an integral part of the group operation; and
- \* Members attend regularly and come prepared.

(Abercrombie, 1974 citing Hill in University of Newcastle working paper XIII, undated).

The above-named source also adds that all of these aspects could be assessed during group discussion, and it would certainly seem beneficial to monitor both task and maintenance functions within groups as an indication of the degree of success. This could also indicate the style and variation in leadership behaviour seen.

Hope et al (1984) described the application of a sociogram to group dynamics, which would reflect activity. An alternative would be to use a checklist of characteristics to be applied by group members. These items could be compiled using a ranking or likert scale type arrangement.

The strategy of learning in groups is well matched to the preceding themes and could provide the vehicle for their manifestation and support.

## **In Conclusion**

The issues described in this subsection of literature gave an indication of those educational factors that would underpin a curriculum choice. The evidence seems weighted in favour of the process approach at present but is not entirely without challenge and the decision to follow a particular curriculum needs to be carefully considered by the evidence available at present.

## **2.5. MODEL FOR THE EDUCATION OF PROFESSIONAL NURSES**

This has been derived from the literature and provides the conceptual framework for the analysis of programmes for the education of community health nurses.

### **2.5.1. ASSUMPTIONS**

There were seven assumptions that are fundamental to this model and these must be stated in the first instance. They are based on the identified significant current issues that impact on the education of those health workers who have professionally driven criteria, such as nurses, that must be met:

- \* Primary health care (PHC), as a philosophy and strategy for delivering health care, is the main thrust of health care initiatives at the present time. Implications are that the principles of primary health care will be

manifest in provisions for the preparations of all health workers.

- \* The students are adults and therefore educational efforts will be imbued with the identified features of adult education.
- \* Health care is recognised as part of human development which emanates from a broad perspective of development consistent with the human development notion of the U.N. (1990). Health care does not take place in isolation from other influences, sectors and disciplines.
- \* Health professionals may operate within their disciplines with a body of knowledge that is an integration of theory and practice - these are not two separate parts of a discipline, but integrated together, constitute the discipline. There is also recognised common bodies of knowledge and the parameters of disciplines may shift at times. Each health care related discipline is seen as dynamic and multi-disciplinary relationships are fundamental to the development of practitioners and the delivery of practice.
- \* Professionally driven criteria for practice need regular validation, but in the interests of practicality, current

criteria are met; that is, parameters for functioning set by the profession are accepted.

- \* It is recognised that whilst this model identifies aspects of professional health care practice, many other levels and types of practitioners are needed for the provision of health care - this includes categories of lay and traditional workers, co-operation with whom is required for adequate health care provision.
- \* A description of the implementation phase of a programme, where the process of programme development is crucial to the nature of the activity, should precede outcome evaluation. The components of the programme have to be identified, examined and implications of this phase (implementation), documented. Outcome measures are an appropriate second stage evaluation, which can only be done once the process of implementation has been investigated.

### **2.5.2. DEFINITION OF CONSTRUCTS CENTRAL TO THE MODEL**

Each construct is composed of two elements and each element is described so as to reflect two possible poles of a continuum. These are therefore not discreet elements but reflect the fact that programmes may have features more closely allied with

one or other pole.

**FIGURE 2.1.**

## 1. The Conceptual Programme

This is the total arrangement of parts which direct the teaching / learning activities during which students become community health nurses and can be grouped under two elements that can be used to describe programmes; viz. the Base and the Structure.

### 1.1. The Base

The programme base is the conceptual location or origin of the programme and can be either in the institution or the community. In the former, the staff of the institution shape the learning and the curriculum. Institution or staff perceptions of community and student needs direct the learning.

In the latter, the community informs the curriculum and the learning, since it is their expectation and present experiences of problems / issues which will drive the curriculum. Discipline related themes may have been identified with students so as to focus contact with community settings / people. Contact must be established with a defined community or communities with whom these health issues are identified, to form a community / problem base.

## 1.2. The Structure

The programme structure refers to the main substance of the programme, and either a content or process focused curriculum is possible. In the first case, the actual content is chosen during curriculum development carried out by teaching staff. The focus of teaching / learning time is significantly more on the content to be learnt by students. The methods employed support this activity, such as lectures and demonstrations. Any discussion that occurs is also predominantly focused on content.

The process focused curriculum has as its emphasis the processes of learning that are scheduled by programme developers. The content is incidental to these learning processes, but discipline specific themes may be used to focus learning activity. Teaching / learning time is predominantly focused on process aspects. Methods that support this are used such as group discussion and self-study. Any discussion is significantly more about the process of learning rather than content.

**TABLE 2.1. Constructs Describing The Conceptual Programme**

<b>ELEMENT</b>	<b>EMPIRICAL REFERENT</b>	<b>EXAMPLE</b>
Institution Based	Written curriculum with content outlined at commencement of programme.	Unit 1 - Development of Community Health.  Objective: list five people who have contributed to the development of community health.
Community Based	Learning objectives and content developed by students from community assessment.	Group 1 - Community assessment guide with objective to gain entry and establish health related needs.
Content Structure.	Significantly more contact time spent on content. Lectures and demonstration dominant.	Register reflects lectures with content covered, e.g. health assessment lecture given.



ELEMENT	EMPIRICAL REFERENT	EXAMPLE
Process Structure.	Most contact time spent on group discussions, emphasis on process of learning.	Register reflects contact time spent on process of learning, e.g. by use process evaluation form to assess group dynamics.

## 2. The Student

The student is a learner participant within the programme. There are two aspects to the nature of the student; viz. professional and personal attributes.

### 2.1. Professional Attributes

The professional attributes that develop in the student person may occur in a manner that would either empower or disempower him / her. Empowering aspects include the ability to participate in a group / team situation and there must be evidence of this occurring in the experience of being a student. Political awareness is also part of being empowered and this is

manifested in recognising the underlying political factors in health and disease / illness. Empowerment may also be seen when system level intervention is included in planning for health care. The student who functions predominantly in isolation and who remains politically naive by not identifying underlying political causes for health / illness, can be said to be disempowered. This student is also more likely to recommend care at the individual level only.

## **2.2. Personal Attributes**

In terms of these, the student may be self-directing or passive. In the case of self-directing, the student gains the ability to assess and control information needed, and has the disposition to act on the identified situation. This would manifest in the students ability to identify gaps in information, and to show confidence in her own judgement. Attempts to address these factors are made. The student who is passive shows no evidence of these features, but follows the routines and prescriptions within the health care setting he / she functions in without question, and does not identify any gaps or deficiencies in information.

Self directedness was also measured by establishing the use made of references - books and people, that was documented by the student. A self-directed student would be expected to use a wider range of resources, more impersonal than personal resources.

**TABLE 2.2. Constructs Describing The Student**

<b>ELEMENT</b>	<b>EMPIRICAL REFERENT</b>	<b>EXAMPLE</b>
Empowered Student.	Active group participation.	"Today B took part in all the discussions."
	Identifies the influence of underlying political factors in health / illness.	"The people are illiterate because there were too few schools for Blacks during apartheid."
	Planning includes systems level interventions.	"The civic will help to arrange the housing."
Disempowered Student.	Non participant in group.	"S was only an observer" (in the group)

ELEMENT	EMPIRICAL REFERENT	EXAMPLE
	Only direct factors mentioned in analysis.	"These people must get more money."
	Intervention only recommended at individual level.	"The mother must feed the child better."
Self-Directing.	Identifies gaps in available information.	"The health assessment was only an examination for the cough, the rest was not done."
	Confidence in own judgement leading to determined action.	"I took the client to the magistrate to sort out the matter."

ELEMENT	EMPIRICAL REFERENT	EXAMPLE
	<p>Adequate references cited in written projects.</p> <p>Uses comprehensive types of references.</p> <p>Uses personal and impersonal references</p>	<p>The reference list reflects most aspects of the factor described, e.g. teenage pregnancy includes social and economic references and the physical.</p> <p>References given include texts consulted as well as either professional or lay informants.</p>
Passive Student.	Does not identify gaps in information.	"She brought the child for immunisation, so I gave it."
	Does not show confidence in own judgement.	"She must ask the doctor what to give the child."
	References do not reflect a search for other sources of data.	No references or very poor references stated.

### 3. The Context

This is the environment in which the programme operates and the student learns or develops. It has the dimensions of components and relationships.

#### 3.1. Components

These may be either limited to health services or extend to include all-embracing structures; for example, health practitioners of various kinds. In the former, learning experiences will be almost exclusively based within the formal health care system, and the student's learning will be influenced by the needs and values of this system. The student will work exclusively with the health sector, and not reach out to other sectors. In the all-embracing mode, the learning experiences will take the student outside the formal health service for a significant part of the time, using non-governmental (NGO), non-formal services and self-help groups. The needs and values of these sectors also significantly influence the learning opportunities. The student will work with sectors other than the health sector, for example, agriculture, labour and industry.

### 3.2. Relationships

The context also includes the relationships that are utilised in order for the programme to take place. These relationships can take one of two forms, either being linkages or partnerships. In linkages, power-sharing, that is a balance of mainly information and decision-making power, is not found in the relationship. The student works mainly independently without influencing the health service. She receives the data given to her by the health care provider with minimal intervention or support from the staff of the setting in which she is learning. There is also no evidence of community control of any aspect of the process of a particular learning situation.

Partnership on the other hand, implies an equal and negotiated type of relationship. Information is shared in a two-way flow and joint decision-making occurs. There is evidence that student and service / agency staff have worked together as colleagues on the student's task, and that the student has influenced the service while the service influenced her. There is also evidence of community control over some aspects of the process of student's learning tasks.

**TABLE 2.3. Constructs Describing The Context**

<b>ELEMENTS</b>	<b>EMPIRICAL REFERENT</b>	<b>EXAMPLE</b>
Components.	Formal services are local, provincial or state health service settings.	"The Dundee Municipal Clinic was visited."
	Health Sector only.	No reference to other sectors.
	All-embracing services are the above + more substantial contact with NGO's, lay and non-formal health providers.	"I was welcomed by the sewing group."
	Multi-sectoral involvement evidenced.	"I talked to the labour union about the people's salaries."
Relationship	Linkages - student worked independently with no mutual influence.	"Sister said I could write down the attendance figures".



ELEMENTS	EMPIRICAL REFERENT	EXAMPLE
	No evidence of community control on any aspect of student's task.	There are no statements in students reports' that reflect any community involvement.
	Partnerships evidence. There was mutual influence and exchange between student and staff.	"We discussed the records to see what we would need".
	Evidence of community control of some aspects of learning process.	"I met with the parents, pupils and teachers before I could go to the school".

#### 4. Concrete Resources

These are the input components that underpin the learning / teaching situations. They comprise Human Resources and Material Resources.

**4.1. The Human Resources** is a significant resource in educational programmes. It includes the staff : student ratio which may be less or more favourable; the contact time between tutor and students which may also be lesser or greater; and classroom / contact time which could also be minimal or increased.

**4.2.** The second aspect to resources are more specifically material resources which may be either limited or varied in terms of the space required for contact with students, which may be one classroom or small group facilities. Reference material may be restricted to that which is prescribed or students may gain access to a wider variety. There would be cost implications of these factors so cost in one situation would be lesser or more than that for another.

**TABLE 2.4. Constructs Describing The Concrete Resources**

ELEMENT	EMPIRICAL REFERENT	EXAMPLE
Human Resources	Staff : Student ratio is less favourable.	One tutor is allocated to the class for all purposes.

ELEMENT	EMPIRICAL REFERENT	EXAMPLE
	Classroom / contact time is minimal.	The tutor sees students mostly as one large group in the class.
	Costs are kept at the minimal rate as only one person per contact time is paid for.	Salaries reflect only one tutor paid per teaching session (1 : 50).
	Staff : Student ratio improved.	At least two tutors per contact.
	Classroom contact time is increased.	Session with students reflected in register. Students have individual and small group interaction with tutor.
	Costs will be proportionately higher.	At least twice the number of personnel will be paid $\geq 2:50$ .
Material Resources.	Classroom only.	One large group being taught in one room together.

ELEMENT	EMPIRICAL REFERENT	EXAMPLE
	Prescribed reference material.	Students use prescribed books of articles supplied to them.
	Costs of teaching facilities kept to minimal.	No record of additional costs incurred for material resources.
	Multiple space needs for small group work.	Several small rooms or sufficient space for groups to hold discussions.
	Variety of reference materials needed.	Variety of reference sources as students need to select appropriate material.
	Costs reflect additional material resources.	Relevant cost reflection of additional meeting facilities and resources.

**FIGURE 2.2.**

### 2.5.3. STATEMENTS OF RELATIONSHIP BETWEEN CONSTRUCTS

- \* Where the programme base is the community the structure will have a process focus, but an institution based programme may have either type of structure.
- \* The institution based programme is more likely to be associated with a content structure.
- \* The community / problem based programme will provide greater opportunity for the professional attribute of empowerment to develop in the student and, conversely, the institution based / content focused programme will be more likely to be associated with the disempowered student.
- \* The empowered student is also likely to be more self-directing in her personal / professional development, whilst the disempowered student is typically passive in this regard.
- \* The community / problem based programme will be associated with an all-embracing care context, as well as relationships of the partnership type.
- \* The context that has limited formal health care structures will be associated with more linkage type relationships.
- \* Linkages are more likely to occur where a content focused

curriculum is found.

- \* The human resources is reduced or at the conventional level in an institution and / or content curriculum.
- \* More human resources is demanded with a community / problem based programme.
- \* The use of varied and more material resources is likely if the programme is community / problem based.
- \* The student is likely to be empowered when a greater human / material resource allocation is present.
- \* Partnership relationships will use more material resources.
- \* Use of all-embracing components will be associated with partnerships.

#### **2.5.4. IMPLICATIONS FOR EDUCATION, RESEARCH, PRACTICE AND THE HEALTH SECTOR**

An examination of the foregoing shows that the current structure and function of the health care system will not readily accommodate the various factors that are recommended by the literature as indicators of good health professional education. The process of transformation has

to take place over a period of time and it is anticipated that there will be a mismatch between the desired educational activities and learning opportunities as these exist in present structures.

This can result in considerable tension which will impact on students, programmes and communities. However, the literature clearly indicated the desirability of a shift to a process-driven curriculum which, it can be argued, is congruent with the general democratisation process in South Africa. As with preventive health care, the impact measurement of such an exercise is very difficult.

It would seem that a start must be made somewhere - hence the need for this study to determine aspects of the implementation of education in differing formats. While some aspects included in this research have been well documented, this particular combination of factors has not been explored before. This project should be seen as the starting point for further endeavours - the practice implications of students experiencing one or another of the programmes should be followed up.

The nature of the health care system is changing in a transformed society and in addition, consumer driven expectations may need to be met. A critical appraisal of students and programme developers is likely at many levels.



## CHAPTER THREE

### RESEARCH METHODS

#### 3.1. DESIGN

The case study as overriding organiser of this design was chosen because ‘the distinctive need for case studies arises out of the desire to understand complex social phenomena’ (Yin, 1985:15). Case studies thus usefully describe contemporary situations and, especially where many uncontrollable variables exist, that are beyond the control of the investigator, this strategy can take account of these without the researcher attempting control. For this reason no manipulation or other procedures were introduced for data collection.

The case studies were conducted retrospectively. This precluded the use of process measures, and forced the researcher to rely on available data. The case study design selected for this investigation used the multiple case design in which each case was selected to serve a specific purpose within the overall scope of enquiry. Thus replication, not sampling logic, is applied. Each case must be selected to predict similar or contrary results. Contrary results were predicted for this study.

In multiple case design, each individual case may be either holistic or embedded; the former dealing with the global nature of a programme - the

latter with several sub-units in the case (Yin, 1989). In this instance then, a multiple-case, embedded design was used.

The case study design allows an investigation to retain the holistic and meaningful characters of real life events. The exploratory case study asks questions about what the ways are in which a programme operates, and aims to develop pertinent propositions for further study (Yin, 1989). The investigation was to explore what actually occurred so this was not influenced by the introduction of any instruments or processes for data generation.

This design is also useful when the boundaries between phenomena and context are not clearly evident and so do not always include direct detailed observations (Yin, 1989).

Case studies may use propositions, each of which draws attention to something that should be examined within the scope of study. In this instance propositions may be equated with the model constructs as they are the parts of the case that must be examined. An exploratory study also required direction, either as propositions or criteria for reaching aims.

Difficult areas of the case study approach are the analysis and interpretation of data. There are no set ways of doing this yet according to Yin (1989). No precise way of setting criteria for interpretation of findings exists.

This difficulty can be partly addressed by ensuring that theory building is part of the design early in the research. Theory building must occur before any data collection - this must provide a "sufficient blueprint for the study" (Yin,

1989 : 36). This will guide data collection and strategies for analyzing data. The theory base will assist in ensuring that all relevant data has been collected. Analytic generalisations can occur when the original theory is used as a template against which empirical results of the case study are compared.

In this study the empirical referents of the model constructs formed the basis for the selection of data from available data sources, to constitute the case study protocol.

### **3.2. UNIT OF ANALYSIS**

A research design is the logic that links the data to be collected (and conclusions) to the initial questions of the study. An important component is the unit of analysis, or what constitutes a case (Huysamen, 1994). In this study, each case comprises all those constituents that together have resulted in an educational programme that ends in registration with the South African Nursing Council as a registered community health nurse.

The two programmes with different curricula have been chosen. Whilst they both operate within region E of the Development Bank of South Africa, they are located at different centres (Erasmus, 1991). Both programmes serve typical decentralised populations of registered nurses - Appendix A map of the region).

### **3.2.1. PROGRAMME A - CONTENT CURRICULUM**

This was located in the northern part of the region - it was started in June 1990 for the duration of one year, in response to requests from professional nurses in the area. The programme was designed around alternating lectures and self-study units in a content curriculum. A list of clinical, practice tasks was drawn up to be completed, as well as written assignments. Students thus participated in lectures or carried out independent self-study and practice.

### **3.2.2. PROGRAMME B - COMMUNITY / PROBLEM-BASED CURRICULUM**

This was located in the southern part of the region and was also started in response to requests from professional nurses in the area. This programme commenced in June 1991, again for one year. It was structured around the concepts of community-based education, a problem-solving approach and small group work with groups meeting formally and informally for theoretical and clinical practice. No content was chosen as such, but assessment tasks relating to professional practice were devised. Issues for study emanated from these community and service contacts, and was studied in small groups. This curriculum had a process focused approach.

For both programmes the first group of students formed the sample. This equalised factors such as inexperienced staff and the teething problems of a new programme.

### **3.3. VALIDITY AND RELIABILITY**

Burns and Grove (1987) described a useful classification of validity issues.

These are addressed as follows:-

#### **3.3.1. INTERNAL VALIDITY**

**History:** During the time span of both programmes of this study, many socio-political activities occurred throughout the region. It seems probable that there were no major influences that differed between the areas, and media reports did not reflect any factors that would affect one area more or differently than the other during the time span covered. General population features were also similar.

The one difference between the settings was that the northern area is somewhat more urbanised, in that the town is larger and has a more urbanised character in terms of housing, schools and possibly employment opportunities.

**Maturation:** It has not been possible to control for this and so this may be a limitation to be borne in mind.

**Testing:** Once students had been given permission, they embarked on the programme and participated in all programme events. There were no specifically identified tests as such.

**Instrumentation:** Is also not applicable and neither is statistical regression.

**Selection:** This is threatened by not having randomisation. In this study the cases were purposively selected, theoretically all of the nursing population could have elected to apply for the programme. However, it must be admitted that some selection bias could exist due to the fact that only certain types of nurses would apply. For instance, only more motivated or ambitious nurses may be the ones to apply.

**Mortality:** Very few participants have been lost to the study and then due to such reasons as being killed in a motor vehicle accident, or family crisis. Other factors threatening validity: for example, compensatory equalisation of treatments are not applicable to this study. Yin (1989) asserts that internal validity is only of concern in causal and explanatory case studies.

### 3.3.2. CONSTRUCT VALIDITY

‘Constructs’ is the term used to denote concepts that take on meaning in terms of a theory, model or typology. Thus, this study used constructs that are explicated by theoretical or constitutive definition

(Mouton and Marais, 1989). To enhance validity, these definitions should be clear and have systematic import. These constructs are derived from the conceptual model which in turn, is based on reputable literature sources.

Burns and Grove (1987) also stress the need for adequate explication of concepts. They furthermore refer to the disadvantage of using only one measure of a construct (mono-operation bias) and of only using one method of measurement (mono-method bias).

Triangulation is recommended to overcome these problems. Huysamen (1994) says it will help to discern patterns in case studies. Whilst Yin (1989), said that data is linked to theoretical propositions by pattern matching whereby pieces of information may be related to a theoretical proposition.

In case study design, Yin (1989) says three tactics that may be used to assist construct validity are: use of multiple sources of evidence, establishing a chain of evidence and review of the draft case study report by key informants; all of which were to be used in this study. Further threats to construct validity identified by Burns and Groves (1987) do not apply here; for example, interaction of testing and treatment.

### **3.3.3. EXTERNAL VALIDITY**

This is the generalisability of findings and in general, research depends on the extent to which the sample is representative of the population. However, in case study research, data generalisable to theoretical propositions and not populations or universes, are generated (Yin, 1985:21). Analytic and not statistical generalisation is carried out. The threats to external validity given by Burns and Groves have been noted too; viz. interaction of selection and treatment, interaction of setting and treatment and of history and treatment.

### **3.3.4. RELIABILITY**

The goal of reliability is to minimise errors and biases in a study. In case study research, the protocol is the mechanism for increasing reliability. In this study the protocol is set out by using the model constructs as framework. Reliability is enhanced by the explicit definitions given for these constructs.

Since data illustrating the constructs had to be extracted from documents, the reliability of this process was ensured by having a second analyst analyze five of the twenty student's documents. There was about 75% correspondence initially, and the remaining aspects were handled by making empirical referents more specific.



To further enhance the reliability of data analysis, a case study data base was drawn up in the form of a matrix on which was set out all the construct elements and all the projects and assignments to be examined.

In this way relevant categories could be allocated. This was done separately for each student's data set. These were then tallied per programme.

### **3.4. DATA COLLECTION : THE CASE STUDY PROTOCOL**

The protocol is a major tactic in increasing reliability in this design (Yin, 1989). The format for presenting the cases is derived by application of the conceptual model so that every construct in the model is addressed in each case.

Procedures to be followed include:

- \* Access to all documents for both cases;
- \* Analysis of same for data regarding constructs using empirical referents described in Tables 2.1. to 2.4;
- \* Report of each case;
- \* Interviews with key persons to validate case reports;

- \* Conduct cross-case analysis; and
- \* Interpret findings through statements of relationship of model constructs. In order to operationalise the data collection, Table 3.1. indicates the sources from which data was established for each construct or proposition and for each research question to be addressed:-

**TABLE 3.1. Empirical Referents And Data Sources Implementation**

CONSTRUCT	EMPIRICAL REFERENT	DATA SOURCE
Base	The curriculum	<ul style="list-style-type: none"> <li>* Application to SANC.</li> <li>* Minutes of planning meetings.</li> <li>* Staff memo's.</li> <li>* Minutes of Board of Management meetings.</li> <li>* Programme materials.</li> </ul>

CONSTRUCT	EMPIRICAL REFERENT	DATA SOURCE
Structure	Classroom activity	<ul style="list-style-type: none"> <li>* Class registers.</li> <li>* Reference material.</li> <li>* Minutes of meetings.</li> <li>* Programme for Workshops (Programme B).</li> <li>* Guidelines for writing study material.</li> <li>* Practice File.</li> </ul>
<b><u>STUDENT</u></b>		
Professional	<p>Group participation.</p> <p>Identifies political factors.</p> <p>Plans at systems level.</p>	<ul style="list-style-type: none"> <li>* Class registers.</li> <li>* Student projects/ assignments.</li> <li>* Programme evaluations by students.</li> <li>* Minutes of planning meetings.</li> <li>* Staff memo's.</li> </ul>
Personal	<p>Identifies gaps in data confidence in own judgement. Consults references.</p>	<ul style="list-style-type: none"> <li>* Student assignments and projects.</li> <li>* Programme evaluations by students.</li> </ul>

CONSTRUCT	EMPIRICAL REFERENT	DATA SOURCE
<u>CONTEXT</u>  Components	Use of formal or all-embracing services.	* Student assignments and projects. * Correspondence. * Clinical Supervisor's report.
Relationships	Evidence of independent or collegial work.	* Student assignments and projects. * Correspondence.
<u>CONCRETE RESOURCES</u>  Human Resources	Staff : Student ratio. Contact time. Cost.	* Staff appointment forms. * Class Registers. * Budget and claim forms. * Reports to management board. * Minutes of programme evaluation meetings.

CONSTRUCT	EMPIRICAL REFERENT	DATA SOURCE
Material Resources	Space / Classroom Reference material. Cost.	* Budgets and claim forms. * Reports to management board. * Programme evaluation meetings.
Other Sources	Socio-demographic data.	* Registration forms.

\* Denotes documents.

It is clear from the above protocol that more than one data source was used for data collection on most constructs of the model. For triangulation purposes, case reports were read by two commentators who were involved with the programmes and who were then interviewed. A third commentator who is an expert in distance education, also read the cases and was interviewed.

In view of the vast amount of material that had to be captured, explored and analyzed in a meaningful manner, it was decided that for certain aspects of the study, a simple random sample, using every ninth student, would be drawn of ten students' records / data sets from each programme. As each student had completed 24 separate assignments and projects, there was a total of 480 items to be analyzed for the selection sample only. The researcher would then analyze these data blind: viz. without knowing from which programme or set of students records they came. This assisted in reducing the influence of any

preconceived notions about the characteristics of each programme.

### **3.5. ETHICAL CONSIDERATIONS**

#### **Permission**

The research was discussed with students on application to the programme in such a way that their access to the programme was not jeopardized should they have wished not to participate.

#### **Process**

There were no conditions attached to those who agreed in writing to participate. No extra tests or measures were applied. Tutors were involved in discussions and were themselves willing to participate.

#### **Confidentiality And Anonymity**

The identity of all participating students and tutors was protected. No confidential aspects were divulged, for example, where sensitive political issues developed during students contact with practice settings (formal and non-formal) these have not been explicitly identified.

Yin (1989) said that as much as possible should be named in order to give more meaning for readers, so those projects that could be named were

identified.

## CHAPTER FOUR

### CASE STUDIES

#### 4.1. PROGRAMME A : CONTENT CURRICULUM

The case study protocol set out in chapter three was followed, and data realisation generated the information described here.

##### 4.1.1. THE CONCEPTUAL PROGRAMME

The base and structure will be described to establish whether implementation of two distinctly different programmes in fact took place.

##### Base

A total of 53 students started Programme A on 6 June 1990 in Newcastle, Natal and completed it on 11 May 1991 (Minutes of board meetings).

In setting up the programme for recognition by the SANC, it was agreed that the SANC would appoint an external moderator for examinations. The programme undertook to be one academic year,



which is 26 weeks long, with six weeks of clinical practice spread over the year and up to one year after completion of theory. The programme aimed to be community-based and community orientated, with student-centred learning taking place (Application to SANC).

Programme objectives do not seem to have been spelled out as such for this programme. Those implicit in the document sent to SANC for approval relate to establishing learning that is community based and orientated, that the students' needs are central and that competent practice will be aimed for in the psychomotor, cognitive and affective domains of practice.

It should be noted that Newcastle is 380 kilometres and four hours drive away from Durban and that although the postal and telephone systems were adequate, they were not consistently reliable. Students however, were located at many distance points and infrastructure for those was very problematic (Staff memo).

This programme also strove to ensure essential competencies in each of the cognitive, psychomotor and affective domains. It was envisaged that this would be achieved by having three broad subject areas in the curriculum; each of which was equivalent to a semester, that is, 52 lecture periods (Application to SANC). These were as follows:

**\* Health Care Dynamics**

- Evolution of health care systems in Southern Africa.

- Demography, population dynamics and epidemiology as the basis of health care delivery.
- Essential health statistics; acquisition, computation, uses / misuses.
- Health care policy.

**\* Community Health**

- Development of community health.
- Determinants and deterrents to health care delivery.
- Environmental health.
- Significant disease conditions - communicable and non-communicable.
- Trends in community health.
- Concepts and content of Primary Health Care.
- Community Health legislation.

\* **Community Health Nursing**

- Health education.
- Individual health assessment, planning, intervention and evaluation (assessment, planning, intervention and evaluation).
- Sexual and reproductive health care (including fertility issues).
- Primary care for mothers and children.
- Family health (assessment, planning, intervention and evaluation).
- Specific groups as the focus for Community Health Nursing practice;
  - school-age children;
  - urban, rural and refugee populations;
  - workers of all categories;
  - elderly, geriatric, frail persons;
  - other groups with conditions or aspects of
- Health maintenance.

lifestyle

that impinge on health, for example,  
psychiatric problems.

- Rehabilitation of selected groups (Application to SANC).

The preparation of all the initial material for the first subject took place before the programme commenced. Those involved with the programme could choose units for preparation, for which work they were paid (Staff appointment forms).

‘Outsiders’ also became involved through ‘word of mouth advertising’, which made it known that anyone with a suitable qualification (diploma in community health nursing) could take on the preparation of one unit (Staff memo). People therefore, did not need an understanding of the educational process / activities to be used.

The target group of consumers had no input, nor were their needs elicited or identified other than the fact that it was a diploma level programme, and it was anticipated that consumers might be older learners and from a rural type existence (Guideline for writing study material).

As far as can be established, six different people produced the earlier units on this basis. Units were produced as independent or isolated entities, with no effort to connect them; in other words, it was implied that units were ‘free standing’ within the programme. The person devising a unit would not necessarily be the one to implement or oversee its teaching (Staff appointment forms).

**Structure:**

The venue was arranged at the local technical college where a classroom was allocated and an overhead projector was available (Correspondence).

The Board of Management minutes of 1 August 1990 noted that 33 of these students were working in community related jobs, but did not have the relevant qualification yet; the remaining 19 students were employed in small country hospitals where a qualification in community health nursing would enhance practice. One student was unemployed. (The description of socio-demographic profile of students gives more detail). Open access was allowed, provided that SANC requirements could be met if a registration with SANC was desired by the student.

An example of programme material revealed the following: Readings and unit objectives - these were presented in separate bound copies for lecture readings and self-study units, so in the instances where a topic was dealt with over a lecture and self-study activity, the student would need to consult both 'books'. The information was also divided up according to the three broad areas of study.

The "Community Health" aspect comprised six units of lecture readings and five of self-study units. Both lectures and self-study topics, not only for Community Health, but for all three modules, were pre-selected and students had no input in the initial stage.

In the Community Health module, the following topics were included:

- Unit 1**      Development of Community Health - lecture;
- Unit 2**      Specific Legislation - self-study;
- Unit 3**      Nature of Communities - lecture;
- Unit 4**      Determinants and Deterrents to Health Care Delivery -  
self-study;
- Unit 5**      Social Pathology - lecture;
- Unit 6**      Trends in Community Health - self-study;
- Unit 7**      Environmental Health - lecture;  
(Geography, pests, housing)
- Unit 8**      Environmental Health - self-study;  
(Water, sanitation, food, pollution)
- Unit 9**      Significant Diseases - Communicable - lecture;
- Unit 10**     Significant Diseases - Non-communicable - self-study;
- Unit 11**     Primary Health Care - lecture;
- Unit 12**     Take home test.

An examination of the objectives set out for each unit shows that the student was expected 'to learn' the content provided by the readings in such a way that the objectives were achieved. The objectives appear to be dependant on the interpretation of the topic by the person who prepared the unit. For instance, for Unit One, the two objectives given state:

- \*      Outline the development of community health in South Africa and the influence of this on the current system.

- \* Identify the major influences on community health in South Africa and discuss which of these are still important.

The readings for these objectives were a brief account of early health visiting in the Cape and the development of school nursing, the public health movement in nineteenth Century Britain, a chapter on the health service structure in South Africa which dealt with 'comprehensive' health care and the political structures imposed by the 'homeland policy', and a synopsis of the work of 14 British 'pioneers' in public health.

The unit on the nature of communities was also entirely Eurocentric in its approach. It formed the theoretical basis for the practice and report assignment on community assessment, and as with the above unit, was also dealt with by lecture method in class.

Between these two topics, students had to complete the self-study on legislation. Here, legislation was presented in various forms as five laws were dealt with; so for one, the actual act was given, for another - a description of the act, for another - the relevant forms were included.

Students were given directions for learning, for example, "Describe measures stated in the regulation, which are taken in regard to the presence of notifiable medical conditions in the community".

Questions for self-evaluation were also included - these were factual, expecting detail to be taken from the legislation. Other directions led to a broader application. For example, "Analyze your own view on the ethics of abortion".

The following self-study unit on Determinants of Health, gave more specific objectives, pertinent to issues to be learnt from that unit. For example, the unit objective stated; "Identify the factors influencing health and health care delivery under the following headings: socio-cultural including education; economic including unemployment; political and geographical.

In the unit, the following specific objectives were given;

"Explain how people in society can be grouped or ranked.

Define social class and identify the main social classes in a known society.

Discuss the causes of social and geographical mobility.

Describe social changes taking place.

Relate socio-cultural, economic, political and geographical influences to the level of health and health care needs in a known society".

Student instructions followed which assisted students to identify relevant information from readings and from their own communities.

Readings were both Western and African in content and origin.



Readings for other lecture topics were mainly from North American sources, with some on primary health care from the local journal of nursing. No research articles were included. It would seem that students were indeed expected to deal with vast amounts of information in limited time. For instance, the unit on Social Pathology aimed at analyzing and examining the aetiology and health implications of family violence, delinquency and crime and all of substance abuse, as well as discussing the extent and manifestations in the student's community - all in one Saturday morning. An invited speaker from the South African Council for Alcoholism and Drug Dependency 'took' the lecture which, it was noted, was well received by the students (Class register).

Lectures were also given on environmental health, communicable diseases and primary health care. Selected content was given and students expected to supplement this with their readings (Class register).

Self-study on selected environmental issues was practical, direct and easy to follow. The self-study book ended with a section on home safety (Western and African).

The Community Health Nursing Module followed, consisting of 17 units, eight of which were self-study. This section dealt with topics such as health education, health and developmental assessment, sexual and reproductive care, family health, school age children, urban / rural communities, occupational health, community disasters and psychiatric

and geriatric care; followed by a classroom test (of which no copy could be found) and the final two units being on promotive health and rehabilitation.

The unit objectives for these were specific to the topic; for example, "Identify the aims of health education and describe the criteria for effective health education". This type of objective focuses on the content the student is to learn or to do, as in "Take an appropriate sexual history" (Reference material).

Many issues were dealt with at the general rather than specific level, such as, "Discuss the problem of poverty in both urban and rural populations". Yet other objectives related to the beliefs about an issue; "Describe the philosophy of rehabilitation as a component of comprehensive health care", whilst a few objectives did try to establish a link between theory and practice; viz. "Evaluate the available rehabilitation services in your area against the needs".

Lecture readings provided for this module were comprehensive and substantial. Health assessment also dealt with the management of common problems such as dehydration and readings provided for sexual health care were wide-ranging and informative - a section on teenage pregnancy being included. 'Family' readings were North American, but a useful chapter from Wilson and Ramphela's book on Understanding Poverty (1989) provided a local perspective (Reference material).

Readings on Occupational Health Care were very extensive, covering role and function of the occupational health nurse, women and work, mine industries' rehabilitation, alcoholism and work, mine industries' rehabilitation, alcoholism and work and executive stress. Self-study references and study activities in this module attempted to bridge the theory / practice gap. For example, laboratory findings for sexually transmitted diseases were given for interpretation.

The health of the school-aged child was also dealt with in detail, which reflects the demographic trend in South Africa.

Community Management of Disasters provided a range of references and clear cut guidelines for working through the topic. For the study of the elderly, objectives were given and questions set, the answers to which will meet the given objectives. The reference is a North American source, but much can be adapted locally and a creative section on alternative ways of structuring the delivery of services could be explored for local application, as also the discussion on levels of prevention in the elderly.

The final self-study unit in this module concerned preventive / promotive health care. In this instance, an attempt was made to devise specific objectives, bringing this area into the domain of community health nurse practice. However, the issue was not dealt with in terms of the constraints that exist.

The final module dealt with Health Care Dynamics and was much shorter, having seven units of which three were lectures - these covered the topics of demography, the evolution of the Health Care System in South Africa, planning and evaluation of programmes, health care statistics, health care policy, management and personnel management.

Objectives for these units also related to the content. For example, "Define epidemiology and discuss its uses for the community health nurse"; "Identify the most important health care statistics for the community health nurse and identify their sources"; "Draw up a motivated budget for a health service or programme" and "Outline the process of staff evaluation". The only objective in this module that does not fit this mould states, "Debate how as a community health nurse, can influence policy on all three levels of government".

The supportive readings for lecture were fairly brief by comparison to the other modules. References provided for self-study were more detailed. The demography unit was supported by an extract from Hammond and Gear's Workbook (1986).

The unit on health care policy used community health workers as the focus - thus also dealing with this topic. Self-study activities were structured so as to enhance student interaction with the texts provided and also to encourage students' utilisation of policy documents. A self-evaluation activity was also provided.

The final self-study unit concerned personnel management. Again, broad objectives were given, as well as specific objectives were complex, such as: "Explain how mismanaging throughput processes may influence the output negatively in the presence of a positive input" and "Explain how Skinner's Re-inforcement theory can be used to motivate pre-school children" (Reference material).

Students were to meet for classroom teaching every alternate week for a Saturday morning. During the interim Saturdays, material would be learnt on a self-study basis. There would be 18 contacts of four periods of 45 minutes each (Application to SANC).

Theory commenced with the section on "Community Health", where six contacts and six self-study units were included. Self-study units were set out in books of readings with a unit of study having specific objectives and a set of learning tasks with the recommended readings. Each contact session (lecture morning) was also supported by a book, containing the unit objectives and readings for the topic being dealt with.

According to the "Layout of Lectures" document, a unit was dealt with at each lecture / contact session, as well as one unit forming a self-study unit. (The exceptions being environmental health, health education, health and developmental assessment and occupational health, each of which extended over a classroom and a self-study unit). Each of these units had objectives set out. These objectives appear to have guided learning. However, the depth of student engagement with

learning is difficult to assess in that there was frequent feedback that students found the programme too intensive. For instance, a report of a visit to the group by a Durban staff member on 27 August 1990, noted students' 'surprise' at the intensity and comprehensiveness of the programme.

Students also requested more formative assessment activity. Only one 'take home test' was done and it seems throughout the programme this need was not adequately addressed. Again early in October, 1990, a note was made regarding the need for yet more supportive activity from Durban-based staff (Staff memo).

Also in October of 1990, it was recorded that students complained that they could not find all the information they needed in the readings that were provided with the relevant units. This related particularly to self-study modules. Students had started a system of sharing any additional sources that were found locally, usually by making photocopies for one another. These were distributed either to the whole group or to smaller groups that developed as study groups. This practice was particularly strong with the group of Afrikaans speaking students as they had to translate much of the reference material.

The clinical practice component of the programme appears to have been problematic from the earliest stages of the programme. On 27 August 1990, students requested to do clinical practice after their written examinations as they felt there was too much to do and they found it difficult to understand what was required. They were reluctant

to sign for leave to do practice tasks and the relationship between the six weeks needed for practice and having to accomplish set tasks as opposed to simply spending time in an appointed place, could not be understood (Staff memo).

Students had previously been told that clinical practice required completing a set of tasks which were estimated to take six weeks. These could be done at intervals (Interview with programme tutor). Consequently, students had been given a file with a description of the tasks that were to be completed (Practice file).

The six week time estimation had been given to the SANC as a guide to the anticipated time taken to complete these tasks (Application to SANC). There was no system of competency-related education in existence in nursing education in South Africa - all practice allocations had been based on time; for example, three days of maternal-child health services , - so the idea of having to perform maternal-child care tasks instead could have been a new notion (SANC Regulation for Diploma in Community Health Nursing).

Student evaluations of the programme documented the following from 20 respondents: At a general level, classroom contacts ranged from "fair" to "good", more specifically with regard to lecture readings, these were gauged to be well compiled. The order of practice assignments was recommended to change from starting at the community level and progressing through the family to the individual, to reverse the order and start with individual health assessment and end

with community level assessment. No reasons were given. More clinical supervision and demonstration was requested.

Of the self-study units, Unit Two (Legislation) was the most unmanageable, with Unit Four (determinants of health care) found unmanageable by three students, and Unit Thirteen (lecture readings for psychiatric nursing care) being the lecture readings with which some difficulty was experienced.

#### **4.1.2. THE STUDENT**

##### **4.1.2.1. Description Of Programme Participants**

Four variables were selected for which most data was available. In addition to these, home address, gender and occupational history were known; however, these have not been analyzed as the format of the data is rather cumbersome and the relevance of the study, obscure. It was found in this programme, that number of years of practice corresponded with age, indicating that most of these nurses remain employed.

In order to describe the profile of the student group, the following four variables were analyzed; age, home language, number of qualifications and number of memberships of other than professional organisations.



A total of 47 students completed the content curriculum programme.

**Age:**

The range was 20 - 53 years with the mean 37.4 years. At either end of the range, students were either newly qualified as registered nurses or about to approach retirement age, generally 60 years for women in the public sector.

The 'lifespan' of the attributes gained from the programme is thus from 40 - seven years, during which time considerable client contact could occur. None of these students stated any intention of withdrawing from work or changing to non-health sector jobs. All appeared to be economically important to their families, based on information on registration forms.

The mean age at which the programme was undertaken was 37.4 years. The mean age for either decentralised or centralised programmes of this nature is not known. As this qualification is now regarded as basic (rather than post basic as was the case prior to 1982), this meant age at gaining this qualification could be considered somewhat older than desirable. Also, with the shift in focus to Primary Health Care, this qualification is particularly important.

This evidence supports the need for home-based study which was also reflected in students’ programme evaluations. Clearly, also, these were adult learners.

**Home Language:**

This programme was conducted in English with English examinations, so it was necessary to examine the extent to which students with English as second language were represented.

**TABLE 4.1. Programme A**  
**Frequency Distribution Of Home Language**

HOME LANGUAGE	FREQUENCY
Afrikaans	9
English	11
Hindi	1
South Sotho	1
255	
Xhosa	2
Zulu	23
TOTAL	47

The northern part of the region in which this programme was based is predominantly Zulu speaking, which is reflected in table 4.1. Newcastle was also an industrial town which attracted mid-level workers of the 'white' racial group - this was reflected amongst students of this programme too.

Seventy-six percent of students who participated in the programme did not have English as their home language. This could be linked to the expressed difficulty with readings and with the difficulty found in understanding words used in the written examination (Interview with programme tutor). The extent to which learning was impaired, cannot be ascertained in this study.

Due to the apartheid system that existed when these students were at school, it can be deduced that the 20 (43%) English and Afrikaans students experienced better general education; the remaining 27 (57%) mostly attended Black public schools and could be regarded as disadvantaged students, despite intervening professional nursing qualifications.

Traditional nursing education was notoriously autocratic, non-participant, teacher dominated and based on factual recall rather than on understanding of material (Gwele, 1993).

### **Number Of Qualifications**

This category included formal short courses and diploma level qualifications. All students who wished to have this qualification registered with the SANC on completion, had to meet their entry requirements which were general nursing and either midwifery or psychiatric nursing, as well as either a standard ten certificate or mature age exemption.

By implication, no student would have fewer than two qualifications on entry and indeed, 23 (49%) had that; 16 (34%) had three qualifications, four (<1%) had four and there were three students with five qualifications and one with six qualifications.

Of the group with three qualifications, the third one was psychiatric nursing in four cases and a family planning certificate course in seven cases; the remainder had a range of occupational health, paediatric primary care and voluntary counselling courses.

### **Membership Of Other Than Professional Organisations:**

This was necessary to establish to determine whether students of the programme were already involved with community related activities, which would either indicate a commitment to

the type of programme selected or could also have a bearing on successful performance within the programme, as theory was to be related to health care practice in community settings; also, an understanding of community characteristics and functioning would enhance understanding of programme components. This membership was reflected in Table 4.2.

**TABLE 4.2. Frequency Of Membership Of Organisations**

NUMBER OF ORGANISATIONS	FREQUENCY
0	13
1	10
2	12
3	10
4	2
TOTAL	47

In fact, 28% (13) did not belong to any organisations, whilst 47% (22) belonged to either one or two organisations and 21% (10) belonged to three; 68% thus belonged to one, two or three organisations.

An examination of actual organisations revealed that these varied with no one kind dominating. Examples included a range from ballroom dancing to Zenzele Women's Groups, with a variety of sports and welfare groups reflected, as also church groups.

### **Sample Of Students**

The ten students of programme A who formed the sample for the analysis of assignments and projects had the following profile:

**\* Age**

Range 36 - 53 years, mean 42.6 years.

**\* Home Language**

All were reflected; however, English, Hindu, SeSotho and Xhosa were represented by one student each. There were three Afrikaans and two Zulu speaking students, which did not quite reflect the group, but the sample had not been drawn on the basis of language and had been randomly selected. For this reason, and due to the small sample size, this group was not subjected to analysis on the advice of the faculty statistician.

### **Number Of Qualifications**

Four of the ten students had two qualifications, two had three and two had five qualifications; one each had five and six qualifications. This appears to reflect the group

### **Membership Of Organisation**

Two did not belong to any, whilst three each belonged to one and two organisations; two belonged to three groups.

#### **4.1.2.2. Professional Attributes**

Empowerment was the indicator for this and in seven students' work there was no evidence of empowerment amongst the full range of data sources. Health issues were simply stated and even where it was evident that these indicated the influence of underlying political factors, they were not commented on.

Individual level reactive care dominated student practice. This was well illustrated by a family study in which it was stated "The employed members need to get more money to care for the home and other members" (Student case 7A). There was no reflection on how this should occur. Another example: "They

need a bigger house with electricity" (Student case 1A). No suggestions as to how or why the housing problem existed.

Lack of general education was also identified as a problem, but no link was made to the health sector. In one case, the unemployed men were identified as illiterate, the solution was simply to register them as work-seekers. No effort was made regarding literacy or other skills training. This instance is reflective of all students who identified this issue. These responses gave individual level interventions and neglected underlying political issues.

One student stated that a family with a total income of R410.00 per month,<sup>1</sup> with two adults and four children, did not have an income problem (Student 5A). However, the children received little protein and she recommended bulk buying of milk to make maas. She concluded "Evaluation was done and she had lots of grocery and said she found this helping to save money". This was an individual level response that also did not reflect underlying political issues; the student fitted the disempowered group.

In the three instances which were not as clear cut, evidence of empowerment was limited. One case had some evidence of group participation in the community profile. This was a study on the community of St. Anthony's Home for Children at Blaaubosch near Newcastle. Relationships had been established



with staff and children and it was noted that the Black children accommodated were not being socialised in the typical manner, so may not adjust well to Black society on leaving St. Anthony's indicating an awareness of underlying political influences (Student 10A). There were obvious contributions to the study by staff members, that is, a partnership relationship was discerned by the exchange of information that occurred about the difficulty of multi-racial care of children.

Another student showed somewhat more liaison and group participation in her community profile and epidemiological report (Student 3A). The strength of this community profile was the multiple sources of data, including community members, so that community perceived problems were reflected. Underlying political influences were identified.

The third student showed some evidence of group functioning (empowerment) when she identified tension between landowners and tenants in a Black freehold settlement (Student 4B). The problem was that the mobile clinic stopping point was at a landowners house. Negotiations were entered into, culminating in a new stopping place acceptable to all. There was also some community control over the process.

#### 4.1.2.3. Personal Attributes

The empirical referent was 'self-directing'. This was seen in response to the poor health service when one student organised two medical practitioners from a nearby town to take turns spending one hour per day at the grossly under-serviced clinic in a township (Student 6A). This was self-directing in that it showed confidence in her own judgement that the medical input was indeed what was required, and the interpersonal confidence to approach high status colleagues.

For the epidemiological report, she investigated an outbreak of typhoid. At obvious expense, she travelled to other areas where patients may have been seen, to identify cases in both private and public sector facilities in order to complete data which she regarded as incomplete. Yet in other projects, for example, the family study, this student gave inappropriate responses - "All must be made to eat eggs" and "Granny must buy her own T.V.", focusing on direct causes of disease and individualised interventions.

Only two other students showed some evidence of confidence in their judgement giving rise to determined action. Student 2A established a communal garden, which had considerable participation (about 60 people) and which in one season, made a profit of over R1 000.00. Two thirds of this sum was divided between participants and one third remained for new seeds,

maintenance and so on. All participants had also received produce as well. Another student (Student 9A) also gave a similar account, but she was more of an observer than the driving force or a participant.

The other example referred to a housing project in a township, where the student obviously has persistently had an input both into the project as such and in ensuring community members gain access to this project (Student 10A).

Epidemiological reports showed that students did not have sufficient or reliable resources for the data collection and acknowledgements were not given. The moderator's comments on health assessments indicated that generally students did not establish relationships between the client's history, physical examination findings and the diagnosis.

There was also considerable inconsistency and incongruence within the presentation, with meaningless remarks such as "the child had no fine / gross motor skills" with no comment on this surprising finding! Developmental tasks were described but not linked to an age for interpretation. These students as a group seem to have accepted incomplete data, thus fitting the category of passive.

One student (Student 8A) simply noted, "Mr N. has lost the will to live" - there was no further action or comment! This

was in an Asian family and may reflect the cultural perspective of student and, or, family.

A further example was related to the nutritional assessment which invariably was conducted with families with virtually no resources, and there was clearly a need to consult other references and resources, yet this was not done (Student 5A).

Only two students had given references for any of the assignments or projects and these were neither comprehensive nor consistent for all their tasks (Students 3A and 4A).

#### **4.1.3. THE CONTEXT**

##### **4.1.3.1. Components**

An examination of settings used for learning experiences, revealed a dominance by the formal health structures. Formal health sector involvement included the major service providers in the area; viz. Natal Provincial Administration (NPA), Kwazulu Department of Health and Welfare and local authority health departments. The latter was used at Newcastle, Vryheid, Ladysmith, Estcourt, Dundee, Dannhauser, Glencoe and Bruntville.

NPA district nursing services were used at Dundee, Empangeni, Pongola and Vryheid.

NPA mobile services were used at Newcastle and Ladysmith whilst hospital based facilities included those from Emmaus, Madadeni and Charles Johnson Memorial Hospital at Nqutu (Correspondence).

Private sector facilities used were at Newcastle: Sunnybank Playcentre, Eskom Ingagane Power Station, Sandown Clothing Manufacturers, Iscor and Afrox. Alucab and Consol were used at Dundee and Corobrik at Glencoe. Limited use was made of other groups such as Al-Anon (Correspondence).

However, with some formal health services difficulty was experienced and correspondence and notations of telephone conversations bear testimony to the discomfort caused to students, tutors and health service staff by the unaccustomed intrusion of students with learning needs in community health services.

No teaching by NPA staff was allowed and practice experience generally had limitations set which precluded holistic learning. For example, limitations in a counselling interview and the stipulation that no invasive procedures were to be learnt. The discomfort can be illustrated by the following extract from the clinical supervisors report:

"21.3.91. Sr S. stopped doing pap smears in December 1989 because she did not have suitable light. Sr mentioned her concern about the matter several times during my visit. I assured her that I would take the matter up with a senior sister, who told me that she had filled the post in November 1989, and would be taking out a gas light to N. clinic in April 1991. This I found satisfactory.

25.3.1991. The Sister-in-Charge of the relevant service phoned me and asked who had given me permission to go into her clinics. She was unhappy that no-one approached her regarding visiting the clinics. The senior sister had reported my telephone call and interpreted my intrusion negatively. I phoned the latter to apologise and reassured her of my good intentions, admitting that I was in the wrong. What I have learnt from this exercise is that when you go into a workplace to supervise - keep blinkers on - do what you are supposed to do - lend a sympathetic ear - no more!".

Several reports pertain to observation of students doing nutritional assessments and it was evident that these were carried out in clinics or other formal venues and not in the client's home, which would have been more relevant.

Clinical supervisors reported mostly on prescribed tasks that took place in the relevant venues, or formal health care provision settings. In all the documents examined for each of

these ten students, only the following community based or NGOs were reflected:

- the profitable communal garden referred to earlier at Sithembila (Student 2A);
- Machibini trust farm (with Zamani club-gardening) (Student 9A);
- Osizweni Handcraft Centre, a rehabilitation centre for adult disabled run by the Kwazulu government (Student 1A);
- Housing was recognised as a contributory factor to health, but only one student had established a partnership type relationship with a housing scheme (Student 10A).

#### **4.1.3.2. Relationships:**

Relationships seemed to be mostly formal, in the form of linkages. Out of the ten students, three had a partnership relationship each, in which they changed the partner as much as the partner changed them. The student who worked with St. Anthony's Home had a partnership relationship (Student 10A).

This occurred through jointly changing child care procedures, each shifting from an original stance.

The student with the successful communal garden experienced good two-way communication, collegial work, and some community control with those involved in this project (Student 2A).

For the student who succeeded in shifting the mobile clinic stop, there was also a partnership with both the landowner and tenants (Student 4A).

One student (Student 7A) participated in the formation of a committee "to prevent teenage pregnancy". This consisted only of professionals such as ministers and doctors. The plan was not clear, but it was evident that these 'experts' expected to deal with the issue despite there being no consumer representation in the form of adolescents, or even their mothers, fathers, teachers. The student remained an independent observer.

Other students reflected sporadic referrals; for example, to the social worker for financial assistance, but these were clearly formal and restrictive in nature; no feed-back ever occurred and no follow-up was conducted, no collaborative or collegial efforts were involved.



There was little evidence of other sectors and disciplines, besides the social worker, the psychiatrist, psychologist or psychiatric nurse, there was no other recognition as necessary partners in health care provision.

#### **4.1.4. CONCRETE RESOURCES**

##### **4.1.4.1. Human Resources**

In this programme there was no one specific programme manager appointed on a full-time basis, or for the specific task of overseeing and ensuring programme activities. Initially, two temporary, part-time lecturers based in Newcastle were used, with considerable input from Durban-based lecturing staff. Both these Newcastle lecturers had honour degrees and both had the required diploma in community health nursing (Staff appointment forms).

The presentation of the programme appears to have been fragmented in that they took turns at Saturday teaching, and they brought in further lecturers from outside - a total of at least ten different people are recorded as having had teaching contact in classroom based activity with this group over the duration of the programme.

A clinical tutor was appointed to facilitate the clinical practice arrangements of students. This was, in fact, the student who was unemployed and who had displayed leadership qualities and a high degree of organisational and professional ability. She received a three day intensive training programme with a Durban based expert in community health nursing. She was paid for the work at the rate for clinical practice supervision and was paid for kilometres travelled in her car. She assisted students in writing for permission to do clinical practice where this was required and made practical arrangements for other sites: for example, private organisations (Clinical Supervision report).

The difficulty of finding people to do clinical supervision in rural areas were mentioned repeatedly at staff meetings (Minutes of Board of Management).

It was noted in the conceptual programme, that both self-study units and contact sessions were conducted by many different people. In some cases this was a matter of expediency, (the most conveniently available person acted as lecturer) but in other instances, it was specifically a subject specialist; for example, the staff member from the South African Council for Alcoholism and Drug Dependence, the staff member from Civil Defence in Newcastle and the service manager who dealt with management issues, were all selected for expert input (Class register).

The classroom arrangement, as well as student and lecturer expectations seemed to indicate a preference for lecture type delivery. The lecturers appear to have taken on the responsibility for all learning arrangements. There is no documentation of student sharing in this, except in so far as some resources were shared as described in the conceptual programme.

There was no allowance made for subjects chosen by students to be reflected in the curriculum. Eighteen contact sessions were planned and this is what occurred. There were 30 reports of clinical supervision from the clinical field supervisor. Issues dealt with related predominantly to the clinical tasks set for students. Evidence from students' assignments and projects showed that the marking of these emphasized spelling, grammar and neatness - no feedback was given on cognitive aspects of the process of conducting the task. Minimal time was spent on this marking activity and no additional appointments were made with students.

All human resource costs totalled R31924 as shown in the total expenditure reflected in the next section.

#### **4.1.4.2. Material Resources**

The other element that constitutes concrete resources is that of

the material resources. These, it is proposed, may be limited or varied in nature. This includes range of learning resources and general infra-structure required.

It could be seen though, from the analysis of evidence for components in the construct context, that settings for learning were dominated by formal structures, mostly located in the students' vicinity of living or working; thus indicating more limited range of material resources.

There is no evidence of many varied resources being used by students. Libraries, either municipal or hospital, were small and not accessible, if they existed at all. An attempt to set up one of the lectures as a 'book shop' with relevant material did not materialise, as family commitments prevented her from such an additional 'free enterprise' activity. The local book store was used to distribute a few books (Staff memo).

There was no documentation of prescribed books being necessary to the programme. There was evidence of a small number of resource people being used by most students; for example, the civil defence person in Newcastle and one of the personnel managers at a large local organisation. The information from these was shared widely in the group (Class registers : clinical supervisors report).

The following indicates the monetary cost of the programme in

1990 Rands. (The second column reflects the addition of 15 % for inflation so as to be comparable with Programme B).

**TABLE 4.3. Programme A : Expenditure**

ITEM	EXPENDITURE (RANDS)	+ 15% INFLATION
SANC fees	4 395,00	5 054,25
Tutor salaries	6 030,00	6 934,50
Preparation of units	1 720,00	1 978,00
Administration Assistance	13375,00	15 381,25
Clinical supervision	4600,00	5290,00
Marking: Examinations, tasks, projects	235,89	271,27
Travel	6 772,92	7 788,86
Accommodation	489,00	562,35
Office resources	5482,83	6 305,25
Video	35,00	40,25
Photocopying	16046,38	18 453,34
Telephone	105,43	121,24
Sundry	703,48	809,00

ITEM	EXPENDITURE (RANDS)	+ 15% INFLATION
Stationary	565,57	650,41
Graduation	1765,18	2 029,96
<b>TOTAL</b>	<b>64 321 68</b>	<b>71 669,93</b>

An examination of detailed accounts responsible for these amounts showed that no rental costs for venues were paid. However, a donation was made to the technical college where classes were held and to the play-centre at which clinical examinations were conducted. These are included under Sundry costs.

No payments were made for the use of clinical facilities, and some telephone costs were borne by the individuals concerned and not reflected.

#### **4.1.5. INTERVIEW FOR VALIDATION OF CASE DESCRIPTIONS**

As established in chapter three the case report was read by a tutor who had been consistently involved with the programme in order to validate it. She was also asked to comment on the conceptual model's ability to capture the information.

This commentator agreed with the foregoing account of the programme, but claimed that recall was difficult in some areas. She did, however, offer additional comments which, in her view, were important to add or re-inforce. This was the fact that both 'white' and 'black' students expected to be directly 'spoonfed'.

"They got a shock when they found they had control over their own learning - later, they got better at organising things for themselves and did question more towards the end of the programme" (this was despite the lecture format).

Other comments reflected that the readings were very American and difficult to understand. The hospital library was very small, even for those working there.

Questioning and discussion, "... was alien to them" and "... class discussion was foreign. People went blank when faced with a strange situation". (These statements indicate some interaction despite the lecture format).

Some informal sub-groupings did emerge according to the commentator. These were based on students working together or from the same geographical area, or based on language as was the case for the Afrikaans speaking group. However, in her experience, no group work took place in the classroom setting. Most classroom activity was lecture-based, with television programmes taped to prompt discussion on abortion and one bought, which dealt with informal housing. It was

reported that the speaker from the Leprosy Mission also used a video, slides and photographs.

She agreed that most students' clinical practice tasks were conducted after the theory examinations were held and commented that even those students working in settings traditionally regarded as 'community health', would not have benefitted, as these would not necessarily give the desired range of knowledge and skill for the programme.

This interviewee stressed some issues relating to the written examination which she felt were important. The priority being the fact that most students did not understand the examination questions; the English words used were regarded as problematic. She could not recall specific words as examples.

At the start of the examination period, an additional ten minutes had been allocated for reading the paper and clarifying the terminology. In her opinion, the time was far too short for students to grasp the meaning of the question before recognising and writing on the contents of the answer, as 'profuse questioning' occurred.

Subsequent to the examination, she also reported that a group of students had disclosed their disapproval of some of the students passing, as, on their assessment in combined clinical work and in the classroom, these students were 'incompetent' and 'clearly had no understanding or ability'.



This interviewee found the case study protocol acceptable and offered no suggestions regarding the conceptual model devised.

## **4.2. PROGRAMME B : COMMUNITY / PROBLEM-BASED CURRICULUM**

### **4.2.1. THE CONCEPTUAL PROGRAMME**

#### **Base**

The initial plans were proposed on 28 November 1990 and venues were explored during the following month. A Management Board meeting of the Institution of Nursing proposed on the 20 February 1991 that health services and communities should recommend students for participation in the programme.

However, this proved to be unfeasible as it was students themselves, in their personal capacities, who would be paying the course fees. Very few services would pay for students, this being the rare case with the private sector. Certainly poor communities struggling at the level of daily existence were not in a position to fund raise for tertiary education of an employed member (Minutes of Board of Management meeting).

It was to be September 1991 before a programme manager was appointed. She was given extensive orientation to the nature of the proposed programme and initiated contact with communities and

services in the region. Students who had applied to do the course from the southern Natal, southern Kwazulu and northern Transkei were accepted (Minutes of planning meeting).

Permission had been given by the SANC to offer a problem-based curriculum in community health nursing at Ixopo. The programme was to be explained to students, and would be run in this way if students agreed to it. All students who had applied, were in fact, prepared to do so. Should students have requested a 'traditional' programme, this would have been provided (Minutes of planning meeting).

The programme was to start with the student choosing a community and using assessment techniques in this community. The student groups would then work through the problems identified, both theoretically and practically. This would form the content of the programme - there would not be any pre-determined contact curriculum in this case.

Readings would have to be available on an individual and group level (Application to SANC).

It was undertaken with the SANC, that at the tenth month of the programme, content would be compared with that of traditional programmes and if any gaps were identified, remedial teaching would be instituted (Application to SANC).

Students needed to take up the challenge promptly, because they were due to present the first community-based data as the focus for learning

on 22 February 1992.

According to the document for permission from SANC, both theory and practice would emanate from community identified health issues, yet this did not happen in terms of clinical tasks. The same pre-set practice tasks was used as in programme A.

The time span of the programme was regarded as one continuous period and not divided into three semesters as in programme A. The way in which the community and problem base was to be derived was via four themes. These themes coincided with the assignments of programme A, except that an occupational profile was a theme for programme B and a clinical practice task (project) in programme A which had the same focus but was more limited in terms of theory as the theory had been dealt with as lecture and self-study content, separate from the activity.

The remaining themes were community profile, family study, epidemiology report. This last was also linked to a service profile which was more than required in programme A (application to SANC: Practice file : Reference Materials).

Each theme had an associated guideline to assist students in following the theme in an appropriate setting. The guideline included guidance on issues that should be identified if appropriate to the setting.

A set of readings at an individual level and another for use as a group

of learners was prepared and given to students before starting on the theme (Reference material). Students were expected to identify, share and use additional resources (Class registers). These readings given to students were both for industrialised and developing countries combined. Reading material was not personalised to individual students.

### **The Structure**

The programme manager also received instruction on problem-based learning. However, in December 1991, immediately before the commencement of the programme, she resigned for personal reasons. The position was advertised, but the new incumbent only commenced work after the programme had started. This programme too, was therefore subjected to inputs and activities from various people with varying levels of expertise (Staff appointment forms).

With the departure of the first programme manager, liaison with services and communities was disrupted and student preparation to initiate contact themselves with these settings became increasingly important. One session on 8 February 1992 was thus devoted to this (Class register).

The venue arranged was the Ixopo clinic, in the town of Ixopo. It was secure and spacious. Access to a large room, which could be partitioned, chairs, tables and kitchen was given. Audio visual

equipment could be borrowed from Christ the King Hospital nearby, with prior arrangement (Correspondence).

Durban based staff were to alternate to attend to the alternate Saturday morning meetings, where group discussions / learning took place (Minutes of Board of Management).

A basic set of readings was prepared to assist students with preparation for the assessment of health and related issues in the communities. No prescribed objectives were set for any student group (Reference materials).

A number of tutors / lecturers were utilised in this programme as well; however, the manner of functioning was stipulated in terms of the way in which the programme was committed to being managed - group work was inherent in this organisation.

'Content' was dealt with in the groups, as well as regular evaluation of group dynamics and the learning process. It would seem, in the final analysis of the reports in registers, that overall a balance existed between these two areas (content and process).

The students were able to satisfactorily pass SANC examination, yet much emphasis and time within contact sessions had been devoted to process issues such as setting learning objectives, monitoring group dynamics and the facilitators' and presenters' functioning. It was noted that two staff members as lecturers / tutors / facilitators needed to be

present at each contact session (and students still requested more in their programme evaluations).

Information regarding time spent and methods applied to clinical practice supervision has not been traced, other than the correspondence arranging access to service areas.

From programme documentation, the main learning resource was in fact the community selected by each student, together with the existing knowledge and skills brought to the group by each participant. The programme commenced with a two day workshop on the methods to be employed. It was proposed that pairs of students would lead tutorial groups of ten students each for a period of three months per pair, with the tutor supervising all groups. Students would be required to negotiate entry into a community where they would work through the whole process of community health nursing. Health problems and interventions would relate to that community and would be dealt with as learning problems. This would thus ensure that the programme was also community-based (Minutes of Board of Management).

Three examination papers were proposed for the end of the programme. It was stated that the prime focus would be the learning process, rather than the content, but that content would have to be covered to ensure registration with SANC, without interfering with the process (Application to SANC).

The programme thus commenced with the orientation workshop on

25/26 January 1992. Five facilitators participated, being three Durban staff and two visiting experts in problem-based learning. This activity was regarded as vital to the programme, as all students had only experienced 'traditional' forms of education previously. Facilitators, too, had done group work on a sporadic basis, but not used it as the main approach to 'teaching' on a consistent basis (Minutes of planning meeting).

The programme included a selection of activities such that explanations for the nature of the programme were given: directions on facilitation and group work processes were accompanied by practice sessions in these. Problem solving was explained and exercises set for group work to be carried out regarding set problems typical in the practice of community health nursing (Programme for workshop: staff appointment forms).

Fifty-one students completed evaluations of the workshop. It was generally positively experienced, so that 76% found the initial session highly or very highly productive; 47 - (51%) found the workshop 'interesting', and 24% 'comfortable'. No-one felt left out or upset in any way.

Very limited suggestions for improvement were given. For instance, four suggested separate registration prior to the workshop and one wanted more structure and notes.

At the workshop, students were introduced to a group evaluation from

which they were to use each time the group functioned, to assess these dynamics as they would be central to learning. They also formed groups based on geographical proximity of their homes or work places, but an attempt was made to also have participants in a group who had differing skills and experiences (Programme for workshop).

Explicit course objectives do not appear on record, but implicit in the motivation for recognition to the SANC, is the aim of developing community health nurses based on realistic health needs and to achieve a level of proficiency at least equal to that of traditional programmes (Application to SANC).

Direction was given to students about the four consecutive themes for community health assessment to be used for the duration of the programme.

Once the new programme manager had been appointed, and given an orientation to the methodology necessary, she directed both practice activities and the classroom contact sessions (Class register).

Unlike Programme A, it appears that most clinical practice was expected to be completed prior to examinations at the end of November 1992.

An examination of the group registers in which learning activities were recorded, reveals the following: there were eight groups of students who functioned together - most groups selected a name for themselves,



reflecting the nature of aspirations of the group, such as 'Progressing Group'.

One large group of 14 members divided into two smaller groups after several meetings and comments on group functioning suggest that this was beneficial. This was expressed as, "Since we are a small group now, we were able to attain our goals - we were able to move fast with our learning without leaving anybody behind". An earlier comment had reflected "Members of the group attentive, participating, all topics discussed. Hoping for more movement".

At each meeting, a person from the group acted as presenter of problems / issues, whilst another person facilitated the group process. These activities were documented in a register, as was the topics/questions studied. Students received instructions and a hand out on formulating their own learning needs (Class registers).

Registers reflect both group learning activities, as well as individualised learning needs; however, this was done inconsistently by all groups. In all groups documentation got weaker towards the end of the programme, with some groups no longer reflecting group dynamics or topics / areas learnt in the final sessions.

Where the information is documented, each group listed health problems identified from the community theme being presented. The following two meeting sessions were devoted to learning about those health issues and finding solutions. Frequently, these tasks were shared

by the group. It was not clear from the registers how this was related to individualised learning needs. Documentation does show clearly how the learning was driven by actual community conditions. For instance, in some groups, certain health issues received much more attention than others. Some groups barely dealt with geriatric issues, and spent considerable time and detail on infectious diseases, while others did the opposite. An examination on documented discussions found the following to be common to all groups even though all groups dealt with differing specific issues:

- \* environmentally related; e.g. land distribution, poverty, lack of basic resources;
- \* communicable and non-communicable diseases;
- \* fertility related issues;
- \* psycho-social issues as distinct from other life-style aspects;
- \* most pertinent issues at differing life-stages;
- \* nursing intervention strategies.

(Class registers).

A meeting for programme evaluation was held half-way through the programme on 27 August 1992 and which Programme B was evaluated. The proceedings were documented. It was attended by the

Durban-based staff, who had taken part in the programme, as well as three representatives from the health services in which students were working and doing clinical practice. The meeting was convened by the programme manager. This was where a discussion about group functioning took place.

With regard to group functioning, it was noted that at times, 'mini-lectures' were given by the presenter - this fact had also been noted in the registers; at this meeting, it was recommended that the 'fishbowl' technique be used to demonstrate good group dynamics. According to the registers this was effected and benefitted all groups.

A take home test had also been given as formative evaluation. It was noted at the above meeting, that recall level questions were well answered, but those at higher levels were not. This was not consistent with the problem-solving learning activities in the contact group sessions. Also, students aged 41 years and older coped better than younger students on application questions. Difficulties with the programme that were noted by the programme manager (there was no student representative at this meeting) included time constraints. Students were in full-time employment, have family and community commitments and have to interface with the community for contact session preparation, as well as clinical practice.

There is no re-reinforcement of the 'new' learning, as students are placed in 'traditional' service settings which do not accommodate any change. Furthermore, when problems arose, poor infrastructure

precluded students from contacting the programme manager as needed. Telephones were rarely operational. Community activities such as large meetings also impinged on both contact sessions and community assessments, as well as practical experience in services. This made control and organisation difficult, with both programme manager and students expressing this difficulty - yet functioning in terms of community based issues was fundamental to the nature of this programme. These matters were all reported at the programme evaluation meeting by the programme manager.

It was said at the second programme evaluation meeting that notices should be put up at the clinic and at various community points (e.g. bus and taxi ranks), explaining the clinical practice examinations that were to be held at the clinic, as clients would participate in the health assessment part of the examination.

Feedback on the programme from students at completion reiterated the benefit of the initial workshop. Waiting for feedback from written assignments were seen as a problem. There were no moderator's reports on these assignments, as was done for Programme A.

Opportunities for the various groups to share their experiences and knowledge were few, but viewed very positively (student programme evaluation).

There was a concern at students programme evaluation that at each meeting, despite two overall facilitators being present, not all groups

had got as much attention and guidance as was needed. The system of group work was seen as a good one, as many diverse perspectives were

shared. Some commented on students who did not do their fair share of contributing to the group discussions.

The use of individual and group learning goals was generally viewed as good, especially where students had felt 'lost'.

Students valued the 'reality base' - they felt well equipped to deal with daily issues. Learning materials were valued, but more formative assessment was suggested. Students were 'grateful' for a programme that accommodated their needs and recommended other courses should follow the same format.

In summary, the base of this programme was more strongly located in the community, although some aspects were directed by facilitators. The structure was process-focused, with content dealt with as problems from real health issues and only 'checked' against that prescribed for community health nursing, near the end of the study period.

#### **4.2.2. THE STUDENT**

##### **4.2.2.1. Description Of Student Participants**

At the first evaluation meeting, biographical details of students were given. Of note, was the fact that 35 of the group were employed in hospitals (albeit small rural hospitals), 16 in clinics, two in industry and one in pharmacy. It was found that the number of years in practice increased proportionally to students ages.

The same four variables were examined as for programme A; viz. age, home language, number of qualifications and membership of organisations other than professional. A total of 53 students completed this programme.

#### **Age:**

The range was 25 - 61 years with the mean age being 40 years. One student only was aged 61 years; she had already retired but was still active professionally in a voluntary capacity. As she was in reasonable health, she expected to continue this for some years. She verbalised on several occasions, her pleasure at participating and not having been discriminated against on account of age!

Again, it is evident that the 'lifespan' of value from the programme could impact on professional practice for several years. This 'older' student, as with those in programme A, probably also indicates the need for decentralised educational

opportunities.

### Home Language

This programme was based in the southern part of the region where Xhosa is the most prevalent language and this was also reflected in table 4.4.

**TABLE 4.4. Programme B : Frequency Distribution Of Home Language**

LANGUAGE	FREQUENCY
English	7
Southern Sotho	2
Xhosa	25
Zulu	19
<b>TOTAL</b>	<b>53</b>

The same observations pertain regarding language, as for programme A, as here too, there were 46 (87%) of the participants who were non-English speaking at home.

**TABLE 4.5. Programme B : Frequency Distribution Of Number Of Qualifications Per Student**

NUMBER	FREQUENCY
2	21
3	29
4	3
5	0
6	0
<b>TOTAL</b>	<b>53</b>

This reflected as 40% (21) with two qualifications and 55% (29) with three qualifications. In all but six cases, the third qualification was psychiatric nursing. These six varied and included paediatric primary care, occupational health and advanced midwifery and neonatal care (table 4.5.).

Again, all student should have had at least two qualifications if registration with SANC was sought. The number of students with psychiatric nursing may have been accounted for, as there was a large psychiatric hospital nearby, where several students (13) were employed.



**TABLE 4.6. Number Of Memberships Of Other Than Professional Organisations**

NUMBER	FREQUENCY
0	5
1	11
2	18
3	14
4	5
5	0
<b>TOTAL</b>	<b>53</b>

Of the total of 53 students, only 9% (5) did not have any membership of organisations. There were 56% (29) who had either one or two memberships and 26% (14) who belonged to three groups, so that 82% of students had membership of between one and three organisations and 9% (5) belonged to four organisations (table 4.6.).

Most students had some kind of community group to which they belonged - these tended to have a community development focus. Several religious groups were represented. This could

not be quantified as some mother's groups, for instance, could in fact have a religious group basis.

Burial societies and youth groups also featured: however, sports and hobby groups were not reflected.

### **Sample Of Students**

As far as the sample of ten students selected from this group is concerned, the following was found:

#### **Age**

The range was 38 - 54 years with a mean of 43.8 years; this being older than in the whole group.

**TABLE 4.7. 'Sample' Group - Home Language Frequency**

<b>LANGUAGE</b>	<b>FREQUENCY</b>
English	2
Xhosa	7
Zulu	1
<b>TOTAL</b>	<b>10</b>

The language distribution appears similar to that of the whole group, except for the Zulu representation, but was not statistically tested for the same reasons as the content curriculum programme (table 4.7.).

**TABLE 4.8. Programme B - 'Sample' Group - Number Of Qualifications Per Student**

NUMBER	FREQUENCY
2	2
3	7
4	1
5	0
6	0
<b>TOTAL</b>	<b>10</b>

The number of qualifications summarized in table 4.8. seem to reflect the total group.

**TABLE 4.9. Programme B - 'Sample' Group - Membership Per Student**

NUMBER	FREQUENCY
0	0
1	2
2	2
3	5
4	1
<b>TOTAL</b>	<b>10</b>

Group membership too, seems to reflect the distribution seen in the whole group (table 4.9.).

The sample does appear to approximate the whole group in terms of variables. However, as was the case in programme A, this sample was randomly selected, and the small number precluded easy use of the Statsgraphics Programme according to the statistician who was consulted.

Programme B was analyzed for the same constructs, using the same techniques with the data sources of students' assignments, tasks and practice files, as was described in chapter three.

#### 4.2.2.2. Professional Attributes

These were demonstrated using the empirical referent 'empowerment'. It was reported at the programme evaluation meeting that students had a good grasp of negotiating entry into required community settings, with good quality data being acquired. No note was made of how communities would benefit from these interactions. A second programme evaluation meeting was held on 29 October 1991 at which it was reported that group functioning was much improved; students were more skilled at identifying learning issues, and dealing with a small group interaction.

All students showed some evidence of empowerment, however, no one student reflected these aspects consistently in all assignments and projects. Examples of evidence included: the learning issues (problem-solving based on community issues) were dealt with both at the individual intervention level and the community or health care system level, although again this was not consistently so. An example was 'divorce', which was dealt with in terms of individual and family effects, as well as social conditions giving rise to this; this was extended to include the issue of cohabitation and the social level of impact of those factors as well as underlying political influences (Group 3 - group names are not used to protect student identities).

A student who identified a nutrition / finance problem, negotiated a land allocation from the chief, negotiated a land allocation from the chief, established a voluntary group for a gardening project where it was evident that good participation occurred. Her list of welfare and health agencies also included two community based organisations (Student 4).

Another student was involved with the initiation of a creche project; again there was good and widespread involvement with a clear partnership relationship existing. The extent of influence has enlarged with local youth now being involved with fundraising activities for the creche, and the building becoming a centre for community activities. This student's health education project demonstrated her engagement with social issues broadly and specifically with the issue of differing perceptions of family planning held by younger and older women, that is, addressing the issue at a social level and not individually (Student 6).

Another's strength lay in her good assessment of problems at the community and political level and the action recounted that was taken at the political level to redress a housing issue. Her service profile also documented an outbreak of measles where human and material resources were mobilised to contain it (Student 1).

For another student, the strongest evidence of empowerment was with the school-aged group, where problems were dealt with at individual, community and political levels. Her listed welfare agencies included the Civic Association and her community organisation task took the form of creating a service centre for employment of unemployed people, utilising the elderly folks at an old age centre to do so. This entailed liaising with many sources and the student has continued membership of the group (Student 7).

Another student carried out group / team efforts and also engaged in resource issues and underlying political influences. This student produced an extensive, yet superficial family study; however, the service profile was very comprehensive and showed a collegial effort in its production. She recommended individual, community and service level interventions and related to formal and other inputs in a service profile (Student 5).

Of note is the contrast between these activities and the statement made in the student's nutritional assessment, "They were eating while bread and tea. I made them cook stiff porridge with vegetables instead". This may be a language problem rather than a reflection of autocratic behaviour, for besides the liaison and partnership referred to above, other partnerships were reflected in the community profile, where a range of people were referred to by name.

The resource problem in the area (Umzinto) was also dealt with as far as possible and she ended the report with, "It is such a sad state of affairs that one cannot straight away help these people, because they become so stimulated when you collect this data, they keep asking how and when are their needs to be met, at the same time one has to be careful not to make unfulfilled promises".

Other students too, reflected further engagement with resources and political influences as a problem, frequently recommending community, system, or political type of action. Due to the classroom activity, all students had active group participation by the end of the programme but other features of empowerment were also found.

### **Personal Attributes**

Self-direction was found both between students and within the work of each student. One student was inclined to list factors related to a topic without interpretation. Gaps in available knowledge were not specifically addressed, although some were noted.

References and resource use also varied in length and type of sources. It was clear that whilst some resources were used (for example, books from suitcase libraries), these were not easily



available. There were students who found some resource persons (based in the community) for community profiles particularly.

Students reflected these with the list of references, when one was given, as well as using appendices to attach additional information, such as related legislation. It was in the service profiles particularly, that students reflected constraints that exist.

One of these students lists the factors indicative of a quality service and then applies the features to the service studied. In doing so, she identifies changes / additions needed. These are expressed as short and long term goals, but more importantly, she identifies those not amenable to any intervention action as they reflect ultimately, issues based on the national economy. "Some problems remain beyond solution due to the country's economy" (Student 6).

Another student identified a serious health problem (vaginal discharge in a four year old girl) and recognised that within the scope of the family study, she would not be able to adequately assess and intervene. An effort was made to compensate by referral to another health provider, as there was incomplete information for the student to act on (Student 2).

The service profiles particularly, were very detailed in programme B and all but two provided a resource list. The service profile recommendations were all at service / community level, indicating systems level intervention as opposed to individual level interventions (empowerment). However, the scope of resources which were followed up were indicative of self-directing activity. Not only were documents and their texts reflected but a variety of human resources were also used such as clinic committee members and various categories of staff.

There was some evidence of a trend towards being self-directed based on the above data.

#### **4.2.3. CONTEXT**

##### **Components**

Based on correspondence, the following settings were used by the programme for clinical practice in addition to the communities: the formal health services of NPA, Kwazulu and Transkei, with the following particularly with their outlying services:

- \* Port Shepstone Hospital;
- \* Usher Memorial Hospital, Ixopo;

- \* Christ the King Hospital, Ixopo;
- \* St. Apollinares Hospital, Creighton;
- \* Umzimkulu Hospital;
- \* St. Margaret's Hospital, Umzimkulu;
- \* NPA Clinics at Ixopo and Kokstad;
- \* Local Authority, Pinetown.

As also, community psychiatric services from Midlands and Kokstad hospitals, and on the south coast. Rietvlei Hospital in Transkei was used for health education, maternal-child health and school-health related tasks. KwaDabeka clinic near Pinetown was used and other Kwazulu health services provided school health, clinic, family planning and other available services. Here too, no supervision, input or evaluation could be carried out by staff of these facilities, but the head of each service department exerted authority over the student during her practice there (Correspondence).

Other than community based activity for themes, components were mostly made up of formal sector services, except for these: one student included two community-based groups with her list of welfare and health agencies (Student 3), whilst another had a broader focus

than usual to the intersectoral part of a service profile, as she included agricultural workers (Student 1).

The contribution to health other than directly from the formal health sector, was recognised by the student whose community organisation task included a group of 'sewing women'. She set out the advantages showing, for example, that there was a carryover to their own homes, where improved housekeeping was attributed to the experience in the 'sewing group' (Student 8). All students had some contact with a group or organisation that did not fall under the recognised formal health sector; such as the Nyangwini spring protection project (Student 9). Also, several students referred to the work of the Transkei Agricultural Co-operative, illustrating an inter-sectoral approach (such as student 7 referred to earlier).

### **Relationships:**

These were not consistently of the same type, however, there certainly was evidence of partnerships amongst the students' reports. All students did have evidence of linkages as well.

One student's activity was an outstanding spring protection project at Nyangwini at Mthwalume, where partnerships were evident and this activity gave rise to income generating projects as well (Student 9).

A student did the community profile at the Grange and Westgate area (Pietermaritzburg) as this is now racially mixed and a new community is emerging. She showed partnership type relationships with individuals, community organisations and formal sources - there was no other indication of this, as all her other tasks were based on formal links (Student 10).

The student who devised the service centre for unemployed associated with the 'old age' home, liaised with many resources, showed collegial work and some aspect of community control of the activity (Student 7). In another case, definite personal contacts were reflected in the occupational profile which was done on a plantation as work setting (Student 4).

In the community profile of a very rural area, another student had numerous data resources - people of many types in that community shared information in a partnership form (Student 5).

In another rural but densely populated area, rape was identified as a major community concern and this project indicated a relationship with equal two-way communication with some community members (Student 5).

#### **4.2.4. CONCRETE RESOURCES**

##### **Human Resources**

In terms of clinical practice, students also had to conduct tasks that were pre-set, so the programme manager arranged for four field practice supervisors to assist with arranging and supervising this practice.

The four field supervisors were themselves experienced community practitioners and were located in Transkei (two), Kokstad and Pinetown. The wide geographical distribution of students is problematic to clinical supervision (the appointment of field-based clinical facilitators was to overcome this problem). However, these appointments did not result in clinical supervision and the appointments lapsed (Staff appointment forms).

For contact sessions, it was necessary for one Durban based staff member to assist at each session, as overseeing eight groups at work demanded more than one person. There were eight groups, each tutor supervising four per session, with rotation of tutors (Class registers : Staff appointment forms).

The total cost of human resources taken from the table of costs in the next section was R80330

## Material Resources

Prescribed and recommended texts were used in the programme and these gave some information required too. Students needed additional resources to consult, as all students were working on common themes, but differing problems and at a differing pace.

A second programme evaluation meeting reported that 'library' resource support was still difficult to ensure.

A selection of core readings was given to each student; the first ones regarding community assessment at the start of the programme, others at interim periods, but prior to the community-based assessment required for each theme.

In addition, as it was deemed necessary by the evidence of students needing more resource material, a book of 'group readings' was made available to each group whose members had to use it jointly (Reference material). Further, the 'suitcase libraries' were compiled and circulated as far as possible. These contained 'background' texts (Reference material).

'Individual readings' thus reflected the themes under study, but it is noteworthy that these only contained core readings. The essence of the area of study was given, but detail is avoided. An examination of 'group readings' shows this to be the source of more detail and more specifics for the same range of areas studied. There are more

references included here and they range in focus (Western and African), as well as in complexity. Many references appeared to have been put in to meet resource needs of students; for example, there was an extensive section on teenage pregnancy, as this was commonly identified as a health problem (Class register).

The costs in money, time and energy to these students personally, were great and it would be impossible to put a cash value on them. Some students did not specifically comment, but it can be seen that some

travel, time and energy costs must have been incurred. In other cases, students worked closely with groups within their own areas (Students assignments and projects).

An example of the former would be the student who lived and worked near Kokstad, did most of her tasks around the area, but studied the Hambanati creche in Harding for programme planning and evaluation; more than a superficial visit in passing was needed for the depth and extent of study produced (Student 8).

The student concerned with spring protection near Mthwalume did most of her other practice around Umzinto. Of the spring protection she says, "This project is still going on and I intend not to withdraw from it, since this gives one a good chance of solving a number of social health matters and as a result, there are a number of community members whom I find gathered at my house during off-duty hours to get their health problems sorted out. In this way I feel a valuable



community member. From the local clinics there is a decrease of water-borne diseases" (Student 9).

Two students specifically commented on the costs in terms of time, energy and money incurred by establishing contacts for practice in a more distant or less structured environment as shown.

"Although I had a most difficult time, not getting a centre to do my service profile, I feel very much delighted that I was accepted in Margate clinic and more especially, that we had to solve most of the problems together as a health team. I feel great to say these people that were shown door size gardens, they also in their turn, made their gardens in their slums and some are knitting and selling" (Student 6).

And in another community profile: "The objectives have been attained. Concerning the strengths on data collection, it has been very difficult for me to collect this information because of travelling for long distances, which were not only tiresome, but were time-consuming and exhausting. It was very difficult to get vital statistics from the Magistrate Office - no estimations have been used" (Student 3).

Once again, it was also found that existing libraries were inadequate and inaccessible. Resource people were very difficult to find: professional and geographic isolation was very marked. Infra-structure was very poor; frequently no telephones or radio communication would function, even hospitals being out of contact for several days at a time (Staff memo : minutes of board meeting).

Typewriters, personal computers, fax machines and cellular telephones were unheard of (Administrative notes and staff memos).

The following gives costs in 1991 Rands for the community based programme:

ITEM	ACTUAL
SANC Fees	2 040,50
Tutor Salaries	59 486,28
Staff Development	8 534,41
Administrative Assistance	8 514,28
Clinical Supervision	1 566,00
Marking	190,82
Travel	11 326,40
Accommodation	268,20
Office Resources	1 845,60
Teaching Resources	2 548,33
Photocopying	7 018,75
Telephone	759,61
Sundry	1 634,85
Stationery	579,23
Graduation	3 468,52
	<b><u>110 785,95</u></b>

By the time programme B was established, it became necessary to set up a more expensive infra-structure with additional administrative resources, as programmes were gaining in popularity and psychiatric nursing programmes were established, so funding as seed money for these was needed.

A further cost reflected in this statement was that of preparation of the tutors used on the programme and whose qualifications in nursing education did not adequately prepare them for the nature of the programme. One university lecturer was predominantly used, as she had some previous experience from reorientation of the university community health nursing programme.

In view of the fact that a programme manager was appointed and who then left just prior to the commencement of the programme, there were essentially three people who were orientated to be able to act as facilitators. The lecturer concerned estimated that, including ongoing contact, discussions and problem-solving, at least two weeks per person was involved. This would have cost, at her salary of that time (1991), an amount of R8 000.00, which is included in the staff development cost. These training costs should be considered for costing new programmes with uninitiated tutors; they should be one off payments. There were no other costs that have not been accounted for, except for those "hidden" such as student transport to practice settings and the donation for use of the venue, as was the case in programme A.

#### 4.3. INTERVIEW FOR VALIDATION OF CASE DESCRIPTION

The comments of the tutor associated with this programme are given below. This interviewee concurred with the description of this programme, with the following additions: list were drawn up regarding the contents of the suitcase libraries (These could not be traced).

When it was stated that heads of departments held some authority over students doing clinical practice in their service, the question was raised as to whether this applied equally to NGO's / agencies (in response to this document examination was not clear).

These placements were engendered by the students' need to complete the pre-set tasks and the interviewee said that an explanation was called for, as this was arguably inconsistent with a community / problem-based programme (these pre-set tasks were stipulated in order to introduce some standardisation in the sense that they ensured a focus on the skills and knowledge required to practice as a community health nurse, and so gave some consistency to student experiences, according to personal communication of a director involved in the programme - planning meeting). A further comment related to the clinical examinations which for this programme, took place in a clinic during the time in which the clinic was operational and for which clinic clients were used. It was said that this was a major difference from any other programme in community health nursing at the time.

A further comment was that many students expressed frustration at having too much to write in the allocated time period for the problem-solving of the vignettes / case studies part of the clinical examination.

It was also pointed out that for the programme evaluation meetings, an attempt had been made to get community representation and also to have community input for the programme evaluation, but this proved unsuccessful (the reason not being given).

In terms of the statement that at the take home test, recall questions were better answered than higher order questions, it was suggested that if the take home test was early in the programme, this could be a "spillover" effect from earlier learning testing experiences.

The final comment was that there had been, at the end of the programme, feedback from the senior nursing service manager at a secondary hospital in the vicinity from which several students had attended, that these nurses were applying problem-solving to other contexts of work and that there was thus evidence of "carryover" of learning methods used in the programme.

The conceptual model was accepted as a reasonable and logical framework for data analysis.

#### **4.4. INTERVIEW WITH DIRECTOR FOR BOTH PROGRAMMES**

This interview was carried out in order to subject the reports on Programmes A and B to further validation and to get validation on comments made by the programme manager / tutor of each programme. The following issues emerged: in terms of the incident where student learning could not take place due to lack of equipment, in programme A it was noted that this was an invasive procedure which could have medico-legal implications and consequently, it had been agreed by the Institute that such procedures would not be allowed. It was also said that the difficulty was organisational and did not lie with the student concerned.

There should also be the same level and degree of comment on all student practice (however, this could only be a reflection of available documentation). It should be stated clearly that due to the nature of clinical practice arrangements, much of this for each student was carried out without being overseen by an expert or clinical supervisor.

In addition, the problems of resources should be stated unequivocally, especially as regards library facilities where provincial and municipal libraries were small / non-existent and barely opened at inappropriate times. Written examinations did also entail evaluation and synthesis of content learnt.

It was also recommended that copies of the examination papers, clinical practice tasks / assignments and the clinical examination material should be appended (due to the enormous bulk of this, the researcher and supervisor elected not to do so).

There was agreement with all other aspects and the conceptual framework used.

## CHAPTER FIVE

### CROSS-CASE ANALYSIS AND FINDINGS

#### 5.1. THE CONCEPTUAL PROGRAMME

The environment for each of the programmes was similar in terms of the health facilities and community profile (Erasmus, 1991). However, the town in which the Northern programme (content curriculum) was based was somewhat larger and had more of an industrial character than that of the Southern region. This reflected in the students' home language profile.

##### 5.1.1. THE BASE

Although the content curriculum was community orientated, learning was derived from topics and unit objectives that were set at the institution with no other input (Application to SANC : Practice file).

In the community / problem based programme, learning was derived from the health issues that were identified by students with communities, using broad professionally established themes. The World Health Organisation (1987) had stated that to be community based, 'real work' and a degree of understanding and acting on elements of community life, had to be greater than traditional



fieldwork, which

conditions were met by programme B (students projects and assignments).

In the content curriculum, control was more strongly in the hands of institution staff and therefore it appeared operationally easier to control; for instance, the links set up with formal services could be more readily controlled as tutors could arrange specific service placements. In the community / problem based programme, students had more varied contacts on a more regular basis under their own direction, with indirect control by tutors who could not know about all the settings / communities with which students were having contact.

This required good inter-personal skills on the part of students and a tolerance for uncertainty and the ability to accept accountability with lesser control on the part of the tutors. The community / problem based programme could possibly contribute to a holistic perspective of health development because of this.

### **5.1.2. THE STRUCTURE**

Programme A had essentially a content structure. In this type of structure, Kelly (1989) contended that the purpose of inclusion of content, and the analysis of the interrelatedness of subject matter and students, would be disregarded. This was not strictly true for the

purpose of inclusion of content that was said to aim at reflecting common health issues. However, there was no mechanism for relating subject matter and students (SANC document). Contact sessions used lectures predominantly (Class registers). Contact time was dominated by content focused activity, despite the fact that students interpreted minimal discussion and informal group activity positively (Student programme evaluations).

The students of programme B, were actively involved in identifying the issues for their learning programme (as was recommended by Engel et al, 1990). Choices about learning were made both in conjunction with community groups / individuals and with fellow students in the study group to which each student belonged. The process of problem identification and prioritisation was carried out. Students were then actively engaged in the process of finding and using relevant resources to meet their identified learning needs. This included group discussion. After each discussion the group spent time analyzing that process too. Records were kept of both the issues discussed and the results of group assessment (Class registers : Application to SANC).

## **5.2. THE NATURE OF PROGRAMMES A AND B**

The Base and Structure were examined as part of the construct Conceptual Programme in order to establish whether or not two contrasting programmes did in fact take place. The community base as defined by WHO (1987), was

achieved in programme B. This programme also manifested the strategies and activities associated with a process approach, such as those described in Quinn (1988). In contrast programme A had a content curriculum as defined by Kelly (1989) and Knowles (1978). The focus and activities in this programme were also consistent with this approach as described by Knowles (1978).

Programme A was therefore institution based and had a content curriculum. In contrast programme B had a community / problem based curriculum.

### 5.3. STUDENT PROFILES

Each of the four variables, age, language, number of professional qualifications and number of memberships of non-professional organisations, was analyzed in the Statsgraphics Programme to establish similarities / differences in the two programmes. Frequency histograms of age distribution appeared as follows:

Two sample analyses were used for three of the four variables and in each of these cases, variance was  $> 1$  and equal, thus 2 sample-t test was appropriate.

For 'age',  $p = > 0,05$  and students in both programmes were similar.

'Language' was classified as Nguni and non-Nguni and then analyzed using contingency tables with a result of  $p < 0.01$ . A significant differences in language representation between the two programmes was found. This was because programme A had more 'white' students representing mostly

Afrikaans speakers, which was typical of the population of the town in which the programme was based.

At the confidence level of  $p > 0.05$ , no difference in qualification and non-professional memberships were found between the programmes.

With students in both programmes comparable in terms of these three variables, and the only difference being in language representation, it seems there were no other major inherent differences between participants. Home language being other than English was found in 76% of programme A and 87% of programme B participants (see Appendix B).

As the samples of ten students from each programme were selected randomly, it is logical that the features of total groups would hold for these too, according to the statistician consulted.

#### **5.4. RELATIONSHIPS OF CONSTRUCTS**

The following evidence for statements of relationship between constructs, as identified in Chapter Three, has been identified from the data acquired in the case study presentation.

- \* Where the programme base is the community, the structure will have a process focus, but an institution based programme may have either content or process type structure.

This has been found in so far as programme B with a community / problem base had a process type structure. Programme A had an institution base and despite intentions to the contrary, developed a content focused structure. However, with some of the principles of androgogy apparent at times, such as student participation in classroom discussion and self-study, students themselves in their evaluation of the programme, clearly expressed some process type experiences within the content format. No further support for this statement was provided by this investigation.

- \* The institution based programme is more likely to be associated with a content structure; this was so in programme A.
- \* The community / problem based programme will provide greater opportunity for the professional attribute of empowerment to develop in the student and, conversely, the institution based / content focused programme will be more likely to be associated with the disempowered student.

This appeared to be so from the case descriptions where the trend towards empowerment was more strongly evident in student projects and assignments from programme B.

- \* The empowered student is also likely to be more self-directing in her personal development, whilst the disempowered student is typically passive.

This is so, but the evidence was limited in that self-directing aspects did not manifest to a large extent in either programme; it was however, more evident in the programme in which greater empowerment was found as well. There was not consistent evidence of both traits in the same student.

- \* The community / problem-based programme will be linked to an all-embracing health care context, as well as partnership type relationships.

There was some evidence of this in that the community / problem-based programme used more non-formal health settings and some intersectoral references were made. Some students of this programme established partnership relationships of which there was very little evidence for programme A.

- \* The content curriculum is more closely associated with more limited formal health care settings.

This was seen in programme A, however there were a few other settings used but no intersectoral aspects could be traced other than referral of clients to a social worker and psychiatrist.

- \* The context that has limited formal health care structures will be associated with more linkage type relationships.

A trend towards this was seen in programme A in students'

assignments, and projects.

- \* Linkages are more likely to occur where a content focused curriculum is found.

This too, was seen in programme A, which had a content driven curriculum and where links, not partnerships, were made with health personnel.

- \* Human resources will be greater in conjunction with community / problem based approach.

Programme B provided sufficient evidence of this, where the student contact sessions needed two facilitators at any one time. In addition, student evaluations of the programme stated that they would have liked more contact and guidance from facilitators. This contrasted with the one tutor who was available at a time in programme A's contact sessions.

Tutor payments in programme A cost R6 934.50, as opposed to R59 486 in programme B.

Some of this difference is accounted for by the fact that a full time appointment was made for the latter, whereas only 'session' payments were made in programme A, saving on a cost of fringe benefits such as pension and medical aid, which have to be included when full time appointments are made. The cost of a second tutor was approximately R18 000,00 in total.

This means that academic salaries in programme A can be rounded off to R7 000 and programme B, to R50 000, that is eight times as much. Forty-four percent of programme B costs was for the second facilitator to be present at group work. Total manpower costs were R32 000 as compared with R80 000, programme B being more than 50% more costly.

An amount of money equivalent to 14% of programme B academic costs (that is, R8 000) was also needed to prepare tutors for the facilitator role. This was included with the academic costs. In monetary terms, programme A academic salaries amounted to R150 per student in contrast with R1 113 for programme B.

It was also clear that current tutor preparation and practice does not support the facilitator role (see Bailey, 1992 and Leinokilp, 1990), and expense is added to a programme when this has to be independently supplied, as was the case for the community / problem based curriculum.

In terms of cost, Donner and Bickley (1990) showed that problem-based learning cost four times as much as the lecture method in terms of faculty hours per year, per student.

According to WHO (1987), a community based programme is also faculty intensive, with this source having suggested one teacher per student. In both programmes students expressed concern at insufficient clinical supervision on their programme evaluations. This was not only due to insufficient fiscal resources, but also due to insufficient people with relevant ability in outlying



areas.

The cost of administrative assistance also varied between the two programmes, with that of A being R15 381,25 and B R8 514, 28. This difference of almost R7 000,00 was possibly due to the fact that with a full-time programme manager, she would carry out some of the administrative duties herself; whilst with 'session' workers in programme A, the additional tasks of co-ordination letter writing and regular appointment and payment of tutors had to be carried out from a central point. Therefore, clerical salaries in programme B were 56% of those of programme A.

Combined academic and clerical salaries in programme A amounted to R22 300. For programme B, this was R67 500, being 66% more than the content curriculum costs for this. Clerical costs can be anticipated to be about 30% more when part-time tutors are appointed on a sessional basis.

The clinical supervision costs also differed - with programme A, this was R5 290, 00 and programme B, R1 566,00. In the case of the former, a field clinical supervisor was specifically employed to oversee this aspect. This was the intention with programme B as well, but no suitable person could be found, so only minimal supervision was 'bought in' although four people were appointed initially, the remainder being done by the programme manager herself, resulting in expenditure of 20% of that of programme A for this item.

This was also partly due to the fact that as much clinical practice as possible was located in the community setting in which the student was located, although she still had to perform the pre-set tasks in order to be recognised

as clinically competent.

The cost of clinical supervision could also be linked to that of travel, for most travel expenditure was generated when tutors visited students in clinical settings. Here again, a marked difference was seen, with programme A travel costs amounting to R7 788,86 and programme B's amounting to R11 326,40. This may be a reflection of the fact that the person for programme A lived in the sub-region in which students practised and that most of this practice was in formal services nearby.

For programme B, the programme manager lived approximately 80 kilometres from the central area and students conducted practice in both central, formal services and a few NGO and more rural type settings.

Another difference in costs, probably due to the difference between a full-time and 'session / job' type appointment, relates to marking. This was higher for programme A where marking had to be 'bought in' at R2 341,27 compared to R190,82 in programme B.

- \* The human resource needs remain at the conventional level in a content curriculum.

Programme A supported this contention in classroom contacts (as discussed above).

- \* The community / problem based programme makes use of a greater number and more varied material resources.

Some gaps in data existed, but evidence of this trend could be established by virtue of the fact that programme B used varied resources as described in the construct 'Concrete Resources' and that of Context, which related differing settings for student practice.

Office resources were also more expensive for programme A where a filing cabinet, computer and typewriter were purchased, with programme B only paying one third of the cost of a computer and half the cost of a printer, as it was to be shared with another (psychiatric nursing) programme.

Additional teaching resources costing R2 548,33 were used by programme B - these being clinical equipment such as diagnostic sets, sphygmomanometer, slides of sexually transmitted diseases. By comparison, a video for R35,00 was

acquired by programme A. This also supports the contention that programme A used fewer resources.

A further item that was much less costly in programme B was photocopying at R7 018,75 as compared with R16 046,38 (that is, more than 50% greater for programme A). In contrast, Ebrahim and Rankin (1988) referred to greater photocopying costs in community based activity.

It would appear that more items were used on an individualised basis for programme A, where large tomes of readings were used for both lecture readings and self-study units. In programme B, some readings were made available to share on a group basis, so possibly cutting costs. Telephone costs

were greater in programme B.

The sundry expenses in programme B were inflated by the extra expense of an advertisement in a Sunday newspaper for a new programme manager.

Stationery costs were much the same for both programmes, but the more expensive graduation ceremony for programme B possibly came about as this group requested a more formal ceremony in Durban, requiring sound equipment, stage decor and so on (Budget).

Whilst not all aspects of material resources could be quantified, evidence strongly suggestive of this trend was established when comparing the two programmes. This was particularly noted in comparing academic salary costs, as the community based programme utilised at least two facilitators for each 'contact' session with students.

An awareness of the shifting base of costs must be developed; for example, in neither programme was any effort made to establish the value of community resources used by students, nor was the economic value of student-initiated projects evaluated. It is feasible that these estimates could be most problematic in the community / problem-based programme, but the point also refers to formal health structures used for clinical practice, which could charge for student placements in future, and which could benefit from student inputs.

In monetary terms therefore, the final difference in cost between the two programmes amounted to R34 654 at 1991 costs in an overall amount of R186 916.

In the field analysis, community / problem-based programmes would increase programme delivery costs by about R700 per student in a one year diploma level programme (at 1991 costs); that is a community / problem-based programme would cost twenty percent more to deliver.

- \* Partnerships will utilise more material resources.

This appeared to be the case as evidenced by greater travel costs for clinical supervision in programme B, but as student costs were not recorded, that could not be assessed, in either programme.

- \* An all-embracing aspect to health care system will be associated with partnership.

This too, was the trend in programme B, but cannot be supported categorically due to the fact that insufficient evidence for a causal statement existed.

- \* The student is likely to be empowered when a greater human / material resource allocation is present. This was not demonstrated conclusively as there was insufficient evidence from programme B to make such an assertion.

In summary, there are trends which can be discerned in terms of the relationships between constructs but further investigation is needed to make categorical associations.

## CHAPTER SIX

### CONCLUSIONS AND RECOMMENDATIONS

In this chapter, the model will be examined firstly. Then the research questions will be addressed, following which adjustments to the model are proposed. Conclusions and recommendations end the chapter.

#### 6.1. ASSESSMENT OF THE MODEL

Glaser and Straus (1976) recommended three aspects to evaluate models emanating from qualitative data. This will be used as a framework for assessing the value of the model constructs too. These are:

\* **Fit** - Do model constructs suit categorisation of data?

This was confirmed by programme personnel interviewed after they had reviewed the programme descriptions and the model and was in fact, found by the researcher to be the case with one exception. That is neither the construct Conceptual Programme, nor that of Student, readily accommodated the cognitive issues that appear to be of relevance, such as the aspects of critical thinking. Critical thinking was an area explored in the literature as several sources stipulated it as necessary to professional nursing practice (McMurray, 1991; Sweeney, 1986).

The nature of critical thinking was found to be controversial with Kintgen-Andrews asserting that research which attempted to measure it as exercised by nurses did not in fact measure that which is critical thinking.

However, fundamental to developing critical thinking is metacognitive ability, viz. thinking about thinking. A good account of this was given by Worrell (1990). This would enable students to actively engage in the learning process. There are also specific skills such as strategic reading which are part of metacognition (Worrell, 1990). In this way learning becomes an intentional activity.

This is closely linked with self-directedness which would be supportive of an intentional learner, as opposed to the student whose participation in an educational programme is non-purposive in terms of learning. The two programmes studied illustrated trends in these features. The students of programme A associated largely with non-purposive learning. They attempted to internalise content in lectures and self-study units which did not impact on the learning process in terms of personal development as it was defined in this study.

From programme B there was a trend in self-directedness. A construct 'metacognition' with elements of intentional or non-purposive learning would therefore be a useful addition to the model



- \* **Grab** - Do people in the field feel that categories are relevant?

The interviews established that this was so. The categories (constructs) were also well supported by the literature. This could be tested further.

- \* **Works** - Is the framework useful to explain, interpret and predict?

This was partly established with the application of the case study protocol; the case descriptions were found to not only encompass all the available data about programmes, but could be used to make judgements about various aspects, as was set out in the cross case analysis and discussion of findings. In this way too, it was possible to identify those aspects that would enhance educational programmes and recommend additions to the model, and for future programmes.

## 6.2. ADDRESSING RESEARCH QUESTIONS

**Objective One** - To propose a conceptual framework in order to compare distance learning programmes in community health nursing.

- \* Which concepts play a role in the education of community health nurses?

- A literature search was carried out about the nature of community health nursing, trends in public health which have a bearing on community health, the educational implications of these and also educational aspects as such. This information was analyzed as to identify those concepts that would be central to the issue under study.



- \* What are the assumptions underlying such education?
  - The literature indicated a number of areas which exist and that would underpin the investigation without forming a direct part of it. These were stated as assumptions that would be considered during the exploration. The assumptions were stated in chapter two with the model.
  
- \* What are the relationships between such concepts?
  - These were expressed as statements of relationship as part of the model. This was also depicted graphically. In terms of the data collected in the case studies, these relationships were either supported or refuted.

**Objective Two** - To describe and compare two distance learning programmes based on this framework : one content-based and the other community/problem-based.

- \* Has a community / problem based programme and a content based programme actually been established?
  - Programme A was established to be an institution based and content structured programme by virtue of the data provided in the construct conceptual programme. It was set up by the staff of the organisation and a subject list was drawn up prior to it's inception and without input from students, health care providers or the community.

- Programme B was categorised as fulfilling the requirements for a community / problem based curriculum. This was because the learning objectives were established by students themselves in conjunction with communities, themes for direction in terms of professional requirements were only given. A process structure was carried out due to the fact that contact time with students by staff was dominated by learning process activities and not content.
  
- \* What is the influence of each of these two programme types on the students of each programme?
  - The previous chapter provided the basis for showing that the trends that emerged indicated that the content curriculum was more strongly associated with students who featured as disempowered and passive; the community / problem based programme was associated with indications of trends for empowered and self-directing students.
  
- \* What is the influence of each of these programme types on the context used in each case?
  - The content curriculum used almost exclusively formal health services with only two instances that were not of this kind, whilst the community / problem based curriculum reflected both use of formal and non-formal and inter sectoral settings.
  
- \* What is the influence of each of the two programme types on the resources needed for education in community health nursing?

- The human resources were traced through staff appointments and payments, indicating twice as many were used for contact sessions with students in the community / problem based programme. However, the situation for material resources was not clear cut. Programme B did use more settings and more equipment but clinical supervision was not as expensive. This appears to be due to the fact that not all the supervisors who were to be appointed were actually used. It also seemed likely that some cost were shifted to the students. In total it was predicted that the community / problem based programme would cost 20% more to deliver than a content programme.

### **6.3. REVISED MODEL FOR THE EDUCATION OF PROFESSIONAL NURSES**

At this stage of the investigation, a number of issues have arisen which indicate the need for adjustment of some existing constructs, as well as the addition of a new construct, in order to reflect new insights gained.

#### **6.3.1. ADJUSTMENT OF CONSTRUCTS**

The construct of student was revised in that the previous two elements of professional and personal attributes were combined. Empowerment

and self-directing are also closely related concepts, that act as indicators of professional / personal development, and are complementary to one another. The earlier definitions of empowered and disempowered hold, as also for self-directing and passive. However, in addition, the following could be added: self-directing should include features that demonstrate intrinsic motivation such as initiating professional and learning activities independently.

The student who remains passive is dependent on extrinsic motivation such as job security or promotion potential, and, wage security or wage increase possibility. Factors impacting on this would be identified. This would provide a fuller and more conventional description of this attribute.

The second element of the construct student could become metacognition. Metacognition could be said to take the form of either intentional learning or non-purposive learning, where intentional means that metacognition in the form of strategic reading, writing and conceptualisation and learning strategies such as mind mapping, are specifically a part of the students' activities of learning.

Non-purposive learning takes place where metacognition is not included and where the student simply reads, writes and learns with no conscious selective procedures for doing so, and no specific learning need in mind. This need is more definitely established by the process approach.

### 6.3.2. NEW CONSTRUCT

#### Access

The construct of Access could be added to the model, as it is evident from the strong support for outreach, home-based and suitably timed study, that this is very important to the adult employed student population. This was stressed in programme evaluations where access was consistently raised as an issue.

The construct Access should have two elements, namely Barriers and Supports, when it is utilised for directing the development of education for professional nurses. Some barriers are always present, but are either identified and addressed or they may be obscure and ignored.

Where they are identified, they may take the form of multiple roles, time and resource constraints (both personal to the student, and programme related). Other barriers may be structural or functional (such as infra-structure constraints, lack of communication systems and those imposed by the dynamics of employment situations), but they are recognised and dealt with as far as possible.

Where barriers are obscure, they may exist but are not made explicit nor are they accommodated by the programme. They may also remain obscure where students and programme staff have greater control of resources such as time and freedom of movement.

Support is also either formalised or not. Where supports are formalised, these are provided as well-timed and suitably located activities that consider barriers (as above) and provide for both peer and facilitator supportive action to occur (such as in study groups).

Where support is non-formalised, standard delivery of education takes place with activities determined by the institution staff with no concern for meeting the specific needs of the student population.

**TABLE 6.1. Empirical Referents For Constructs Access And Metacognition**

<b>CONSTRUCT ELEMENT</b>	<b>EMPIRICAL REFERENT</b>	<b>EXAMPLES</b>
Access barriers identified and addressed.	Statements in student information documents refer to barriers which can be expected: multiple roles time resources.	"If you have a problem getting through to the facilitator leave a message with the secretary".
Obscure.	Student information documents refer to no potential problems.	"This is an exciting and rewarding programme".

CONSTRUCT ELEMENT	EMPIRICAL REFERENT	EXAMPLES
Supports Formalized.	<p>Access to facilitator and peers are formalized.</p> <p>Different supports are offered at different times during the programme.</p> <p>Supports are accessible to students.</p>	<p>"The facilitator will see each student once a month in the clinical settings".</p> <p>"If a student fails an examination an individualized remedial programme will be available".</p> <p>"The suitcase library will be circulated to all".</p>
Non-Formalized.	<p>No formalized access to peers and facilitator.</p> <p>No supports are specifically offered during the programme.</p>	<p>Nil.</p> <p>Nil.</p>

CONSTRUCT ELEMENT	EMPIRICAL REFERENT	EXAMPLES
Metacognition Intentional Learning.	Students learning contract includes skills / activities for metacognition.	"Mind maps will be used to depict the main ideas in each reference used".
Non-Purposive Learning.	The syllabus reflects a list of subjects to be lectured on.	Classroom activity reflects students passively listening to a lecture.

### 6.3.3. ADDITIONAL STATEMENTS OF RELATIONSHIP OF CONSTRUCTS

- \* Metacognition as intentional learning will be associated with a process-approach curriculum.
- \* Non-purposive learning cannot occur in a process-approach curriculum.
- \* A content-curriculum is inconsistent with intentional learning.
- \* Barriers that are identified should be linked with formalised supports.



- \* Where barriers are obscure, institution based content driven programmes are likely.
- \* Provision of formalised support will increase and vary material resources.
- \* Limited human and material resources are more likely where barriers are obscure, whereas identified / addressed barriers may be associated with varied teaching resources.

The new format of the model, with its attendant relationship statements, will need to be assessed in practice and that this will be a continuous process with adjustments and additions being made as evidence is accumulated.

However, this initial blueprint given below, forms the starting point for further development.

**REVISED MODEL**

## **6.4. RECOMMENDATIONS**

### **6.4.1. RESEARCH**

- \* Follow-up investigation needs to be carried out to ascertain the 'survival' of attributes in students of educational programmes, in order to identify longer term impact (that is, increased or decreased impact), especially for the trends identified.
- \* The cognitive issues not included with this study need to be investigated; for instance, to discover what cognitive development occurs with adults in different educational programmes.
- \* There is a need to discover the implications of the students home language differing from the programme language and to determine this aspect's relationship with the metacognitive issues. For example, ability in reading and writing in English may be established at the outset and end point of a programme. Progress expectation during a programme would be useful in monitoring student management and expression of knowledge.

### **6.4.2. EDUCATION**

- \* The value of the community / problem-based learning programme was established by this research and therefore this

strategy should be more widely recognised, and supported in policy.

- \* Decentralised / more accessible programmes addressed a real need; therefore this mechanism must be implemented to a greater extent and be included for human resources management policy.
- \* This model should be used to accentuate the specifics of self-direction and empowerment and to strengthen growth in this aspect.

#### **6.4.3. PRACTICE**

- \* This model should be used by health service providers and potential students to evaluate educational programmes, as it has been found to provide suitable criteria in the form of its constructs.

All professional educational programmes are registered with statutory controlling bodies. This does not distinguish the value or quality of various programmes. Should a programme match the desired attributes of this model, there is confidence that some expected attributes will be present in the student of such a programme, such as the potential ability to function in a partnership relationship. Since health service providers are

often asked to support educational programmes in different ways, this model can assist them in decision-making.

- \* A participatory action research (or other suitable) approach should be used in the educational programme in order to ensure community responsiveness is accommodated as part of the educational process.

#### **6.4.4. LIMITATIONS OF THE STUDY**

- \* Since this was a retrospective study the researcher was limited to data which was collected / documented by programme implementors, this left some areas unexplored.
- \* Bias in subject participation was given as possible when the research design was described in chapter three.
- \* Differences in available documentation preclude comparison of some factors; for example, only programme A had moderator's reports on assignments and field clinical supervisor's reports, whereas programme B had two evaluation meetings in the course of the programme.

## 6.5. CONCLUDING STATEMENT

Barriers to successful educational experiences must be identified and mechanisms to counter these should be included in programme delivery. Some of these have been addressed in this study.

New technologies must be aggressively investigated for possible application, specific to South African conditions.

This investigation sets the direction for the education of community health nurses in a socially relevant manner, suited to the resource realities and congruent with general human development approaches such as the Reconstruction and Development Programme.

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# ORIENTATION MAP



Development region E

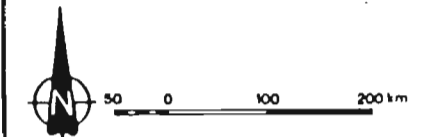
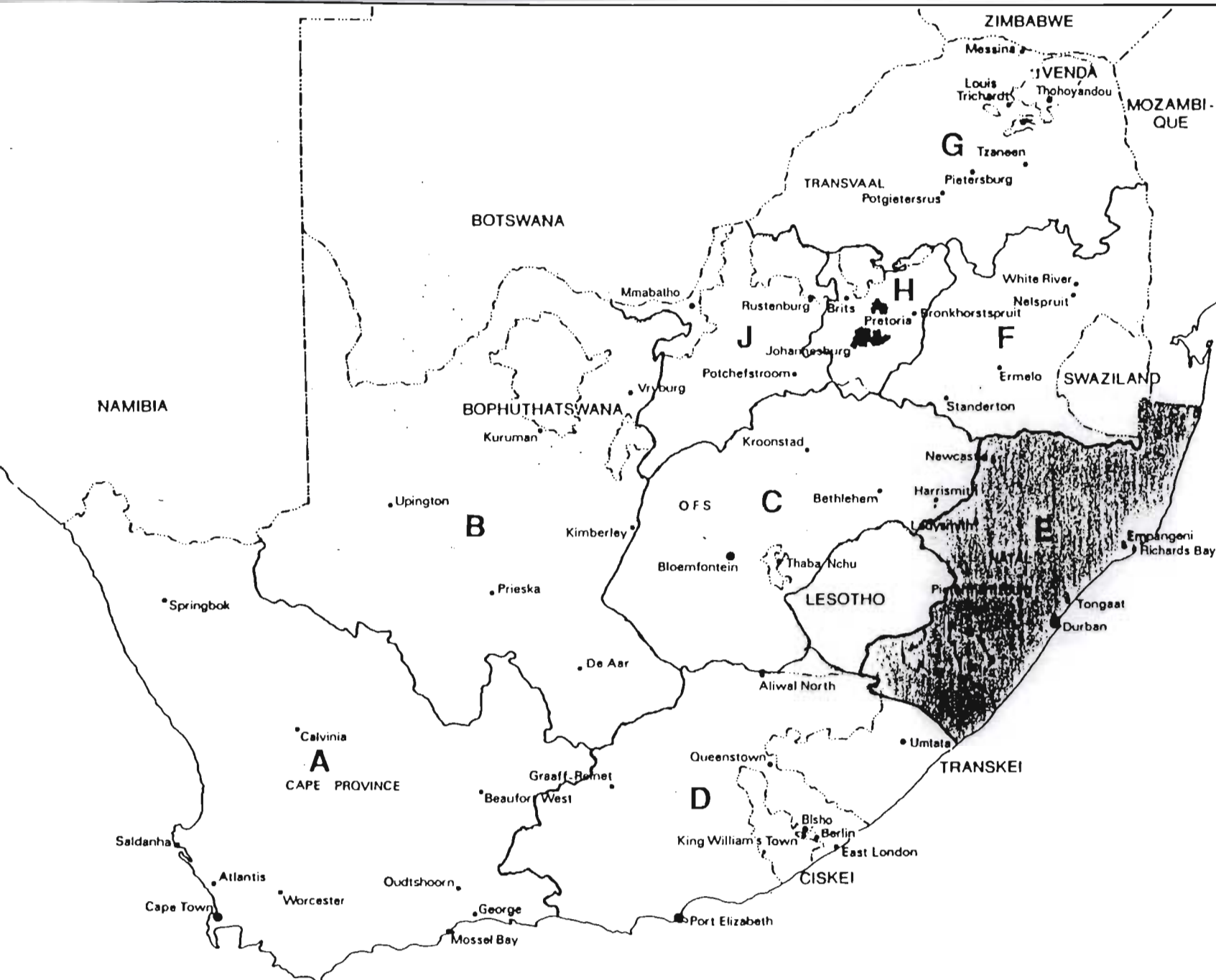
## BOUNDARIES

- Provincial
- - - International
- Development region

## TOWNS

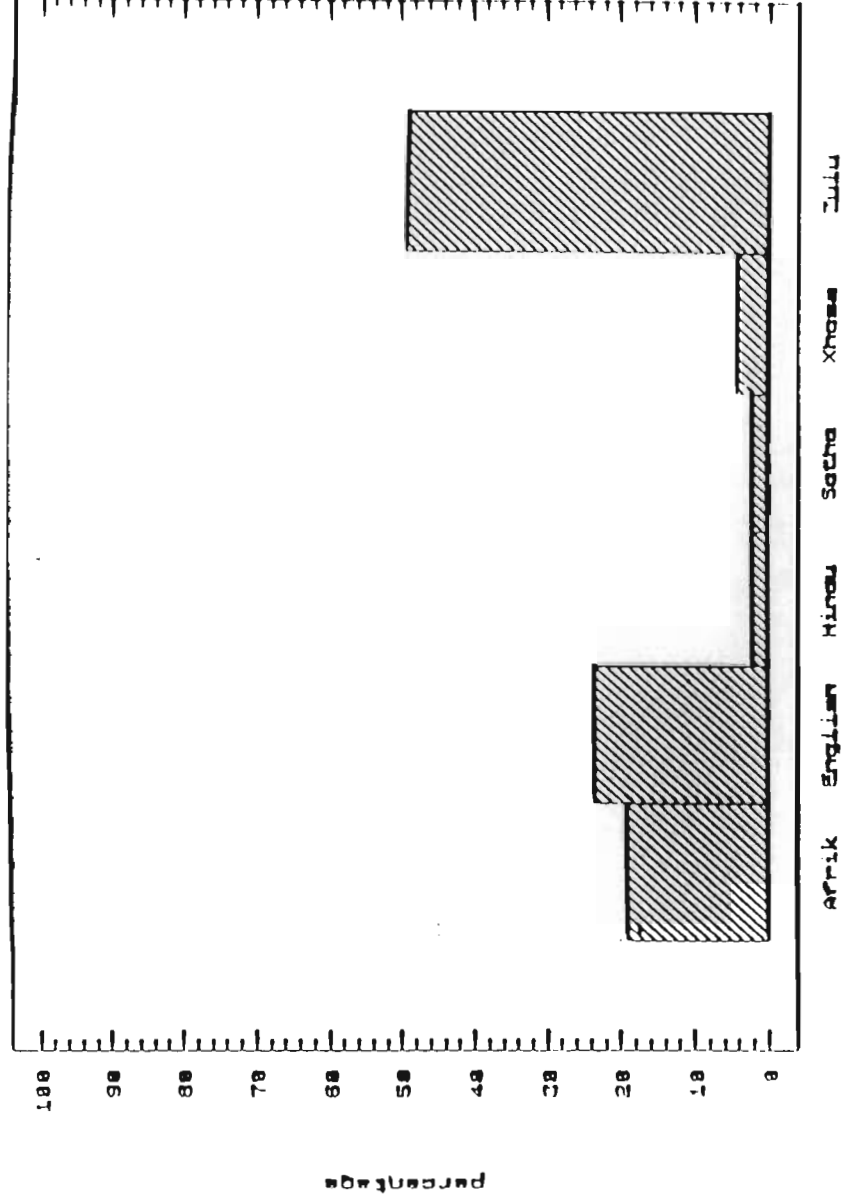
- Major towns

APPENDIX A

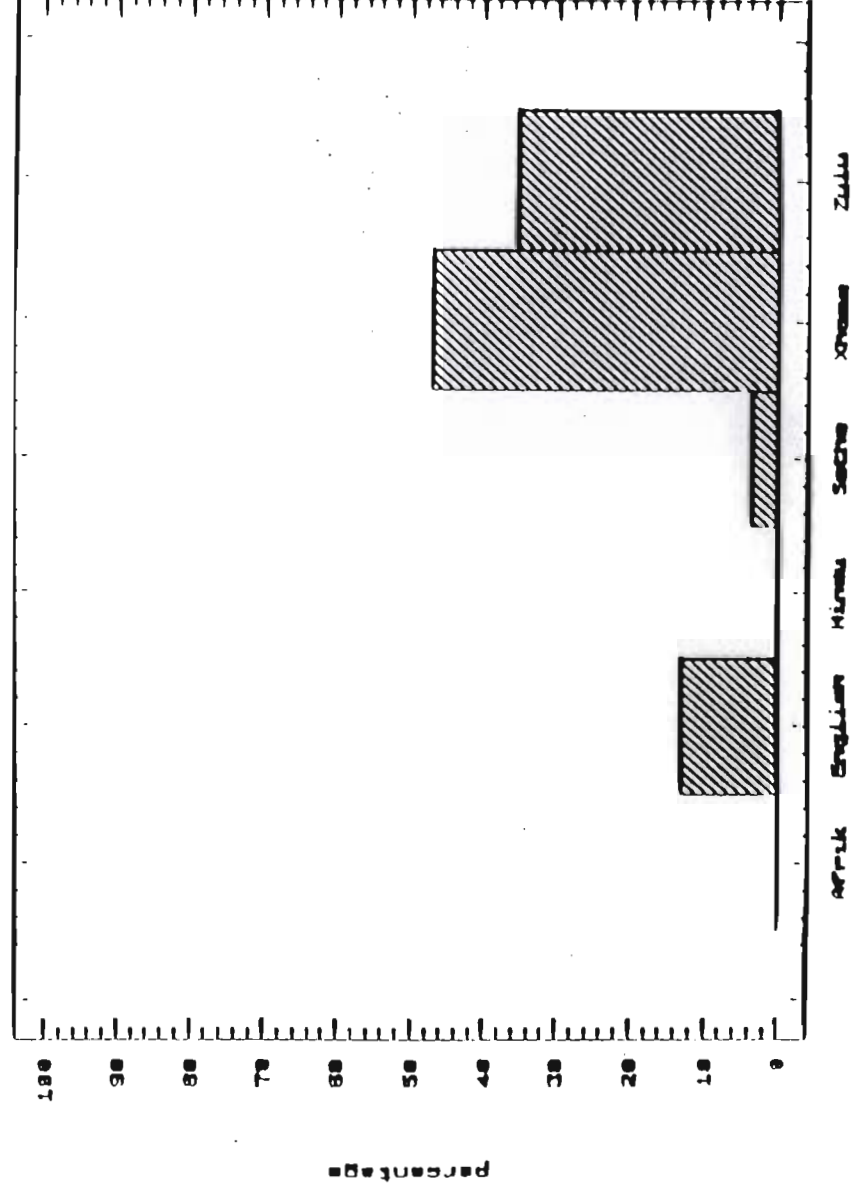


## APPENDIX B

PROGRAMME 2 : LANGUAGE

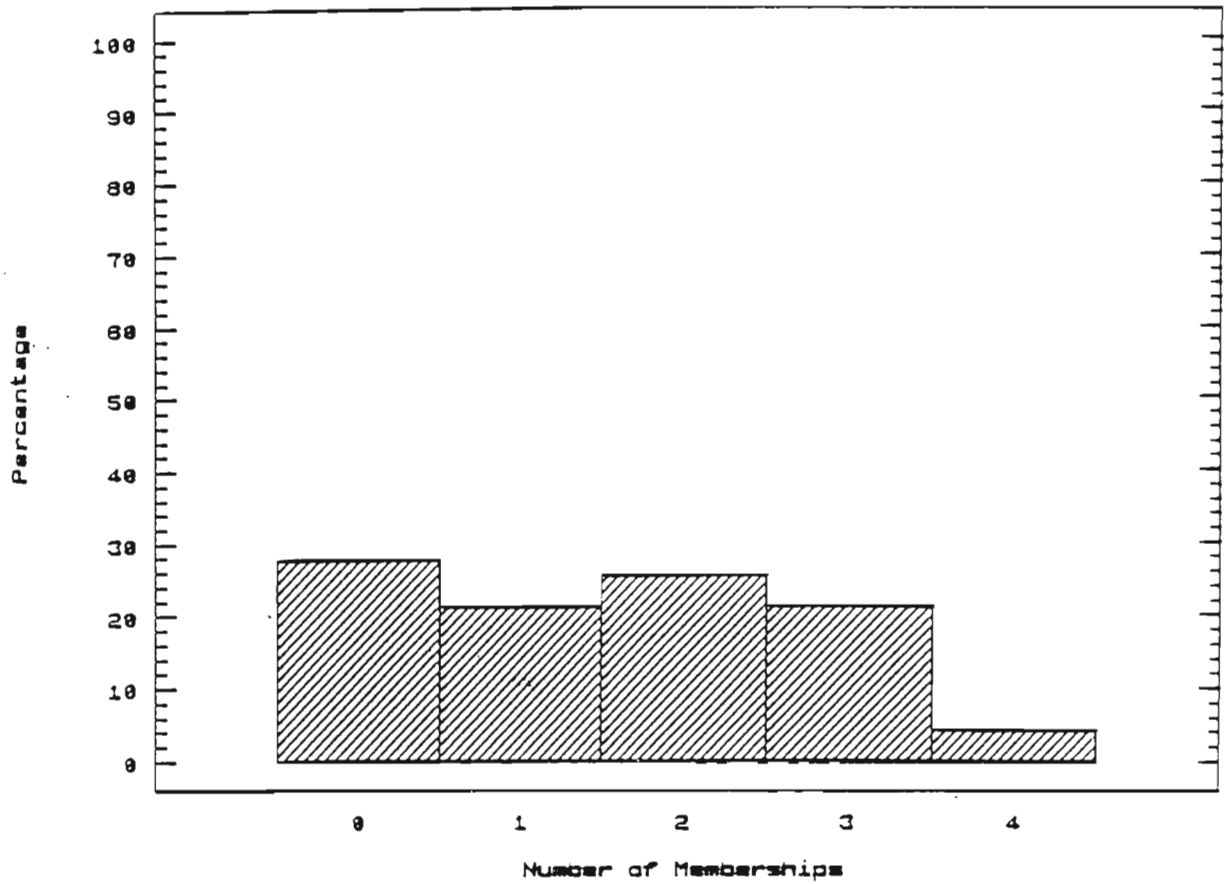


PROGRAMME 3 : LANGUAGE

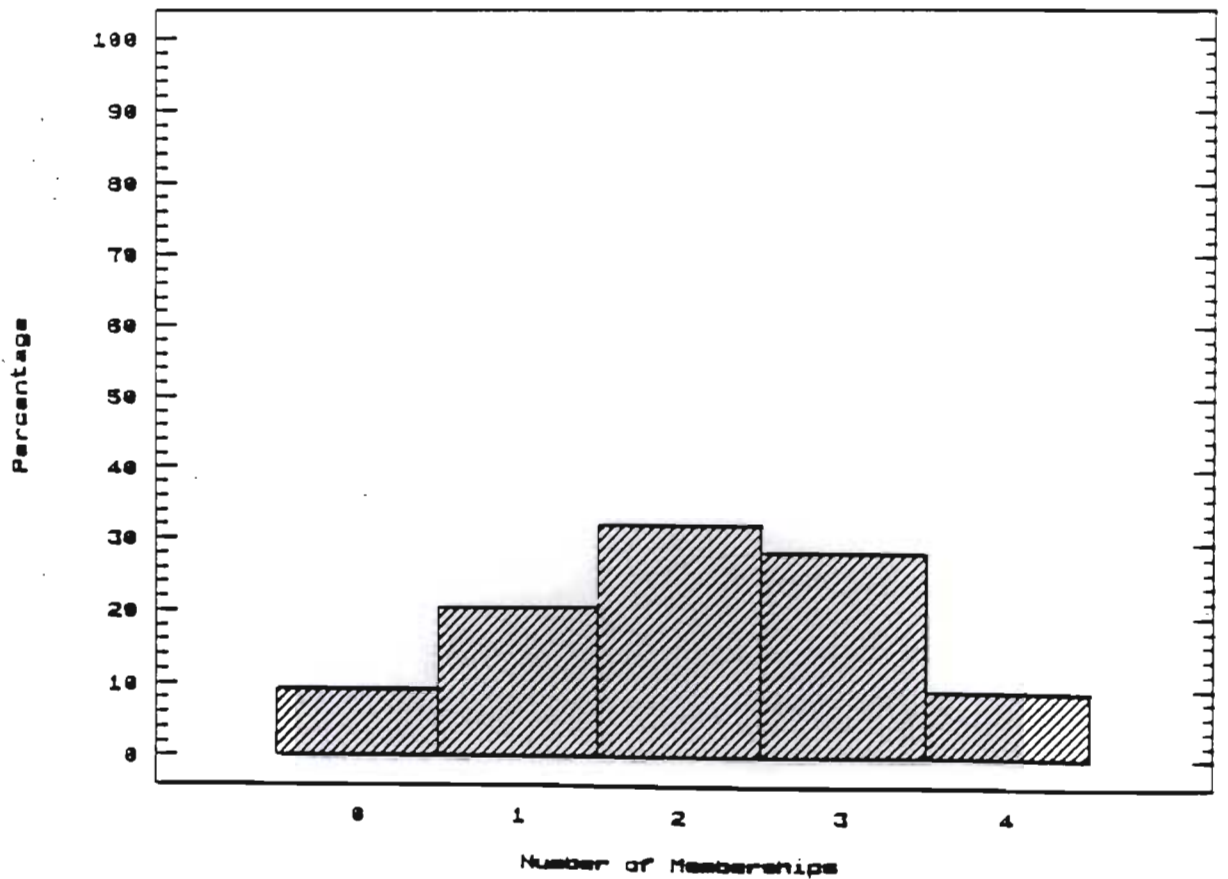




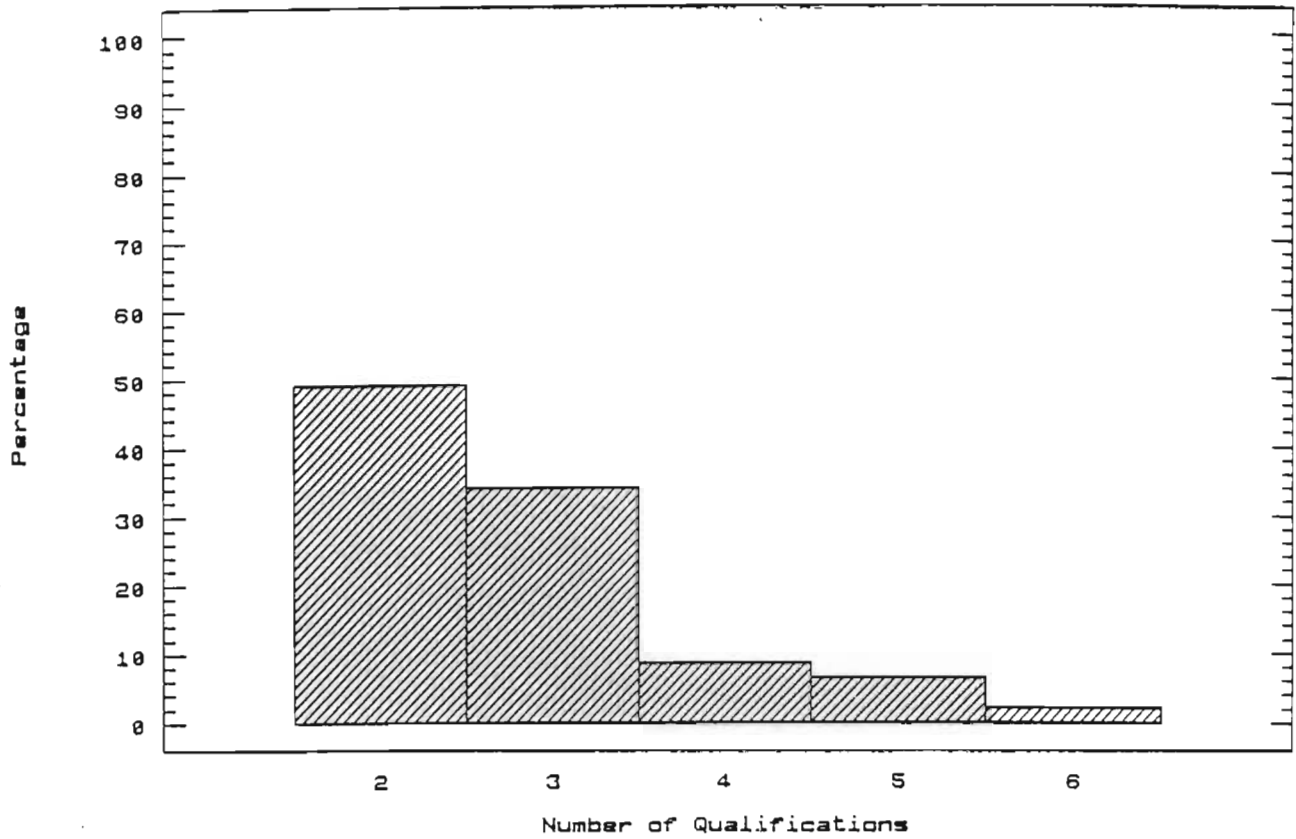
PROGRAMME A: MEMBERSHIP OF NON-PROFESSIONAL ORGANIZATIONS



PROGRAMME B: MEMBERSHIP OF NON-PROFESSIONAL ORGANIZATIONS



Distribution Professional Qualifications  
Program A



Distribution Professional Qualifications  
Program B

