

# CHAPTER 1

## INTRODUCTION AND ORIENTATION

The programme for upgrading enrolled nurses to registered nurses started in 1994 because of the Botswana Government Directive of April 1993 to restructure the entire nursing education system in the country. The Ministry of Health (MOH) viewed this as necessary for effective delivery of primary health care services in the country. A longitudinal study for the evaluation of the effectiveness of the upgrading programme was undertaken using the students that had done the course from 1995-2000.

### *1.1 Background to the problem*

#### *1.1.1 Historical Review*

The delivery of health care services in Botswana depends largely on the nursing workforce. The Health Manpower Plan (HMP) for Botswana (1988-2002:5&34) indicates that 2332 nurses had completed training since Botswana attained independence in 1966 and enrolled nurses constituted more than 50% of the total trained nurses. The same plan also reflects that in 1987, nurses accounted for more than 64% of the total trained health personnel in the country. Nurses in Botswana have therefore been and are still the backbone of the delivery of primary health care services.

The National Health Institute (NHI) Requirements Study (1989:1) revealed that the health care system made significant progress in the development of a health service

infrastructure. The study further revealed that the rapid development outstripped the supply of skilled human resources to the point where completed buildings stood empty of virtually all types of skilled health personnel. In 1990, the government directed to restructure the nursing education system to improve the quality of life of Batswana by strengthening the development of human resources for effective delivery of primary health services to all rural communities in the country. The restructuring led to, among others things, the effacing of the enrolled nursing programme and the upgrading of the enrolled nurses to registered nurses.

The emphasis on the upgrading of the enrolled nurses to registered nurses is because enrolled nurses were then staffing the majority of health facilities particularly in the rural areas. The enrolled nurse-training programme, which was in place at that time, did not adequately prepare these nurses to work independently in primary health care settings in rural communities where majority of Batswana live. The programme did not in particular equip the enrolled nurses with the following skills:

- Health assessment skills to provide preventive, curative and rehabilitative care to individuals, families and communities
- Problem-solving skills, learning and teaching processes to provide care within the context of primary health care.
- Nursing leadership and managerial skills in planning, implementing and evaluating primary health care services in collaboration with other members of the health team.

The inability of the enrolled nurses to provide appropriate primary health care services had an impact on all aspects of health service delivery system and therefore they deserved a special attention and action. At the time of undertaking this study, the upgrading programme for enrolled nurses had been in place for about seven years and it was necessary to investigate whether the programme had so far achieved the desired/intended objectives.

### ***1.1.2 The Country***

Botswana is a land-locked country bordered by Republic of South Africa on the South and South East, Namibia on the West and North and Zambia and Zimbabwe on the North and North East. The country straddles the Tropic of Capricorn in the Centre of the Southern African plateau. The mean altitude above sea level is approximately 1000 metres and the total land area is 582,000 sq. km. The land is characterised by sandy plains with scattered rocky outcrops. The Kgalagadi sands cover most of the country particularly in the west. In the Northwest, the Okavango River drains inland from Angola to form the Okavango Delta that is one of the largest inland deltas in the world. This area is prone to malaria due the lush vegetation and abundant water in the swamps. According to Botswana Handbook (1999:11-23) the country is prone to drought that usually runs on an eight-year cycle causing poor vegetation and harvest particularly in western part of the country. During these drought periods, malnutrition among the under-five children and pregnant women becomes prevalent particularly in the western sandy parts of the country.

### ***1.1.3 Population***

Botswana Human Development Report (1997:1) estimated the population of Botswana at 1.533 million. The report further reflects that the average life expectancy has been 65.3 years until the advent of Human Immune Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) in the country that is predicted to negatively affect the life expectancy. Botswana live in traditional villages that range in population from 20,000 to 80,000 people. During the rainy seasons, people move from the villages to the lands where they plough, and to the cattle- posts (traditional cattle farms scattered throughout the country), in search of good grazing for their cattle. This type of life style influenced the structure of the health care system as well as the development of human resources for health in the country as reflected on Table 1.1 on page 9.

### ***1.1.4 Political background***

In 1966, Botswana attained its independence from the British after being a protectorate of the British Empire since 1885. Botswana's policy of governance after independence as a republic is based on four national principles of democracy, development, self-reliance and unity (Government Paper 1 1972:20). For administrative purposes, the country is divided into nine administrative districts and each district has a district council whose functions are:

- Provision of primary education and primary health facilities,
- Maintenance of rural roads and the
- Operation and maintenance of village water supply and community development (National Health Policy 1995:9-13).

The nine administrative districts are subdivided into twenty-four health districts to make health care services more equitable, accessible and affordable to all the people throughout the country as reflected in Figure 1.1 on page 7. The mobile stops and health posts are the lowest levels of health facilities constructed at the cattle posts and the lands or the settlements while the primary, district and referral hospitals are in the major villages, towns and cities.

According to Figure 1.1 on page 7, the entire health system is built on the referral from lower level of health facility to the highly specialised one. It has been a challenge for the Ministry of Health to train enough health workers to staff all these health facilities for both central and local government. The Ministry of Health has an overall portfolio responsibility for health in the country namely:

- Development of national health policies and strategies;
- Provision of preventive, promotive and curative services in primary, district and referral hospitals;
- Development of all types of health personnel to staff all the health facilities throughout the country.

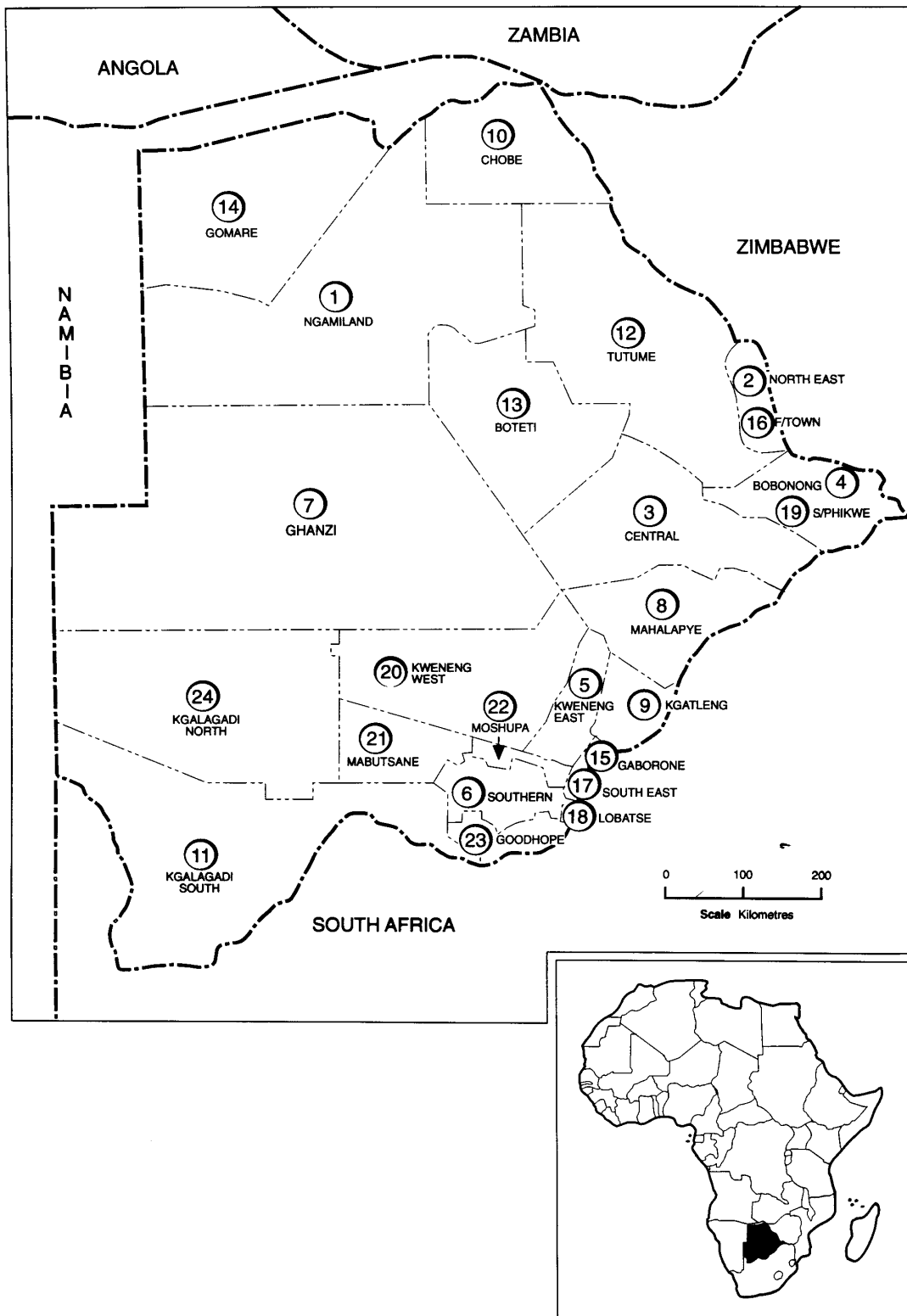
The Ministry of Local Government is responsible for provision of primary health care services in the mobile stops, health posts and clinics in the rural communities, villages, towns and cities. The Christian mission hospitals, diamond and nickel mines as well as the private sector also provide primary health care services in their respective districts.

During National Development Plan (NDP) 6 (1985-91:15.75) it was revealed that 85% of the population was within the fifteen kilometre distance from a health care facility. The remaining 15% of the population was within more than twenty kilometre distance from a health care facility especially in the western part of the country where the population is sparsely distributed.

Macgregor (1991:147) in his assessment of the achievements of “Health for All by Year 2000 in Africa” alluded to these achievements and he identified the 85% access to the health care facilities as one of the factors that contributed to the achievement of the following health indicators during NDP 6 plan period:

- Crude death rate of 9.7 per 1000
- Infant mortality rate of 37 per 1000
- Immunization coverage of 67%
- Ante-natal attendance of 92% and
- Post natal attendance of 71%.

Macgregor (1991:147) was particularly focusing his achievement of Health for All on Botswana, Tanzania and Zimbabwe. He also associated Botswana’s achievement of primary health care to the government’s commitment to subsidise the health care system and the incorporation of programmes such as safe water supply, sanitation, health education in schools and community participation in planning, organisation and management of primary health care.



**Figure 1.1** *Maps of District Health Team Boundaries and Health Facilities. Adopted from Central Statistics Unit 1990.*

### ***1.1.5 The Health Care System***

At independence in 1966, Botswana inherited a largely hospital based curative type of British health system that did not address the health needs of the rural majority. In his address to the nation, on the fifth Anniversary of Independence in 1971, His Excellency the President, Sir Seretse Khama in response to the needs of the rural majority said, *“The greatest challenge ahead of us is undoubtedly that of rural development. Unless we provide clear and consistent policies that provide for social justice, development will enrich a minority of our citizens and leave the lives of the majority practically untouched. We must ensure that our strategy for development is based on social justice, and this means that rural development must have a high priority.”* Government Paper 1 (1972:2). The President’s statement above called for reorientation of the health services from curative hospital based care to preventative and promotive community based care, to ensure the provision of health care services to the rural majority.

During National Development Plan 2 (1970-75), the focus of the health care system was health education in the fundamental aspects of health, nutrition, hygiene and disease prevention, early diagnoses and treatment of diseases and rehabilitation services. In order to ensure equity and access to health facilities, population distribution was used during NDP 6 (1985-1991:310) to determine the type of health facility to be provided for rural and urban communities as reflected in Table 1.1 on page 9.



**Table 1.1 Referral System and Criteria for Health Facilities 1985-1991**

<b>FACILITY</b>	<b>SERVICES PROVIDED</b>	<b>DESCRIPTION</b>	<b>LOCATION AND POPULATION COVERAGE</b>
<b>Health Post</b>	<ul style="list-style-type: none"> <li>Family welfare educator at first contact point provided primary Health Care Services.</li> <li>-Health Education, Family Planning, Nutrition, Environmental Health, Maternal/Child Health, School Health.</li> <li>-First Aid and treatment of common diseases.</li> <li>-Case Finding and Follow-up.</li> <li>-Periodic Visits by Mobile Health Teams.</li> </ul>	<ul style="list-style-type: none"> <li>-3 rooms and toilet.</li> <li>-House in the remote areas.</li> </ul>	<ul style="list-style-type: none"> <li>-500-1000 in rural areas.</li> <li>-4000-80000 in major villages and towns.</li> </ul>
<b>Clinic/clinic with maternity ward</b>	<ul style="list-style-type: none"> <li>-Maternal/Child Health and deliveries.</li> <li>-Preventative work as in health post.</li> <li>-First aid.</li> <li>-Diagnosis and treatment of common diseases.</li> <li>-Simple laboratory examinations.</li> <li>-Case Finding and Follow-up with emphasis on tuberculosis (TB).</li> </ul>	<ul style="list-style-type: none"> <li>-5 rooms</li> <li>-Covered area, toilets.</li> <li>-Vehicle, 2 staff houses.</li> <li>-Clinic with maternity ward-as for clinic plus maternity unit, vehicle, 3 staff houses.</li> </ul>	<ul style="list-style-type: none"> <li>-5000-10000 in rural areas,</li> <li>- 10000 or more in major villages and towns.</li> <li>-As for clinic, maternity ward subject to assessment of area needs.</li> </ul>
<b>Health Centre</b>	<ul style="list-style-type: none"> <li>-As at clinic.</li> <li>-Supervision of clinics and health posts.</li> <li>-General in-patient care.</li> <li>-Laboratory examinations.</li> <li>-X-rays.</li> <li>-Surgery.</li> </ul>	<ul style="list-style-type: none"> <li>-Total beds 20-70. - Delivery and 4-12 maternity beds;</li> <li>-observation and curative 16-58 beds.</li> <li>-Outpatient facilities as in clinic.</li> </ul>	<ul style="list-style-type: none"> <li>-Subject to assessment of area needs.</li> <li>-Mainly in villages and remote areas.</li> </ul>
<b>District/Regional Hospital</b>	<ul style="list-style-type: none"> <li>-As at Health Centre.</li> <li>-Specialist services for serious and complicated health problems.</li> <li>-Basic curative, prevention, and promotive services.</li> <li>-In-patient care for more complicated health needs.</li> </ul>	<ul style="list-style-type: none"> <li>-Health Centre on a larger scale.</li> <li>-70-400 beds.</li> </ul>	<ul style="list-style-type: none"> <li>-Major villages and towns.</li> </ul>
<b>National Referral Hospital</b>	<ul style="list-style-type: none"> <li>-As a district hospital.</li> <li>-Specialist clinical services for serious and complicated health problems.</li> <li>-More specialist equipment.</li> </ul>	<ul style="list-style-type: none"> <li>- 400+ beds.</li> </ul>	<ul style="list-style-type: none"> <li>-National level Gaborone.</li> <li>- Referral services for the whole country.</li> </ul>

*Source: Ministry of Finance and Development Planning 1985-1991*

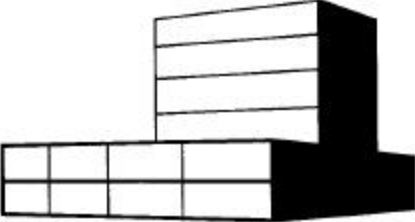

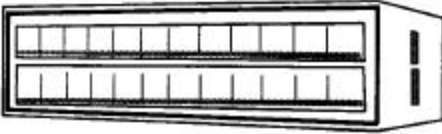



### ***1.1.6 Primary Health Care***

Primary Health Care as defined by Alma-Ata (1978:34) is essential health care made universally accessible to individuals and families in the community by means acceptable to them, through their full participation and at a cost that the community and country can afford to maintain the health care system. Primary health care forms an integral part both of the country's health care system of which it is the nucleus and of the overall social and economic development of the country. As mentioned earlier under the Political System (1.1.4), the Government of Botswana recommended the reorientation of health care services from curative-hospital-based care system to preventative, promotive and community-based health care system. Each administrative district is responsible for the provision of primary health care facilities and services, primary education facilities and services, rural roads, water supply and community development.

Table 1.1 on page 9 shows the health services to be provided, types of structures to be constructed and the population coverage in each health facility throughout the country. Each district provides health and other social services that are required to meet the needs of the population under it. Table 1.1 further shows how the government of Botswana attempted to make primary health care accessible to all Batswana.

The Government of Botswana accepted the primary health care approach as an appropriate strategy for attainment of health for all Batswana. Primary health care, as defined by the Government of Botswana, places emphasis on prevention of prevailing diseases and promotion of healthy living habits, along with the provision of curative and rehabilitative services. One of the aims of the government's programme for rural development from 1970-1975 according to Government Paper No 1 (1972:1-2) was the improvement of social services in the rural areas such as water supplies, primary and secondary education, health and welfare services, sanitation and other social services. The belief is, according to government that if all the above-mentioned services are provided to rural communities the families will become healthier, smaller, better educated, better fed and will be in a position to participate actively in the socio-economic development of the country.

The Government of Botswana also views its people as the most important resource for development and therefore poor health is viewed as a barrier to economic and social development. The community is viewed as a partner in identifying health problems, setting priorities for action and in designing, planning, organising, implementing and managing health care services and programmes. Community participation and community involvement is used as an approach in all community programmes.

Type of Facility	Health and Medical Personnel	
<b>Two Referral Hospitals</b> <b>One Psychiatric Hospital</b> <b>One Private Hospital</b>	Specialised professionals such as Medical Specialists, Nurses, Midwives, Pharmacists, and allied health officers	
<b>12 District Hospitals</b>	District Medical Officers, Nurses, and health related professionals, Midwives	
<b>16 Primary Hospitals</b>	Physicians, Nurses, Midwives and allied health officers	
<b>222 Clinics</b> Two types of clinics: <ul style="list-style-type: none"> <li>• Clinics with maternity beds - 74</li> <li>• Clinics without maternity beds - 127</li> </ul>	Nurses, Midwives, and Family Welfare Educators (FWEs)	
<b>330 Health Posts</b> <ul style="list-style-type: none"> <li>• Manned by ENs - 238</li> <li>• Manned by FWEs - 75</li> </ul>	Nurses, Family Welfare Educators (FWEs)	
<b>740 Mobile Stops</b>	Managed by Health Teams, Nurses and Midwives	

*Figure 1.2 Organisation of the National Health Care System in Botswana. Adopted from General Nursing Curriculum (1995:3)*

### *1.1.7 Nursing Education System*

According to Selelo-Kupe (1993: 29-30 & 70-80), the Seventh Day Adventist Church (SDA) built the first health facility in 1922 at Kanye and the first training of nurses started in 1925 with three trainees. The author indicates that this type of training was not certificated. The schools of nursing were later opened in 1930 at Athlone Hospital in Lobatse; in 1931 at Sekgoma Memorial Hospital in Serowe, in 1932 at Deborah Retief Memorial in Mochudi; in 1934 at Scottish Livingstone in Molepolole; in 1935 at Jubilee Hospital in Francistown; in 1937 Maun; in 1938 Sefhare; and in 1952 at Moffat School of Nursing in Kanye. The author attests that the enrolments in all these schools were too small when compared to the varied needs of the rural communities and learning was mostly by apprenticeship.

The nursing education system in Botswana was developed in line with the socio-economic development of the country. The rapid economic growth led to the rapid growth of infrastructure and this called for the development of more human resources to meet the health needs of the community throughout the country. The MOH therefore embarked on the production of both quantity and quality of health personnel to ensure the delivery of health services in all health facilities in all the districts. The nursing education system, as it evolved over the years to meet the health needs of a changing society, developed programmes with three distinct areas namely, basic and post-basic at National Health Institute (NHI), which was, renamed Institutes of Health Sciences (IHS) after its affiliation with University of Botswana and degree programmes at UB.

### ***1.1.7.1 Basic Nursing Programmes***

In 1970 the country offered two basic nursing programmes. The first programme was a two year enrolled nursing programme for staffing mobile stops, health posts, clinics and all levels of hospitals (Curriculum for Enrolled Nurse 1970: 1-3). The students who passed with honours or merit qualified for midwifery training after passing year one general nursing according to rules 4 and 19 in the Nurses and Midwives Act (1967 Cap 61:03). The second programme was a three-year general nursing programme for staffing clinics and hospitals offered at the NHI in Gaborone and two mission nursing schools at Kanye and Molepolole (Selelo-Kupe 1993:154-160). The enrolled nurses who upgraded into this programme had to obtain the Cambridge School Certificate and then join the basic nursing programme at year one again according to rule three (ii) 61:79 in the Nurses and Midwives Act (1967 Cap 61:03).

### ***1.1.7.2 Post-Basic Nursing Programmes***

Subsequently, post basic education for nurses was gradually introduced in response to the needs of the communities and the duration of these programmes was eighteen months. The programmes offered were Nurse Anaesthesia (NA), Family Nurse Practice (FNP), Community Health Nursing (CHN), and Community Mental Health Nursing (CMHN) and Midwifery. All the registered nurses with post basic training were deployed mostly in outpatient departments and district health teams except nurse anaesthetists who deployed specifically in the theatres because of specialisation.

### ***1.1.7.3 University Degree Programmes***

The University Degree programme for nurses in Botswana started in 1978 to prepare nurses in Nursing Education for operating the schools of nursing and Nursing Administration for leadership in the hospitals and district health teams. The duration of the programme is three years as the University of Botswana credited the students with one academic year only (Selelo-Kupe 1993:181-183). The nurses who entered into this programme had to serve for two years after completion of general nursing and midwifery programmes. Majority of these nurses had also done one of the post-basic nursing programmes such as community health nursing, community mental health nursing and nurse anaesthesia as mentioned earlier.

The NHI affiliated to the UB in 1985 and since then, the UB has the overall responsibility for the quality of nursing education according to University of Botswana/Ministry of Health Affiliation Document (1985:1-3). In 1993 the NHI was renamed Institute of Health Sciences (IHS) with five autonomous campuses in Gaborone, Serowe, Lobatse, Molepolole and Francis town. Both the Government of Botswana and mission nursing institutions receive approval from the UB to operate nursing education programmes. All the graduates receive their licenses to practise from the Nursing and Midwifery Council of Botswana (NMCB). Each educational level has basic licensure, with additional certificates awarded upon successful completion of appropriate educational requirements.

#### ***1.1.7.4 Rationale for Restructuring of Nursing Education in Botswana***

The MOH and the UB in 1990 commissioned the Kellogg consultancy to review and advice on the alternative system of nursing education for Botswana (MOH 9/84 11 (125) 1990:9). The rationale for the review was in recognition that the nursing curriculum that was developed in 1970 was never reviewed to be in line with the primary health care strategy and the technological advancement for the delivery of primary health care services in the country. The community was also dissatisfied with the delivery of the health services. The main tasks of the consultancy as reflected in Appendix VIII were to design an alternative system of nursing education which:

- Is more efficient and cost effective
- Increases attractiveness of nursing as a career to potential entrants
- Supports career development for practising nurses
- Strengthens the knowledge and skills of nurses for the direct provision and management of primary health care services.

#### ***1.1.7.5 Feasibility Studies***

The MOH set up a National Task Force to look critically into the feasibility of the implementation of the Kellogg consultancy recommendations. The membership of the Task Force was drawn from all relevant government ministries and departments, Nurses Association of Botswana and Botswana Nursing Council, University of Botswana and Association of Medical Missions of Botswana (AMMB). The membership is as follows:



1. *Ministry of Health:* Mrs. K. Gasennelwe Chair, Mrs. K. Makhwade, Mrs R. Poonyane, Mrs. N. Mokgautsi, Mrs. L. Mabona and Ms. S Rampa
2. *University of Botswana:* Dr J. Reeves and Dr S.S. Kupe
3. *Ministry of Education:* Mrs. F. Mogami
4. *Ministry of Local Government Lands and Housing:* Mrs M. Molefi
5. *Ministry of Finance Development and Planning:* Mr. E. Odotei and Ms. R. S. Tlwaelang
6. *Directorate of Public Service Management:* Ms. M. Pelaelo
7. *Association of Medical Missions of Botswana:* Mrs. S. Rapoo
8. *Nurses Association of Botswana:* Mrs. F. Kelobang, Mrs. S. Matlhabaphiri, Mrs L. Koodibetse
9. *Nursing and Midwifery Council of Botswana:* Mrs. E. Alidi
10. *National Health Institute:* Mrs. D. Mosieman, Mrs. B. Sola, Mrs. O. Mogano and Mrs P. Ncube
11. *Planning Unit: Ministry of Health:* Mrs M. Tselayakgosi.

The terms of reference of the National Task Force were to:

1. Review the findings and recommendations of the Kellogg consultancy on Nursing Education System in Botswana
2. Discuss the desirability or otherwise of the proposed changes
3. Discuss the implications of the proposed changes in relation to:

- Quality of patient care and deployment of staff
  - Costs of training and salaries and whether the Government of Botswana can absorb the costs of the changes in nursing education as recommended by the Kellogg Consultants
4. Propose a schedule of implementation as well as steps to be taken for the implementation
  5. Make a comment on each of the recommendations as to whether it should be accepted; accepted with modifications or rejected
  6. Make a comment on any other observations made in the 1990 Kellogg Consultancy Report in Task Force Report (1992:3) and Appendix VIII.

The National Task Force was also directed to oversee the implementation of the revised nursing educational programmes. The National Task Force reviewed the Kellogg Report recommendations; reviewed curricula for enrolled nurse and registered nurse; collected data on costs of nurse training in all levels from enrolled nursing to Masters Degree in nursing as reflected in Table 1.3 on page 21.

**Table 1.2 Implementation Schedule for the Proposed New Nursing Education System in Botswana from 1993-2000**

<b>YEAR</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>Total</b>
RN	170	170	220	220	250	250	250	250	250	2030
EN	50	-	-	-	-	-	-	-	-	50
EN/RN completion (formal)	40	40	40	40	40	40	40	80	80	440
Distance learning	-	-	-	-	-	-	-	40	40	80
BSN	-	-	-	-	30	30	30	30	60	180
B. Ed	30	30	30	30	30	30	30	30	-	240
B. Ed diversified	-	30	30	30	30	30	30	30	30	240
Masters degree	10	10	15	20	20	20	20	20	20	135
<b>Total</b>	<b>290</b>	<b>280</b>	<b>330</b>	<b>335</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>480</b>	<b>480</b>	<b>3395</b>

Table 1.2 shows an implementation schedule drawn up for the proposed nursing education system in the country. The implementation was scheduled to start in 1992 with the last intake of basic enrolled nursing programme and the first intake of one-year full-time residential upgrade programme of forty per year until 1998. From 1999 until 2000, an intake of eighty was proposed. The part-time distance education was scheduled to start in 1999 with an intake of forty per year but the programme started in 1996 with an intake of eighty at IHS Serowe. The implementation schedule was significantly modified due to the expansions at the IHS Serowe and when the two mission nursing schools, at Bamalete Lutheran hospital and Deborah Retief Memorial hospital participated in the upgrading of enrolled nurses. By the year, 2000 it was projected that 520 enrolled nurses would have been upgraded to registered nurses but there were 1042 enrolled nurses that were upgraded as reflected on Table 4.1 on page 148 on the

analysis of academic performance of students by institution reflecting the intakes, outputs and withdrawals. The intake into the basic registered nursing programme also increased significantly due to the expansions that were made in other training institutions in Francistown, Gaborone and Molepolole.

The intake of the B. Ed Nursing at the University of Botswana remained unchanged and there was no diversified B.Ed Nursing programme as planned. The Bachelor of Nursing Science started in 1999 rather than in 1996 as proposed while the Masters degree in nursing also started in 1996 and not in 1992 as proposed in the schedule. The reader should note that information on the details of other nursing programmes is not reflected in this table because the focus of the study is on the upgrading of enrolled nurses.

**Table 1.3 Costs and Duration of Training Nurses in Botswana**

<b>PROGRAMME</b>	<b>DURATION IN YEARS</b>	<b>TRAINING COSTS IN PULA</b>	<b>SALARY PER ANNUM IN PULA</b>	<b>REPLACEMENT COSTS IN PULA</b>	<b>TOTAL</b>
<b>CURRENT SYSTEM 1985-1991</b>					
Registered nursing (RN)	3	33000	0	0	33000
Post Basic Programmes	2	22000	27000	36000	85000
B. Ed. Nursing	3	37200	36000	54000	127200
<b>TOTAL</b>	8	92000	63000	90000	245000
Masters Degree	2	50000	27000	36000	113000
<b>SUB TOTAL</b>	10	142200	90000	126000	358200
<b>PROPOSED SYSTEM 1993-2002</b>					
Enrolled Nursing	2	22000	0	0	22000
Post Basic Cambridge	1 or 2	11000	10000	10000	31000
RN	2	0	0	20000	20000
B. Ed. Nursing	3	33000	20000	30000	83000
B. Ed. Nursing	3	37200	36000	54000	127200
<b>TOTAL</b>	11	103200	66000	114000	283200
Masters Degree	2	50000	27000	36000	113000
<b>SUB TOTAL</b>	13	153200	93000	150000	396200
<b>PROPOSED SYSTEM 1993-2002</b>					
RN	2	22000	0	0	22000
Internship	1	11000	0	0	11000
BNS	2	22000	27000	36000	85000
<b>SUB TOTAL</b>	5	55000	27000	36000	118000
Masters Degree	2	50000	27000	36000	113000
<b>TOTAL</b>	7	105000	54000	72000	231000
<b>PROPOSED SYSTEM 1993-2002</b>					
Enrolled Nursing	2	22000	0	0	22000
RN Upgrade		5500	5000	5000	15500
Internship	1	11000	7500	10000	28500
BNS	2	22000	27000	36000	85000
<b>SUB TOTAL</b>	7	60500	39500	51000	151000
Masters Degree	2	50000	27000	36000	113000
<b>TOTAL</b>	9	110500	66500	87000	264000
<b>PROPOSED SYSTEM 1993-2002</b>					
BNS Direct Entry	4	44000			
Internship	1	11000			
<b>TOTAL</b>	5	55000			

Table 1.3 shows the duration and the costs of upgrading of nurses from certificate level

to Masters Degree level in Botswana. The training has been long and expensive and the analysis the discussions on the programmes are as follows:

**1. *Basic Enrolled Nursing programme***

The basic enrolled nursing programme was two years after junior certificate. It was a requirement that enrolled nurses should also train at a post basic level after working at least for two years either in midwifery or ophthalmic nursing or in both. If an enrolled nurse had to upgrade to registered nursing, it was a requirement to apply for study, do two years Cambridge School Certificate, and then enrol into the three year general nursing programme. During the years of study, the enrolled nurses were to be replaced with other officers of similar qualifications so that the provision of health services should not be affected and government paid all the costs of the student and the officer who replaced the student. In all, it took about eight years to upgrade an enrolled nurse to a registered nurse at the cost of Pula 156, 000 as reflected in Table 1.3. In the new proposed system, it would take only three years for a generic registered nurse to complete the course at the cost of Pula 33,000.

**2. *Basic Registered Nursing Diploma***

The basic training of registered nurses was three years after Cambridge School Certificate. It was a requirement that registered nurses also train as

midwives and an additional post basic qualification in FNP, CHN, or NA. In order to upgrade the basic nursing diploma to a degree, a registered nurse had to do three years at the University. During the periods of study, another officer with similar qualifications had to be employed to continue to provide services to the communities and the government paid all the costs of the two officers. In all the cost of upgrading a registered nurse to Bachelor of Nursing Science (BNS) took eight years at the cost of Pula 245, 000. In the new proposed system, a generic BNS could take only five years at the cost of Pula 55,000. The upgrading of a registered nurse to a Masters Degree took ten years at universities overseas at the cost of Pula 142, 000 while training locally could take about seven years at the cost of Pula 110,500.

The calculations for the costs for nurse training were based on the 1990/91 financial year costs during NDP 6 (1985-1991: 14.109). The budget for all NHI programmes in all the five campuses was P9, 108, 000 per year, the total number of students was 828, and the cost per student per year was P11, 000. The salary of an enrolled nurse for that financial year was P 10,000 and P 18,000 for a registered nurse as reflected in Appendix V11 on Public Service Grades/Salaries 1993/4 and in Table 1.3. According to the Ministry of Education P 12,400 were costs per student per year in the B.Ed Nursing programme and the replacement costs are the same.

From these findings, the National Task Force concluded that nurse training was repetitive, long and costly to the Government of Botswana. The following recommendations were made to the Government of Botswana and a Presidential Cabinet Directive 4/1993 issued on 18<sup>th</sup> February 1993 that gave the mandate to effect the implementation of the restructuring of the entire nursing education system in Botswana as follows:

1. Efface the enrolled nursing programme and upgrade the current number of enrolled nurses to registered nurses from 1993-2002.
2. Increase the intakes into RN programme to offset the decrease in the EN programme.
3. Develop a new registered nursing programme that places more emphasis on clinical skills and performance in health care.
4. Develop a generic Bachelor of Nursing Science (BNS) with emphasis on critical thinking and problem-solving skills.
5. Diversify the current Bachelor of Education in Nursing (B.Ed) programme to cater for other nursing specialties.
6. Develop a Masters degree in nursing that will provide expertise in both functional and clinical specialties.

From the analysis of all these feasibility studies, the National Task Force concluded that the restructuring of the nursing education system would be an economically sound investment to the Government of Botswana. The implementation of the proposed new education system started in 1994 and not 1993 due to the realignment of the new



nursing education system with the University of Botswana academic year. For the current study, the focus is on the recommendation of effacing enrolled nursing programme and upgrading the existing numbers of enrolled nurses to registered nurses.

### ***1.2 Problem Statement***

As mentioned earlier under background to the problem under 1.1.1 the enrolled nurses who staffed the majority of rural health facilities were inadequately prepared to provide primary health care services to the communities they served. According to WHO (1985:8) in providing primary health care services a nurse should be able to:

- Provide preventive, curative, and, rehabilitative health care to individuals, families and groups within the community
- Extend primary health care to all sections of the community
- Train and supervise health workers in primary health care at the community level
- Work effectively with health teams and collaborate with other sectors concerned with socio-economic development.

The enrolled nurses were perceived not to be adequately prepared in all the above primary health care principles and hence the EN/RN upgrading programme to equip them with the primary health care knowledge and skills to deliver these services.

According to Botswana's strategy of Health for All, every inhabitant should by the end

of NDP 7 (1991-1997:359) have attained a level of health that will enable him /her to lead an economically and socially productive life. This means that everybody should have access to essential health care. It is important that the production, deployment and utilisation of human resources should reflect the commitment to this goal. The achievement of the goal of health for all through primary health care requires the effective and co-ordinated services of many types of health personnel within the health care systems that are designed to respond to the health needs of communities. The effectiveness of the health system depends largely on the extent to which human resources development and health systems development are carried out concurrently and in the closest possible co-ordination (WHO 1990 series no 802: 13). The demand for trained human resources for health was estimated at 3560 and was projected to reach 6820 by year 2002 during NDP 7 (1991-1997:368). The inadequate training of enrolled nurses in relation to national health needs and their deployment and utilisation is one such problem that led to poor delivery of primary health care services in the country and the dissatisfaction of the community about the delivery of the services.

### ***1.3 Purpose of the study***

The purpose of this study is to evaluate the EN/RN upgrade programme in Botswana to determine whether the programme has strengthened the knowledge of the upgrade graduates to provide primary health care services and whether the programme has been efficient and effective.

### ***1.4 Research Objectives***

Educational or health programmes are assessed in terms of their adequacy, effectiveness, efficiency, and appropriateness. The objective of this study is to determine the extent to which:

1. The upgrade programme has strengthened the knowledge of the graduates for direct provision and management of primary health care services
2. The graduates perceived that their knowledge and skills in the delivery of health care services has been strengthened.
3. The supervisors perceived the improvement of the graduates' knowledge and skills in the delivery of Primary Health Care Services.
4. The upgrade programme has been efficient and effective.

### *1.5 Assumptions Underlying the Study*

Assumptions are referred to as basic principles that are accepted on faith, or assumed true without proof or verification Polit & Hungler (1995: 18). The effacing of the enrolled nursing programme and the upgrading the existing enrolled nurses to registered nurses is a major development in the history of nursing education in Botswana. The current study was undertaken with the following assumptions:

1. That the upgrading programme for enrolled nurses will strengthen the knowledge and skills of the graduates for direct provision and management of primary health care services in hospitals and health districts
2. The graduates of the upgrade programme will work independently in a variety of health settings throughout the country and there will be no difference between those upgraded through full residential programme and those upgraded through distance learning
3. The upgrade programme will be efficient because it will not be repetitive and will recognise the previous knowledge and skills the enrolled nurses had acquired before enrolling into the upgrade programme
4. The upgrade programme will be cost effective because the length of training will be reduced from eight years to one to two years and therefore will be less costly to the Government of Botswana.
5. On completion of the upgrading exercise, the graduates of the programme would have opportunities for further development at institutions of higher

learning.

6. The effacing of the enrolled nursing programme and the entry level of nursing at diploma level and the development of the generic Bachelor of Nursing Science (BNS) at UB will increase the attractiveness of the nursing profession to potential entrants and therefore majority of school leavers will like to join the nursing profession.

### ***1.6 Significance of the study***

The planning of educational programmes for health personnel to deliver primary health care services to communities should take into consideration the planning of evaluation of such programmes. Sohn (1987:27) states that though programme evaluation is an integral component of the educational processes in both nursing and education, she had observed that most nursing programmes have not been evaluated. This is true of nursing educational programmes in Botswana. The programmes that were developed before and after independence did not have evaluation integrated into their planning, and as such, they have never been evaluated except the Acheson and Mogobe evaluation study of 1993/4 that will be discussed under chapter 2. The significance of this evaluation study is that the study should demonstrate whether the EN/RN upgrade programme has strengthened the knowledge and skills of the graduates to deliver primary health care services. The study should also provide data with regard to effectiveness and efficiency of the upgrade programme on which the policy makers can base their future policy decisions if they have to efface and upgrade programmes similar to enrolled nursing.

The study may also contribute to nursing theory, practice by identifying the strengths and weaknesses in the current upgrade programme, and indicate modifications that may lead to quality of the programme and better patient care because of provision of care by skilled personnel. If the Stufflebeam Context, Input, Process and Product (CIPP) model for evaluation is found satisfactory and cost effective, it may be shared with other colleagues in other institutions and countries that contemplate on upgrading of enrolled nurses, thereby contributing to evaluation procedures and theory in general.

### ***1.7 Scope of the Study***

The scope of this study was focusing on all enrolled nurses who were upgraded to registered nurses since the 1993 Presidential Directive of effacing the enrolled nursing programme. The focus was on those enrolled nurse who trained and are working in Botswana but enrolled nurses who trained outside the country or were still undergoing training were excluded from the study. The enrolled nurses who failed and discontinued or did not sit for the final IHS/UB examinations were only used to determine the dropout rates and therefore the effectiveness of the programme. The study used the graduates that had completed the EN/RN upgrade programme between 1995 and 2000.

### ***The 1.8 Methodology/Research Design***

An evaluation design is a structure created especially to appraise a programme's effectiveness objectively and without bias (Fink 1993:43). The research design according to Polit & Hungler (1995:153) is the researcher's overall plan for obtaining answers to the research questions. They further state that the design indicates whether there is an intervention and what the intervention is; the nature of any comparisons to be made; the methods to be used to control extraneous variables and enhance the study's interpretability. The timing and frequency of data collection; the setting in which data collection is to take place; and the nature of communications with the subjects. The Stufflebeam model, context, input, process and product (CIPP) as described by Madeus et al (1983:118) was used in this longitudinal study to serve as a framework for data collection to determine if the objectives of the enrolled nurse/registered nurse upgrade programme have been achieved.

### ***1.9 Ethical Considerations***

The Ministry of Health National Research Committee permitted the researcher to undertake this study (see Appendix 1. The researcher protected the rights of the subjects by maintaining confidentiality of those who participated in the study. The graduates in this study, were not to fill in their names in the self-administered questionnaires while the supervisors were identified by their places of work and not by names. The participants in this study were informed of the purpose and the potential benefits of the study and their right to withdraw from the study anytime if they wanted to withdraw.

### ***1.10 Definitions***

The following definitions of key concepts used in this study are provided to ensure that the reader will share the researcher's interpretations of these concepts.

#### ***Effectiveness***

Effectiveness refers to the extent to which a programme or policy is achieving the goals (Berk & Rossi 1999:13). In this study, effectiveness would refer to EN/RN upgrade programme adequately preparing the graduates to deliver primary health care services to the communities. The programme should be offered within one year or two years, and should be at an affordable cost to the Government of Botswana in order to cover a large population of the serving/employed enrolled nurses. The previous programme upgraded 80 enrolled nurses at the cost of P156, 000 per student per year during NDP 6 (1985-91).

#### ***Efficiency***

Efficiency is a state of competence and within an operation; efficiency is producing effectively with minimum waste, expense or unnecessary effort (Waltz & Bond 1985:258). In this study, efficiency refers to implementation of the EN/RN upgrade programme within one to two years to produce competent registered nurses with fewer costs to the Government of Botswana. The programme should not be too long and should cover only the content that was lacking in the basic enrolled nursing programme.



### ***Enrolled Nurse***

An enrolled nurse means a person who has completed such period of training in practical nursing, and passed such examinations in such courses of instruction as may be determined by the Nursing and Midwifery Council of Botswana. A period of training for enrolled nurses according to Nurses & Midwives Act (1995:A1) is two years. For the purpose of this study, an enrolled nurse would refer to all enrolled nurses who completed the two year basic enrolled nursing programme as well as those enrolled nurses who have done additional post basic qualifications such as midwifery and ophthalmic nursing.

### ***Evaluation***

Evaluation is the collection and analysis of information by various methodological strategies to determine the relevance, progress, efficiency, effectiveness and impact of programme activities (Poteet & Pollock 1986:41).

For the current study, evaluation refers to collection and analysis of information on the graduates of the upgrade programme from 1994 to 2000 to determine the extent to which the objectives of the programme have been achieved. The Stufflebeam's CIPP model of evaluation will be used as a framework in determining the extent to which the programmes objectives have been achieved.

### ***Primary Health Care***

Primary health care according to Alma-Ata (1978:34) is essential health care made

universally accessible to individuals and families in the community by means acceptable to them, through their full participation and at a cost that the community and the country can afford. In this study, primary health care refers to the development and delivery of health services to the people of Botswana through their participation and involvement and inter-sectoral collaboration with all other relevant ministries and departments involved in the development and delivery of health services.

### ***Programme***

A programme is a systematic effort to achieve pre-planned purposes such as the improvement of health, knowledge, behaviour, attitudes and practice. Programmes may be small or large and may take place in differing geographic or political climates and health care settings. A programme may vary in structure, purpose, organisation and constituents (Fink 1993:2).

In this study, a programme refers to the EN/RN upgrade programme that is offered in one-year full-time residential and two years on part-time distance education.

### ***Programme Evaluation***

Programme evaluation is a diligent investigation of a programme's characteristics and merits and it provides information on the effectiveness of the programme in order to optimise the outcomes, efficiency and quality of health care (Fink 1993:2).

For this study programme evaluation refers to the evaluation of the enrolled

nurse/registered nurse upgrade programme to determine the extent to which the programmes goals and objectives have been achieved and the extent of its impact and cost to the Government of Botswana. The Stufflebeam's CIPP model will be used as a framework for evaluation.

### ***Registered Nurse***

A registered nurse means a nurse who has completed a programme of basic generalised nursing education and passed such examinations in the practice of nursing as determined by the Nursing and Midwifery Council of Botswana (NMCB) and University of Botswana and is registered in the appropriate register of general nurses (Nurses & Midwives Act 1995: A2). The length of training for the programme is three years.

### ***1.11 Organisation of the Report***

In order to create a clear reference for studying the identified problem, the research report is divided into five chapters as follows:

Chapter 1: Introduction and orientation to the study.

Chapter 2: Review of literature that is relevant to the study.

Chapter 3: Research design and methodology that was used for collection of data in the study. Clarification of role of the coordinator and other participants.

Chapter 4: Analysis of data and presentation of the findings.

Chapter 5: Summary of the results and interpretations, limitation of the study and

recommendations and conclusion

.

### ***1.12 Conclusion***

In this chapter, the country, population and political system, development of the health care system, primary health care system and nursing education system were described.

The chapter also described how the nursing education system was influenced by the socio-economic and political systems of the country. The background to the problem, statement of the problem, purpose of the study, objectives of the study, assumptions underlining the study, significance, scope, research design/methodology, ethical considerations in this study were described. Terms as used in this study were defined to enable the reader to understand the context in which the terms were used.

In conclusion, an overview of the lay out of the research was given. The next chapter presents literature review on those aspects that are relevant to the study.

## CHAPTER 2

### LITERATURE REVIEW

#### *2.1 Introduction*

In this chapter, the researcher reviewed literature that was pertinent to the subject under study. The purpose of a literature review for a research project is to find out what has been studied, the gaps in the studies, how dependable the studies are and to present the findings of what has been studied (Polit and Hungler 1993:41), (Bless and Higson-Smith, 1995:23).

In this chapter, the researcher considered and followed the guidelines by Bless and Higson-Smith (1995:23) and in particular, the researcher reviewed:

- Selected evaluation models
- Selected evaluation models used in evaluating nursing programmes
- Selected literature on basic nursing education curriculum that integrated the primary health care concepts and principles and
- Selected literature on reorienting basic nursing curriculum to primary health care concepts and principles.
- Selected literature on the restructuring of nursing education in Botswana.

The purpose of reviewing the evaluation models was to enable the researcher to decide on which model would be appropriate for evaluating the EN/RN upgrade programme and to also find out which basic nursing education curriculum had successfully integrated the primary health care concepts and whether these have been evaluated.

Since the Alma Atta (1978) declaration by governments, there has been very little done to reorient the basic nursing education curriculum to primary health care. The use of evaluation models in nursing and schools of nursing also started in the 1980s and literature in this area has been relatively scarce hence the use of literature much older than ten years in this study.

## ***2.2 Programme Evaluation***

Programme evaluation as described by Fink (1993); Rossi & Freeman (1993:6); Hamilton (1993:148); Saunders (1992:2); Scriven (1983:123); and Poteet & Pollock (1986:41), is a diligent investigation of a programme's characteristics and merits. It provides information on the effectiveness of projects to optimise the outcomes, efficiency, and effectiveness. They believe evaluations can analyse a programme's structure, activities, and organization and examine its political and social environment. Evaluations can also appraise the achievement of a project's goals and objectives and the extent of its impact and costs.

The evaluation study of the EN/RN upgrade programme was undertaken in line with the definition and purpose of programme evaluation as referred to by the different

authors above. The results of the study will provide information on the efficiency and effectiveness of the programme to the stakeholders namely, Botswana government officials, Institutes of Health Sciences, University of Botswana and the Kellogg Foundation as sponsors/and collaborating partners in this project.

The other area of clarification that the researcher sought in this study was in the use of evaluation and evaluation research as discussed by Clark (1983:57). There are some difficulties encountered during the evaluation process as the two terms have been used interchangeably. Evaluation according to Krichbaum et al (1994:395) is the process of rendering judgement to determine the worth, merit or quality of a particular product, service or phenomena. The better one can define phenomena, the better one can evaluate it. Evaluation compares what should be and this assumes that a programme has clearly spelled out objectives or a statement of intent so that it can be evaluated. It has been observed that the programmes often lack clearly defined objectives and this makes evaluation difficult if programme objectives have been not clearly defined.

Rossi & Freeman (1993:5) define evaluation research as a systematic application of social research procedures for assessing the conceptualisation design and implementation of social intervention programmes. They further indicate that evaluation is a political and managerial activity, an input into the complex mosaic from which emerge policy decisions and allocations for the planning, design implementation and continuation of programmes to better the human condition. In this sense, Rossi &

Freeman (1993) argue that evaluation research also needs to be seen as an integral part of the social policy and public administration movements. In conclusion, Rossi & Freeman indicate that evaluation is not necessarily research though some research methods may be used in evaluation.

### ***2.3 Purpose of Programme Evaluation***

Programme evaluation is an integral component of the educational process in both nursing and education. However, a review of nursing literature according to Sohn (1987:27) showed a wide agreement that nursing programmes have not been evaluated with a comprehensive and systematic approach. Herbener & Watson (1992:31) also indicate that nurse educators and administrators are faced with challenges to maximize the value of educational resources by increasing productivity, allocating resources appropriately and accounting for their use. On-going evaluations are therefore necessary in meeting these challenges and maintaining high standards in nursing education and practice to improve the quality of care.

The purpose of programme evaluation as seen by Poteet and Pollok (1986:41) is to diagnose problems, weaknesses and strengths and to test new and different approaches for accomplishing and advancing the philosophy, objectives and conceptual framework of a nursing school and to improve the operation of all aspects of the school of nursing. Rossi and Freeman (1993:425) on the other hand state that evaluations are done with a purpose that is practical and political in nature, and as such, they involve more than



simply appropriate research procedures. Government of Botswana, for example, to efface the enrolled nursing programme, upgrade the practicing enrolled nurses to registered nurses, and evaluate the extent to which the objectives of the programme have been achieved, made a political decision. The authors have also observed that evaluations in higher education were viewed primarily as a way of testing effectiveness with little or no emphasis on efficiency, yet a sound programme evaluation plan, as a method for measuring accountability, can lead to both organizational effectiveness and efficiency. It is based on this that in this study both efficiency and effectiveness of the upgrade programme were assessed.

It is through evaluations, Rossi & Freeman (1993:7) further elaborate that we learned from the past twenty-five years that people are very difficult to change and that a programme budget, well-meaning professionals, and good intentions do not readily overcome poverty. Likewise, the current HIV/AIDS scourge is an example of how difficult it is to change human behaviour. According to Country Review for Botswana (1999:4-8) the level of awareness in Botswana indicate that the majority of people (90%) now know about HIV/AIDS. This knowledge has not been translated into change in their behaviours. The report shows that there is no reduction in the infection rates of over 17% for general population and 29% for the 15- 49 age group

Rossi & Freeman (1993:5) further state that researchers use social research methodologies to judge and improve the ways in which human service policies and

programmes are conducted, from the earliest steps of defining and designing programmes through their development and implementation. The purpose for this is that policy makers, funding organizations and programme managers need to distinguish useful current programmes from ineffective and inefficient ones so that they can plan and design programmes that can effectively and efficiently have desired impact on the needs of communities. The authors also contend that evaluation research, unlike basic research, is undertaken to solve practical social problems and therefore the authors see evaluation research as evaluation. In the current study, the researcher used evaluation and evaluation research interchangeably as Rossi & Freeman view the two definitions.

#### ***2.4 Evaluation Models***

Madeus et al (1983:3-18) record the history of programme evaluation in six periods namely, Age of Reform (1800-1900); Age of Efficiency and Testing (1900-1930); Tylerian Age (1930-1945); Age of Innocence (1957); Age of Expansion (1958-1972); and Professionalisation Age (1973 to present). During these periods a lot was done on the development of models for evaluating education by a number of educators such as Tyler (1930); Stufflebeam (1971); Scriven (1974); Stake (1975); Guba and Lincoln (1981) just to mention a few.

A model according to Good (1973: 371) aids in the understanding of a structure or a process and should describe phenomena in order to become comprehensible. Scriven (1974) believes that the plethora of evaluation models provides a fascinating perspective on the complexity of this complex subject. The purpose of evaluation

models is to provide different ways of conceptualising the manner in which systematic educational evaluation should take place. Unlike traditional evaluation methods, Popham (1988:25) states that models cover a wide range of evaluation variables to study the many facets of education. Sohn (1987:27) argues that traditional methods ignore the multi-faceted nature of education but only compare results with stated objectives as a basis of evaluation. Important data such as student experiences and unintended outcomes are excluded. Providing information only at the end of the programme does not help to modify and improve a programme while it is in progress and cannot reveal causes of problems that hinder programme improvement.

Although models differ in many ways, they share the same basic assumptions of liberal ideology that includes the principle of freedom and choice (Madeus 1983:62). The author believes that it is not an easy task to select a model for evaluation because evaluation of a programme addresses many variables. In evaluation, one may not necessarily evaluate all the variables in a model or models. Ediger et al (1983:195-199) believe that using a model has many advantages because a model:

- Provides direction during evaluation
- Indicates the parameters for the evaluation
- Supplies a systematic approach and it specifies relationships of the parts in the evaluation.

### ***2.4.1 Ralph Tyler***

Ralph Tyler coined the term educational evaluation in 1930, which means assessing the extent to which the stated objectives had been achieved as part of an instructional programme. He conceptualised a broad and innovative view of both curriculum and evaluation. Tyler's views on evaluation helped teachers to improve on their courses and tests. He conceptualised evaluation as a comparison of intended outcomes with actual outcomes. This view had an advantage over previous approaches in that it avoids subjectivity of professional judgment or accreditation approach by focusing on defined objectives that must be realistic, attainable, and achievable. Tyler identified the following four basic questions that should be answered in developing curriculum and plan of instruction:

1. What educational objectives are the students to be helped to attain?
2. What learning experiences can be provided that will enable the students to attain the objectives?
3. How will learning experiences be organized to maximize their cumulative effect?
4. How will the effectiveness of the programme be evaluated?

In answering each question, the rationale suggests the kinds of empirical data that are made to inform judgments and the kinds of criteria to guide the judgments. In selecting educational objectives according to Madeus (1983:75), data regarding the demands and opportunities in contemporary society, information about needs, interests, activities,

habits, knowledge, and skills of students, and potential contributions of relevant subject matters can inform the committees in a more comprehensive way than most curriculum groups have considered. Tyler's model is still being used widely in the development of instructional objectives in a number of educational institutions (Madeus et al 1983:67-78; and Popham 1988:25-27).

#### ***2.4.2 Scriven's Goal Free Model***

Scriven (1983:229) defines evaluation as a systematic and objective determination of the worth and merit of an object. Evaluation can best be implemented by engaging an independent evaluator to render a judgment of an object based on the accumulated evidence about how it compared with similar objects in meeting the needs of consumers. This approach he called summative evaluation and he believes this is more important than formative evaluation in which an evaluator collects and reports data and judgments to assist the development of an object. Scriven in his model distinguishes between formative and summative evaluations. Formative evaluation according to him focuses on programme improvement and development while summative evaluation focuses on accountability, accreditation, selection, and continuation of a programme.

Scriven has been concerned about bias in evaluation and how this had impact on efficiency of the programme. Unlike Tyler, his model insists that the evaluator should not know the objectives of the programme in order to avoid bias. The evaluator should search for all intended and unintended outcomes in order to reduce bias in evaluation.

Scriven (1983:232) had observed that programme managers and legislators initiated and evaluated programmes. He argued that if evaluators know the objectives of the programme they tend to pay more attention in a particular direction because looking for unintended outcomes tended to count against them for future contracts.

Scriven has developed a checklist for evaluation that should contain the following:

- Description of the client after some discussions with the consumers, staff, audiences, and other stakeholders in the programme
- Client and in particular who is actually commissioning the evaluation and the roles the officer/officers are playing in the evaluation.

Background and context of the evaluation and whatever is being evaluated, fears and hopes should be documented in order to have a goal free evaluation. Resources, consumers, values, processes, outcomes, generalizability, exportability, saleability, costs, comparisons, significance, report and meta evaluation should all be described in the goal free evaluation according to Scriven (1983:258-259). The focus of his model is on measurement of outcomes and its purpose, nature of decision-making, and it is summative. Though Scriven's goal free model for evaluation has contributed significantly to the development of evaluation theory, (Scriven 1983:229-260) and Popham (1988:27-30) it has been observed that the model has not been used often in the actual practice in nursing Sohn (1987:28).

### ***2.4.3 Stake Countenance Model***

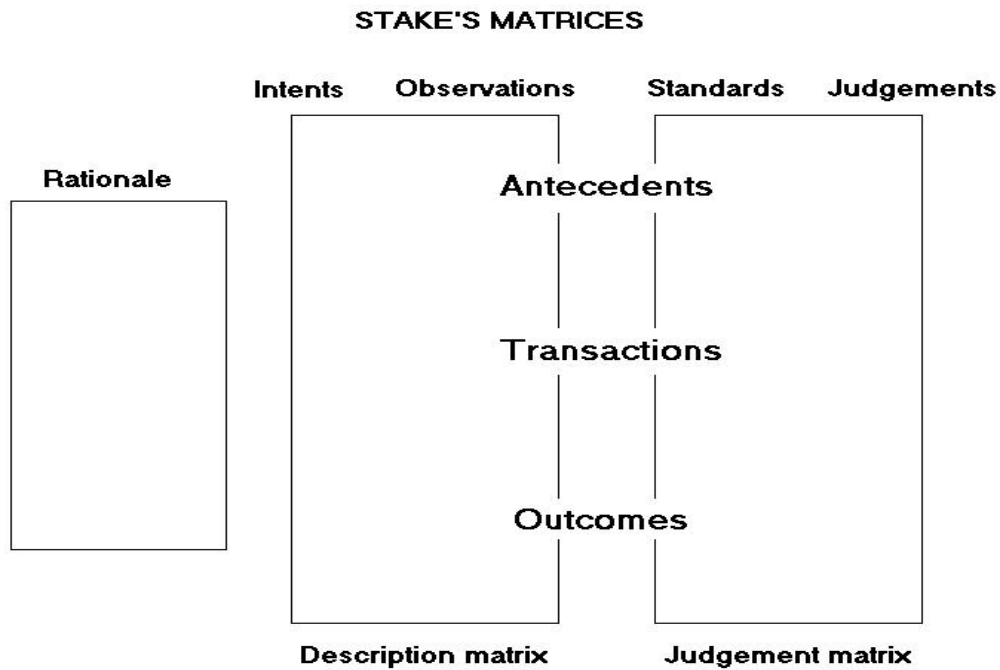
This model is often referred to as responsive. Stake believes that responsive evaluation is based on what people do naturally to evaluate things they observe and react and as a result, they make decisions and judgments. Stake believes that an educational evaluation can be responsive only if it:

- Focuses more on programme activities rather than programme intents
- Responds to audience requirements for information
- Refers in the report the different value perspectives of the people and the successes and failures of the programme.

The focus of the model is on measurement of intended versus the actual outcomes and the effects of the programme. Its purpose and nature is decision- making and is summative. Stake indicates that when using this model the evaluator should first identify and describe the intents and observe the effects of the programme in terms of the following:

- Antecedents which are the conditions that exist before implementation of the programme
- Transactions which include all the experiences that students have during programme implementation
- Outcomes that are the achievements of the programme .

The evaluators can then judge the merits of the programme based on the assessment of congruency between the intents and the observed effects. The relationships of these are as reflected in Figure 2.1. The focus of measurement is on intended outcomes versus actual outcomes and effects. The purpose and nature is decision making and it is summative (Stake 1973:287-303; Popham 1988:31-33; Brinkerhoff 1983:9-10).



*Figure 2.1 Stake Countenance Model. Adapted from Journal of Continuing Education and Nursing (Yeaw 1987:125)*

#### **2.4.4 Stufflebeam Context, Input, Process and Product Model (CIPP)**

Stufflebeam believes that the most important purpose of evaluation is not to prove but to improve and make judgments about the worth of the programme. The model was developed in the late 1960s as an alternative to other views about evaluation that were prevalent at that time. The model is referred to as decision-making model because it emphasizes that evaluation is done to help decision makers make decisions effectively



based on defensible grounds. Stufflebeam believes that full implementation of the CIPP approach would provide information to use to address these questions:

#### ***2.4.4.1 Context Information***

What needs were addressed; how pervasive and important are these needs and to what extent were the projects objectives reflective of the assessed needs?

#### ***2.4.4.2 Input Information***

What procedural and budgeting plan was adopted to address the needs; what alternatives were considered; what was the reason for choosing one alternative over others and to what extent was it a reasonable, potentially successful and the cost effective response to the assessed needs?

#### ***2.4.4.3 Process Information***

What are the defects in the procedural design or in the implementation of the programme; and to what extent was the programme implemented according to plan; what are the potential procedural barriers in the implementation of the programme; how and for what reasons was the programme design modified or refined if any?

#### ***2.4.4.4 Product Information***

What are the results of the programme both positive and negative as well as intended and unintended; how did the stakeholders judge the worth and merit of the outcomes

and to what extent were the needs of the target population met? Information collected to answer these questions will enable the evaluator to make defensible decisions in each evaluation type.

Stufflebeam has described the four types of evaluation. In using this approach for evaluating programmes, Stufflebeam advises that the decisions that are taken must relate to the objectives that are addressing the identified needs and the methods for collecting data must relate to what is being evaluated as reflected under the four evaluations in Table 2.1 on page 51.

**Table 2.1 Four Types of Evaluation Adopted from Stufflebeam (1983:129)**

	<b>Context Evaluation</b>	<b>Input Evaluation</b>	<b>Process Evaluation</b>	<b>Product Evaluation</b>
<b>Objective</b>	To define the institutional context, to identify the target population and assess their needs, to identify opportunities for addressing the needs, to diagnose problems underlying the needs, and to judge whether proposed objectives are sufficiently responsive to the assessed needs.	To identify and assess system capabilities, alternative programme strategies, procedural designs for implementing the strategies, budgets, and schedules.	To identify or predict, in process, defects in the procedural design or its implementation, to provide information for the pre-programmed decisions, and to record and judge procedural events and activities.	To collect descriptions and judgments of outcomes and to relate them to objectives and process information, and to interpret their worth and merit.
<b>Method</b>	By using such methods as system analysis, survey, document review, hearings, interviews, diagnostic tests, and the Delphi technique.	By inventorying and analysing available human and material resources, solution strategies, and procedural designs for relevance, feasibility, and economy; and by using such methods as literature search, visits to exemplary programmes, advocate teams and pilot trails.	By monitoring the activity's potential procedural barriers and remaining alert to unanticipated ones, by obtaining specified information for programmed decisions, by describing the actual process, and by continually interacting with and observing the activities of project staff.	By defining operationally and measuring outcome criteria, by collecting judgments of outcomes from stakeholders, and by performing both qualitative and quantitative analyses.
<b>Relation to Decision making in the change process.</b>	For deciding upon the setting to be served, the goals associated with meeting needs or using opportunities and the objectives associated with solving problems, i.e., for planning needed changes; and for providing a basis for judging outcomes.	For selecting sources of support, solution strategies, and procedural designs, i.e., for structuring change activities, and to provide a basis for judging implementation.	For implementing and refining the programme design and procedure, i.e., for effecting process control, and to provide a log of the actual process for later use in interpreting outcomes.	For deciding to continue, terminate, modify, or refocus a change activity, and present a clear record of effects (intended and unintended, positive and negative).

#### ***2.4.4.5 Context Evaluation***

The main objective is to assess the overall status, identify deficiencies, make an inventory of the strengths that could be used to remedy the deficiencies and diagnose the problems to improve the situation. The other aim is to examine the goals and priorities and align them with identified needs. The results of the context evaluation are used to defend the efficacy of ones goals and priorities.

In the current study, the results of comparing the enrolled nursing programme with the registered nursing programme and the high costs that the Government of Botswana was incurring in upgrading enrolled nurses were used to defend the effacing of the enrolled nursing programme and the upgrading them to registered nurses.

#### ***2.4.4.6 Input Evaluation***

The input evaluation helps to describe a programme in order to bring about needed changes. It searches for barriers, constraints, and potentially available resources that can be taken into account when activating the programme. It helps in considering alternatives to develop a workable plan and avoid wastage by undertaking projects that are likely to fail. Input evaluations can be used to prepare budgets for supporting or funding programmes or can provide a forum for groups to reach a consensus. The records can help decision makers in authority to be accountable for the choices they made concerning the programme.

In the current study inadequate preparation of faculty to implement the upgrade programme, particularly using distance education was identified. The decision makers in the MOH requested the government to fund the IHS faculty to develop skills in the development and implementation of the distance education programme for upgrading the enrolled nurses in the country. As a result, travelling seminars to institutions offering distance education and upgrade programmes such as University of South Africa (UNISA), Wayne State University, Madonna University, University of Illinois in the United States of America (USA) and Open University, West Bank University and the Nursing Times in the United Kingdom (U.K) were undertaken. Information from this input evaluation was also used to prepare a budget for funding the upgrade programme from the Kellogg Foundation and Ministry of Finance and Development Planning (MFDP).

#### ***2.4.4.7 Process Evaluation***

The main objective is to provide feedback to managers and staff about the achievement of the goals and objectives in an efficient manner. The other objective is to make periodic assessments of how the participants accepted the programme and their ability to carry out the new roles after the programme. Process evaluation provides a record of what was actually implemented against what was initially planned, the costs incurred, and the stakeholders and participants judgments on the overall quality of the programme. During process evaluation, an advisory group may be needed to help with identifying concerns and problems to be addressed. Records in process evaluation are

useful for promoting improvement, support, and accountability, which are vital sources of information for interpreting product results, and in this way, they foster understanding of phenomena being investigated.

In the current study, the need to identify and train preceptors to assist the students in their clinical attachments was identified and the preceptors were trained. The preceptors were also familiarised with the upgrade curriculum and its implementation and were evaluated to identify their knowledge of supervision of students. Books and other learning materials were also identified as a problem and were adequately provided in all facilities where students were learning. Some facilities were also upgraded to improve accommodation as well as clinical facilities for learning.

#### ***2.4.4.8 Product Evaluation***

The purpose is to measure, interpret, and judge the attainment of the objectives of the programme. Product evaluation should be extended to assess the long-term effects and the performance in relation to previously identified needs. Stakeholders and recipients of the programme may also assess the performance of the programme. The evaluation should also search for the intended and unintended outcomes both negative and positive. The reports may also be done at different stages, showing costs incurred and indicating the long-term impacts of the programme if any. The main use of the product evaluation is to determine whether the programme is worth continuing, modifying, repeating or extending in other settings. It is an essential component of

accountability and can be used for securing funding and political support. The focus of measurement is on intended versus actual outcomes. The purpose and nature is decision making and it is summative (Stufflebeam 1983:118-140; Brinkerhoff 1983:10-12; Popham 1988:33-37).

## ***2.5 Evaluation Models in Nursing***

### ***2.5.1 Rationale for use of Evaluation Models in Nursing***

Munro (1983:35) indicates that nurses are being challenged to become change agents in the health care delivery system. Nurses as leaders are being asked to assess the current practice and to suggest and participate in new and innovative programmes. They need to perform needs assessment to determine where change is needed and then design programmes, implement them and evaluate the results. In agreement with Munro's statement, Brady & Netusil (1988:226) affirm that nurse educators recognize the need for accountability and programme evaluation as revealed by literature. As such, they have developed sensitivity to the issues of programme evaluation, are interested, and committed to demonstrating accountability to their various audiences through the process of programme evaluation. They also recognize the contribution a model of programme evaluation can make to the evaluative procedure. Hamilton (1993:148) on a different view from Munro (1983:35); Brady & Netusil (1988:226) argue that evaluation is an important and inherent component of the nurse's daily activities in all health care settings such as the clinical, home or in the school. In these settings, nurses evaluate many dimensions related to patient care, student performance,

programmes and procedures in order to make decisions. Though evaluation is important to nurses, the author deplors that most of the time nurses do not understand the methods that are used nor do they know whether they are doing evaluation, research, or quality assurance activities. The author further attests that there is an urgent need under the current financial constraints for nurses to make evaluation a priority in their daily activities in order to justify existence of nursing as a profession.

### ***2.5.2 Selected Evaluation Models in Nursing***

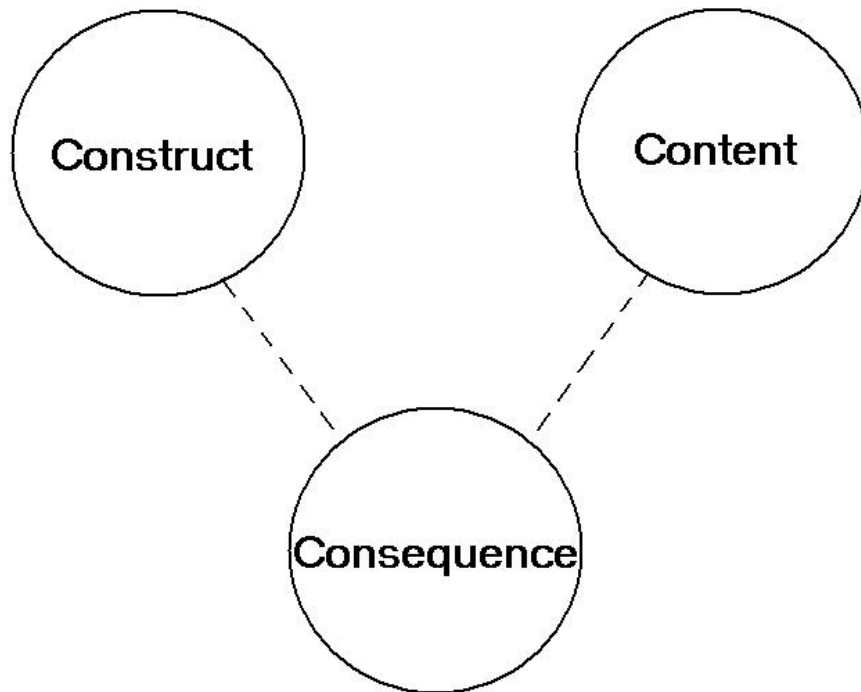
There are eight evaluation models that the researcher found had relevance in the current study. Out of the eight evaluation models, only one was used as a framework in the evaluation of the EN/RN upgrade programme. Out of the eight-evaluation models used in nursing, only two were done in Southern Africa.

#### ***2.5.2.1 Yeaw Study***

Yeaw (1987) developed a theoretical framework based on the evaluation models of Tyler, Scriven, Stake, and Stufflebeam and showed how these evaluation models could be used in continuing education programmes. In particular, Stake's model was used in evaluation of the continuing nursing education (CNE) programme at Texas Tech University Health Science Centre School of Nursing.

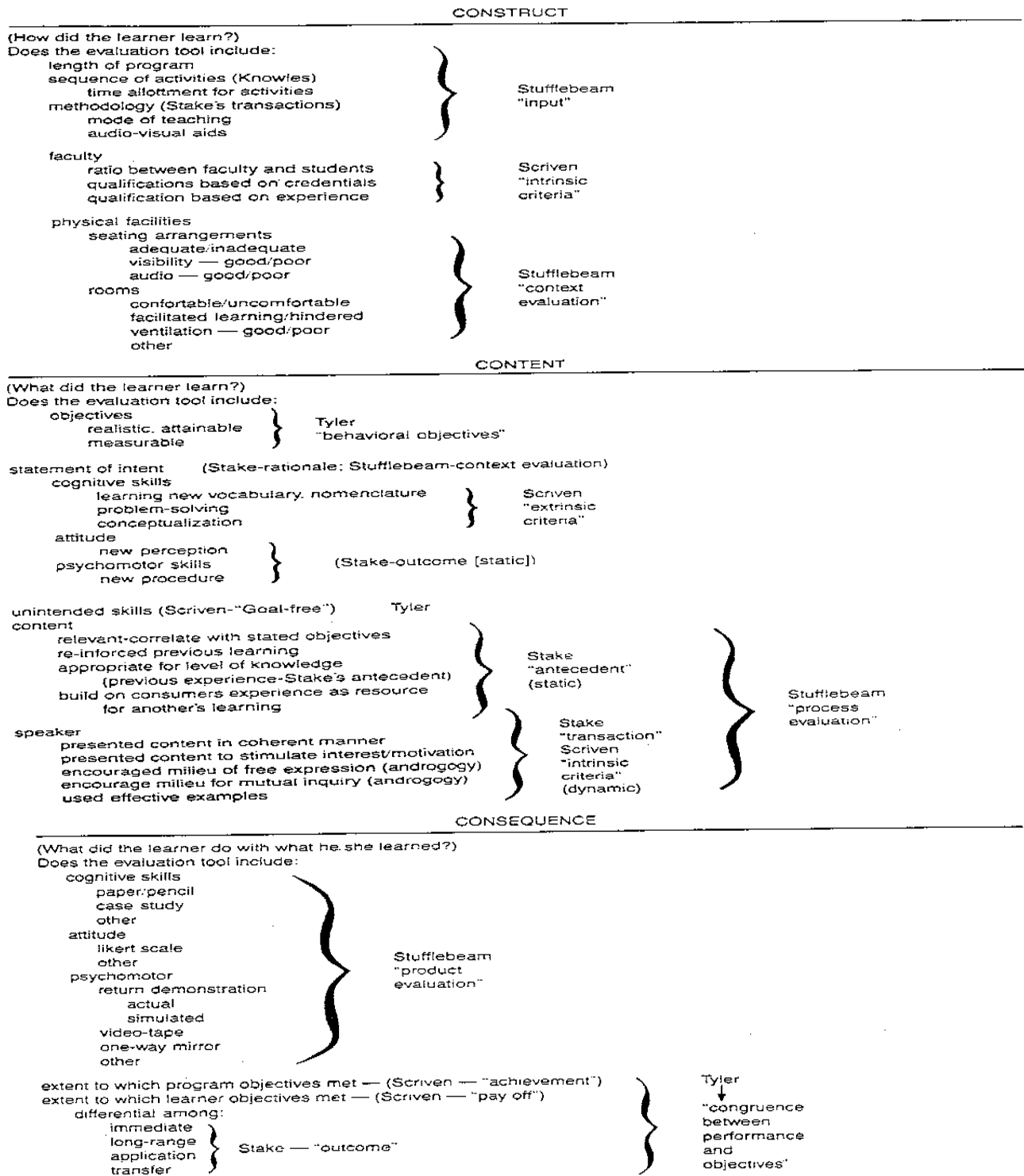


## Theoretical framework



*Figure 2.2 Theoretical Framework adopted from Journal of Continuing Education in Nursing (Yeaw 1987:125)*

From the theoretical framework above Yeaw (1987:127) argues that theories of Tyler, Scriven, Stake, and Stufflebeam, emphasize that the theoretical framework which best lends itself to the principles of conceptual relationships and inquiry are the components of construct, content and consequence. The description of how the author conceptualised the four evaluation models by Tyler, Stufflebeam, Stake, and Scriven fit into the theoretical framework she developed is shown in Figure 2.3.



**Figure 2.3** *The Overview of Different Evaluation Models by Yeaw 1987:127. Adopted from Journal of Continuing Education in Nursing 1987*

The overview of different models by Yeaw gives one a broad idea of the relationships of these models to each other and how one can select an aspect of a model to borrow for use in an evaluation. Sometimes it is difficult to see these relationships without the analysis that the author eloquently discussed.

### ***2.5.2.2 Stake Model in Evaluation of Nursing Curriculum***

Ediger et al (1983:196) served as external evaluators for evaluating nursing curriculum for University of Minnesota School of nursing. They reviewed with the faculty Stufflebeam, Provus, Tyler and Stake evaluation models in order to select an appropriate one for evaluating nursing curriculum in their University. The following questions assisted them in the selection of the model:

- What are the decisions to be made because of this evaluation?
- What data are needed to make the decisions and
- What will be the roles of persons who are involved in the various aspects of the evaluation process?

After examining the three questions with the faculty, they identified that the Stake Countenance model was appropriate for evaluating their curriculum for the following reasons:

- Rationale for evaluation helped them to collect data about the programme philosophy, objectives, and conceptual framework.
- Description and judgment matrices provided the scope of the evaluation.

The Faculty planned for evaluating outcomes of the curriculum and on going activities. Explicit standards were identified and this facilitated objectivity in the evaluation process. Faculty was involved at all levels because they fully understood the model and they communicated with other faculty and external evaluators about the model. Because the model divides evaluation tasks into small segments, completed tasks were easily identified and this created a sense of accomplishment among the faculty. They feel the use of the model makes an evaluation exercise more manageable and enjoyable and can improve the quality of the evaluation, but they also caution that the use of the model will not eliminate all the problems and frustrations of curriculum evaluation.

### ***2.5.2.3 Staropoli and Waltz Model***

Herbener and Watson (1992:28-29) describe this model showing how it can be used in evaluation of nursing programmes. The model covers four distinct and yet not interrelated areas of evaluation namely; school, programme, sub-programme, and course level. The focus of measurement is on concerns, interests of the faculty across all programmes and the purpose and nature are decision-making, and it is formative and summative. The model is useful where more than one programme is offered within a school. The evaluation is in terms of inputs, operations and outcomes and the educators make decisions on five major areas:

- Who will be involved in the evaluation?
- This question requires that the evaluator ensure that input from all who will be affected by the findings of the evaluation should be taken into account.

- Why is the evaluation being conducted?
- What is to be the subject of evaluation?
- How is the evaluation going to proceed?
- When should the evaluation occur?

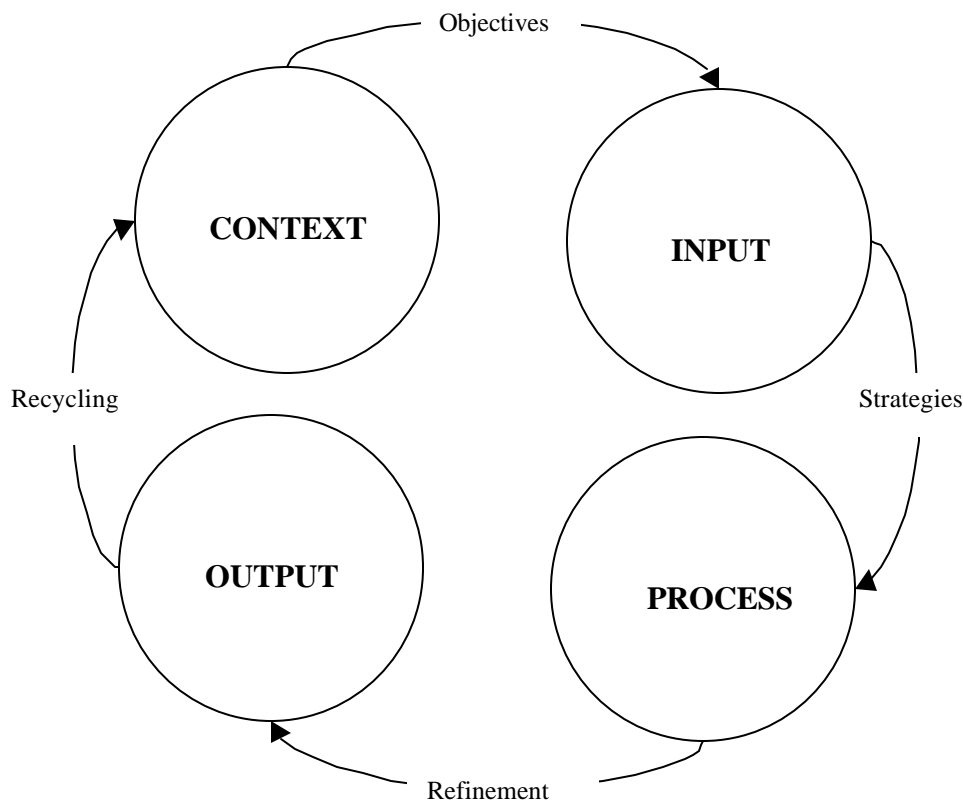
Herbener & Watson (1992:28-29 and Staropoli and Waltz 1978) have indicated that instruments for collection of data on this model already exist and these can be modified according to the needs of individual's schools

#### ***2.5.2.4 Stufflebeam CIPP Model in Evaluation of Nursing Programmes***

In reviewing literature, the researcher found that the Stufflebeam CIPP model was used in evaluation of nursing programmes either in clinical settings or in the schools (Clark et al 1983; Yeaw 1987; Sohn 1987; Sarnecky 1990; Watson & Herbener 1990&1992; and Hamilton 1993). Clark et al (1983) used the Stufflebeam CIPP model to evaluate the baccalaureate-nursing programme at the Catholic University of America School of Nursing (CUA). They chose this model because they believed the model ensured a systematic and comprehensive evaluation that will reveal the effectiveness and worth of the curriculum. The flow chart on page 62 shows how they started the evaluation in 1975 and completed it in 1981 and all the activities they undertook in context, input, process and product evaluations and how they conceptualised the use of the model in curriculum evaluation.

Their findings indicate that the Stufflebeam model can be used effectively and systematically to evaluate curriculum of a nursing programme. Though the components in Stufflebeam CIPP would provide a framework for clearly directing the evaluation process, Clark et al (1983:57) indicate that they encountered some difficulties during the evaluation process.

Firstly, there was a problem of a large group to work on the implementation of the evaluation. In order to overcome this difficulty a small curriculum committee was organized to oversee the implementation process. Poteet & Pollock (1986:46) also found out that large committees did not usually accomplish major outcomes.



**Figure 2.4** *Stufflebeam Evaluation Model as perceived by Clark et al 1983*

In the current study the researcher, bearing in mind these problems that were identified, worked with the National Curriculum Committee, (Bility 1992-1993; Maskey 1995-1997 from MOH Continuing Education Unit which was latter renamed “Curriculum Unit”; Implementation Task Force (1995-1997; Acheson & Ncube 1997 from MOH Curriculum Unit; Kellogg Consultants Reports 1990-1999 and IHS Serowe faculty (1990-2000) IHS/UB curriculum committee and the subcommittees at different stages of the evaluation process of the upgrade programme.

Secondly, Clark et al (1983) found out that a great deal of time was needed to organize the implementation process and to collect data for product evaluation. It was also observed that there was:

- Lack of uniform data on student’s demographic and academic information and
- There was no uniform course evaluation tool.

Based on these problems the authors made the following recommendations for those who would be using the Stufflebeam CIPP model in curriculum or programme evaluation that:

1. There should be total commitment of the entire faculty and administration to the evaluation process and the model selected to implement the process.

In the Petro-Nustas (1996) study the author recommended commitment at the highest level in an organization in order to ensure commitment of the entire staff during the evaluation.

2. Formation of a representative faculty committee of five to six members to organize curriculum evaluation.
3. Securing adequate research and secretarial support for tool development, data collection and data analysis.
4. Development of a uniform data sheet on each student record that summarizes demographic and academic information.

#### ***2.5.2.5 Petro-Nustas Study***

The second study was done by Petro-Nustas (1996) to evaluate the process of introducing a quality development programme in a nursing department at a teaching hospital in Amman, Jordan. The study was initiated in 1992 and was completed in 1995. The purpose of evaluation was to test whether the developed programme had achieved its goals, which were:

- Management of nursing manpower
- Improvement in the general patterns of communication
- Management of some operational and organizational level problems and enhancement of measures to facilitate staff development.



The findings of this study were that the Stufflebeam CIPP framework helped to undertake the partial evaluation of the programme. The partial fulfilment was due to the financial constraints due to the effects of the Gulf War.

Sarnecky (1990:27) alluded to the fact that the CIPP model was costly to implement because it takes long to implement and this may be one of the limitations of the use of the model in evaluation of nursing programmes.

- Lack of a committee to ensure the implementation.

The author emphasised the need to formulate a quality improvement committee as a control measure at the highest administrative level possible to ensure quality of evaluation.

#### ***2.5.2.6 Alison W. Schultz Study***

Alison W. Schultz did the third study in 1993 in a large University Hospital of 700 beds still using the Stufflebeam CIPP model. The purpose of the study was to evaluate the use of a clinical advancement system to determine if the goals of the project were achieved. The objectives of the project were:

- To increase staff nurse job satisfaction and
- To improve patient care through use of the clinical advancement system.

The problems that were identified were that poor patient care was due to staff dissatisfaction with conditions of services such as promotional opportunities and career development and professional advancement.

Under the clinical advancement, system nurses were to apply for promotions based on their clinical competencies. A committee was set up to review the applications, those nurses who were promoted were honoured in public ceremony, and they received a clinical recognition pin. The authors used both qualitative and quantitative methods to investigate the research questions.

Qualitative data were from records and administrator's interviews while quantitative data were from demographic data and nurses' attitudes about job satisfaction, promotional opportunities, and work rewards.

The findings of this study were:

- 1. *Context evaluation***

A list of applicants for vacant positions was compiled and made available.

- 2. *Input Evaluation***

Two new programmes were created, one for long service and the other for clinical advancement. Cost benefit analysis was conducted to compare indirect and direct dollar costs of the system with the dollar

benefit attributable to lower turnover rates among staff. The findings were that the clinical advancement system had lower turnover percentages in each year since the system was operational.

**3. *Process Evaluation***

During the eight years of the system, changes that were made were mostly procedural in nature. Transfers to other units, and the re-entry after leave of absence, are an example of procedural changes. Contrary to expectations for the clinical advancement system, the study did not demonstrate that advanced level nurses believed that they had good opportunities for advancement in the hospital.

**4. *Product Evaluation***

The intended outcomes showed that the respondents believed that promoted staff experienced improved job satisfaction simply because of the promotion. On the other hand, the system diminished job satisfaction for those who were denied the promotion but the promotion given to those whose clinical abilities were regarded poor by other colleagues. It was the feeling of the staff that the system did not evaluate actual clinical practice but relied heavily on documentation that staff believed did not necessarily reflect good clinical performance. The clinical advancement system produced professional growth among staff and this had indirect positive effect on patient care. The cost benefit analysis under clinical

advancement system showed that although the costs were high, there were lower turn over rates and the system achieved a high level of patient care as a result. The benefits of this system did not outweigh the costs incurred during the eight years when the system was in operation. The relationship between retention of nurses and the promotion under the system support the value of this system in retaining nurses in direct patient care. The author in conclusion recommended further investigation of the effectiveness of the clinical advancement system in general.

#### ***2.5.2.7 Bitzer Study***

Bitzer did the fourth study in 1997, at the Department of Nursing of a university in South Africa. The department was offering a Master's Degree programme using problem based learning (PBL) and community based learning (CBL) as its educational model. The study focused on formative evaluation using Stufflebeam's CIPP model. The aim of the programme was to prepare nurse educators in a self-directed manner for teaching in a problem / community based educational settings. Six nurse educators were funded for further studies so that they can provide supervision for students enrolled in this new programme. Two external evaluators were contracted to conduct an evaluation of the programme and report to the department. The objectives of the evaluation were:

- To obtain feedback from staff, students and more detailed information on courses and learning activities within the programme.

- To enquire about the management of the programme in general.

### *Methodology*

An evaluation team made up of ten members, external evaluators, and a programme coordinator, programme staff, community site supervisors, a learning facilitator, a course coordinator and five Masters Degree students reviewed the following documents:

- Personal and academic portfolios
- Reflective learning diaries
- Minutes of the facilitators meetings
- Learning contracts
- Classroom documents
- Course information

They made visits to the Department and to the Clinical Laboratory to collect data. Individual interviews ranging from thirty to sixty minutes were conducted for two consecutive days and the questions covered the following areas:

- Personal experiences in the programme both positive and negative
- Satisfying and dissatisfying learning /teaching experiences
- Mastery of goals and objectives
- Active involvement in learning
- The effectiveness of the personal and academic portfolios

- Continuous assessment and feedback on learning
- Utilization of learning sources
- Balance and volume of course work experienced programme impact and efficiency of administrative and other support.

Their findings revealed that the PBL/CBL was powerful in terms of learning that affects changes in knowledge, behaviour and skills in that transfer of learning to other nursing education settings seemed highly probable. Without exception, students were excited and challenged by the PBL/CBL approach and staff was positive about the potential outcomes of the programme.

The author has highlighted a number of limitations from this study. First, it seems programmes like PBL/CBL need adapted evaluation approaches because they are concerned with learning productivity and not teaching productivity.

Secondly, PBL/CBL in South Africa is relatively new and evaluators might find it difficult to identify comparable criteria since no such comparable programmes exist. Thirdly, it is questionable whether qualified PBL/CBL evaluators do exist in South Africa. Even among experienced programme evaluators, the author argues that theoretical background and practical experiences might be lacking and therefore training and retraining is very important for this type of evaluation. The fourth and last is that programme evaluators should be aware of the limitations of PBL/CBL

programmes. The programmes may become mechanical in nature because the students may be trained to acquire knowledge and skills to solve that particular problem and in this way, holistic and creative thought is lost because of the prescribed problem-solving processes.

Bitzer has revealed in his study the problems of evaluation in a primary health care oriented curriculum (PBL/CBL) and the author suggests that there is an urgent need to train more personnel in this area if primary health care goals have to be achieved.

#### ***2.5.2.8 Acheson and Mogobe Study***

Acheson and Mogobe (1993-4) at University of Botswana, Department of Nursing specifically focusing on summative evaluation unlike the Bitzer study that was focusing on formative evaluation, did the last study. This was the first curriculum evaluation study to be undertaken in the country. The study was on the evaluation of the Bachelor of Education in Nursing (B.Ed Nursing) programme that was started in 1978 to produce teachers for training institutions and administrators for clinical health facilities such as hospitals and district health teams. The purpose of the study was to provide input into the proposed graduate nursing programme that was envisaged and into the current B.Ed nursing curriculum in order to make the programmes relevant to the needs of the country. The authors used the National League of Nursing (NLN) study manual for development of the tools to collect data.

The sample was taken from all the graduates of the programme, their supervisors, and Ministry of Health officials in Botswana, Lesotho, Swaziland, Zimbabwe, and Malawi. Out of the 208 graduates, a sample of seventy-nine was selected representing 38%. They developed a forty-eight-item questionnaire for the graduates and twenty-six item questionnaires for the supervisors for collection of data. For focus group discussion, there were 115 graduates from the sample, six administrators from service and nine from nursing education. Their findings concerning the B.Ed curriculum were that the course load was too heavy, nursing courses were redundant, and conducting an independent research study was seen as a strength.

The graduates of the B.Ed Nursing programme recommended restructuring of nursing clinical courses and the addition of a computer course and an elective. As far as their utilization is concerned, the graduates felt being under utilized and under paid particularly those in administration and yet their supervisors at work were satisfied with their performance. There was no problem in utilization of the graduates in training institutions. Responses from supervisors revealed that the programme was appreciated but they felt that there was need for more clinical experiences in the programme and that administrators should be briefed about the content of the curriculum and what the graduates can offer in the service settings. Out of the seventy-nine graduates, fourteen (18%) had already gone for graduate studies overseas and some were still away on study leave. The Department used this information as evidence to develop a graduate programme within the country.



The five studies above have shown that the CIPP model can successively be used in the evaluation of nursing programmes or curriculum in the schools of nursing or the clinical areas. The context, input and process may be used in formative evaluation (Bitzer study) and product in summative evaluation (Acheson & Mogobe study).

### ***2.6 Rationale for Reorienting a Basic Nursing Curriculum to Primary Health Care***

The second part of the literature review was on how the primary health care concepts influenced the review of the basic nursing education curriculum. Fülöp and Roemer (1987:45) indicate that in 1978 virtually all governments had declared their intentions to advance the goal of Health for All through primary health care. Based on these intentions, the educational programmes for health personnel should be designed in such a way that they will further the implementation of health for all strategies within their countries. Within the primary health care framework, the eight essential elements of a primary health care service are:

- Education concerning prevailing health problems and methods of preventing and controlling them;
- Promotion of food supply and proper nutrition;
- The provision of safe water and basic sanitation;
- Maternal and child health care including family planning;
- Immunization against the major infectious diseases;
- Appropriate treatment of common diseases and injuries; and
- Provision of essential drugs. Alma Ata (1978:34).

These essential elements are the basis of educational programmes for health personnel for delivery of primary health services that are affordable, acceptable and accessible. The development of human resources for health has been a concern for WHO and member states, and as such, WHO Expert Committees have been looking into this issue as reflected in Technical Report Series (708:1984; 717:1985 and 738:1986). The WHO 1986 Study Group on regulatory mechanisms for nursing training and practice recommended that countries and regulatory bodies should, among other things, reorient the regulatory mechanisms for basic nursing education to prepare all nurses for an expanded role in primary health care as determined by countries particular health needs.

In order to operationalise this recommendation, it is therefore necessary to, among other things, initiate changes in the content of the basic nursing curriculum to incorporate the concepts of primary health care, ensuring that education, including field practice, is provided in the essential elements of primary health care in accordance with the defined scope of nursing practice. The Study Group further recommended that educational institutions should design educational programmes to prepare nurses for practice in primary health care settings by:

- Planning the curricula of such educational programmes in collaboration with health service personnel, community representatives and other health related sectors. In the current study, membership of the National Task Force on the Kellogg Consultancy Report was made up using this

approach (MH 9/84 ii 1991:125 and Task Force Report 1992:2).

- Orient all teaching staff involved in such programmes to primary health care and ensure their continuing education in this area
- Establish a system to evaluate such programmes and the graduates in order to determine whether the training and deployment of the graduates are appropriate for meeting the country's health needs.

### ***2.6.1 Model for Restructuring Nursing Curricula***

Hegge (1995:39-41) in support of the rationale for restructuring the registered nurse curricula indicates that the new world demands require professionals who will be flexible enough to adapt to the massive wave of change they will encounter in the health care system. The restructuring of the registered nurse curricula should reflect changes in higher education accreditation standards. The author proposes five models for restructuring the registered nursing curricula namely:

- A community model that focuses on the delivery of health care to families, groups and populations within the community.
- A health promotion model that focuses on restoration and promotion of health and professional issues and trends.
- A nursing diagnosis model that focuses on diagnosing human responses to health deviations, clinical nursing and nursing in expanding health care systems.
- A case management model that focuses on planning, teaching and health

education, case management across systems and interdisciplinary collaboration in a changing society.

- A caring model that focuses on caring for high-risk clients in alternate settings, advocacy, change process and clinical empowerment. Though Hegge does not call this model, primary health care, it encompasses all the concepts and principles of primary health care.

### ***2.6.2 Restructuring Nursing Education in Botswana***

The process of restructuring the nursing education system in Botswana to make it more responsive to primary health care started in 1988 with support from the Kellogg Foundation. Various Kellogg Consultants participated in this process, namely, Dr. Strickland and Dr. Cobin in 1989, Dr. J. Poindexter and Dr. Shaw Nickerson in 1990 and Dr. Gloria Smith in 1991. These consultants worked with nurse leaders in the review of the nursing education system. The researcher, in her capacity as Director of the Department of Human Resources for health at that time, worked closely with all these consultants (MH 9/84 vol. 1, 11 & 111).

The reports from all these consultancies revealed that the training of nurses in Botswana was too long, repetitive, and costly as reflected in Table 1.3 and Table 2.5 on review of enrolled nurse and registered nurse curricula. The reports revealed that enrolled nurses, in particular, were not adequately prepared to provide primary health care services to communities they served. The need to review the nursing education system to reorient to primary health care was therefore of paramount importance to the

government of Botswana. The researcher used the CIPP model for this review as follows:

### ***2.6.2.1 Context Evaluation***

The purpose of this step was to identify the deficiencies and strengths that could be used to remedy the situation. The objective was to strengthen the knowledge and skills of enrolled nurse in order to enable them to provide primary health care to communities. One of the responsibilities of the National Task Force therefore was to develop an implementation schedule that would offset the decrease in the enrolment of the enrolled nursing programme as reflected in Table 1.3 on page 21.

### ***2.6.2.2 Categories of Enrolled Nurses***

According to the Establishment Register 1993/4, 1433 enrolled nurses were employed in the civil service, local government and the private sector in various health facilities throughout the country such as hospitals, clinics, health posts and district health teams. The enrolled nurses were mostly those that have qualified from local training institutions. After two years of good performance, an enrolled nurse could be promoted to become a senior enrolled nurse and if one has done midwifery or ophthalmic nursing one would be promoted to become senior enrolled nurse with specialization and earn a higher salary than a senior enrolled nurse without specialization. From being a senior enrolled nurse with specialization, an enrolled nurse would then be promoted to become a principal enrolled nurse.

**Table 2.2 Categories of Enrolled Nurses in Botswana**

<b>Category</b>	<b>Total number</b>	<b>Percentage</b>
Principal Enrolled Nurse	128	8.9%
Senior Enrolled Nurse with Specialization	111	7.7%
Senior Enrolled Nurse without Specialization	655	45.7%
Enrolled Nurse	539	37.6%
<b>TOTAL</b>	<b>1433</b>	<b>100%</b>

**Source: Directorate of Public Service Management Establishment Register 1993/4**

Table 2.2 shows that out of 1433 enrolled nurses employed in 1993/4 financial year, 128 (8.9%) were principal enrolled nurses; 111 (7.7%) were senior enrolled nurses with specialization; 655 (45.7%) were senior enrolled nurses without specialization and 539 (37.6%) were enrolled nurses. Out of 239 enrolled nurses, 128 (8.9%) were principal enrolled nurses and 111 (7.7%) were senior enrolled nurses with specialization trained either as midwives or ophthalmic nurses after completion of basic enrolled nursing. The upgrading of 1433 enrolled nurses had implications for enrolment of school leavers into the generic nursing programme during the National Development Plan 6 (1985-1991). The government therefore designated one training institution in Serowe in 1994 for this upgrading so that the enrolment of school leavers should not be interfered with. The mission schools in Ramotswa, Bamalete Lutheran Hospital and Deborah Retief Memorial in Mochudi joined the government later in 1996 to upgrade enrolled nurses.

### 2.6.2.3 Distribution of Enrolled Nurses by Salary Scale and Employer

According to the 1993/4 Establishment Register, the MOH had employed 755 (52.7%) enrolled nurses. Out of 755 enrolled nurses, 603 (42%) were employed by the department of Hospital Services deployed in the district and the referral hospitals. The department of Primary Health Care had employed 152 (10.6%) enrolled nurses mostly deployed in the primary hospitals and other primary health care programmes. The Ministry of Local Government had employed 590 (41.2%) enrolled nurses, deployed in the clinics, health posts and mobile stops and the district health teams while the private sector had employed 88 (6.1%) deployed in the mission and mine hospitals.

**Table 2.3 Distribution of Enrolled Nurse by Salary Scale and Employer**

Salary Scale for Enrolled Nurses	B1	B2/3	C3	C4	Totals	%
Primary Health Care	32	83	20	17	<b>152</b>	10.6%
Hospital Services	292	165	56	90	<b>603</b>	42%
Unified Local Government Service	127	407	35	21	<b>590</b>	41.1%
Private Sector	88	-	-	-	<b>88</b>	6.1%
<b>TOTAL</b>	<b>539</b>	<b>655</b>	<b>111</b>	<b>128</b>	<b>1433</b>	
	37.6%	45.7%	7.7%	8.9%		
<p><b>Key:</b> B1 = P10, 836 – P12, 708            B2/3 = P8,844 – P10, 632            C4 = P13, 020 – P16, 092            C3 = P16, 440 – P19, 800</p>						

Table 2.3 reflects that out of the 1433 enrolled nurses, 1194 enrolled nurses (83.3%) were in the B salary scale. There were 539 (37.6%) enrolled nurses in B1 scale while 655 (45.7%) were in B2/3 scale. The remaining 239 enrolled nurses (16.6%) were in C3/4 salary scale and 111 (7.7%) were in C3 and 128 (8.9%) were in C4 and 183 (76.6%) of these were employed by the central government under the departments of hospital services and primary health care while 56 (23.4%) were employed by local government. As mentioned earlier under categories, these enrolled nurses in C3/4 salary scale had trained in either midwifery or ophthalmic nursing. The first enrolment for the residential programme in 1994 gave preference to Local government employees in order to provide skilled health personnel to where they were most needed in rural communities.

The African Development Bank (1992:39) in their implementation of NHI Requirement Study indicated that, *“if the system of upgrading enrolled nurses is chosen, the stock of nurses will gradually comprise higher qualified but very much more expensive manpower than presently”*.

The analysis of salary structure for all enrolled nurses that were for upgrading was undertaken to explore further this assumption. Table 2.3 further shows that about 239 (16.6%) of the enrolled nurses were in C.3 /C.4 salary scale, which is the entry point for a registered nurse according Appendix VII no page 317. This shows that the government would in fact not incur further costs in terms of salaries of upgraded nurses at least not from 239 (16.6%) of the total numbers of the enrolled nurses to be



upgraded because they were already at the registered nurses salary scale of C3/4. Apart from acquiring new knowledge and skills in the upgrade programme, these enrolled nurses would not have any economic benefits from the upgrading exercise.

#### ***2.6.2.4 Age Distribution of Enrolled Nurses***

The Botswana Government Directive of April 1993 required that all the practising enrolled nurses be upgraded to registered nurses. The government policy at that time stated that only public officers who were below forty years should be allowed to go for further development. The retiring age in the civil service was fifty-five years during this time. An analysis of all the 1433 enrolled nurses employed in the country was made to determine how many enrolled nurses were above forty years of age and would meet or not meet the criteria for further development.

**Table 2.4 Age Distribution of Enrolled Nurses in 1993/4**

<b>Age</b>	<b>Principal EN</b>	<b>Senior EN and Specialisation</b>	<b>Senior EN no Specialisation</b>	<b>Enrolled Nurse</b>	<b>Total</b>	<b>Percentage</b>
20-24	-	-	-	155	155	10.81%
25-29	-	-	61	230	291	20.30%
30-34	35	30	222	114	401	27.98% (28%)
35-39	45	30	207	18	300	20.93%
40-44	17	25	76	11	129	9.00%
45-49	19	20	45	11	95	6.62%
50-54	9	3	36	-	48	3.34%
55+	3	3	8	-	14	0.97% (1%)
<b>TOTAL</b>	<b>128</b>	<b>111</b>	<b>655</b>	<b>539</b>	<b>1433</b>	<b>100%</b>

Table 2.4 shows that in 1993/4 financial year, 446 enrolled nurses (31.12%) were below thirty years of age, 701 (48.91%) were below forty years of age while 286 (20%) enrolled nurses were above forty years of age. There were fourteen enrolled nurses (0.9%) above fifty-five years of age and due for retirement. A special waiver was therefore granted by the government, that enrolled nurses above forty years be allowed into the upgrading programme. The first two intakes in 1995/1996 gave preference to those enrolled nurses who were above forty years, with the belief that they would later work on contract after completion of the upgrading programme. As mentioned earlier the other preference was given to those enrolled nurses working for local authorities.

**Table 2.5 Comparison of the Enrolled Nurse and Registered Nurse Curricula**

COURSE	DURATION		CONTENT DEFICIT	PROPOSAL
	EN	RN		
<b>1. Anatomy and Physiology ( 1<sup>st</sup> Year only)</b>	150 hrs	200 hrs	RNs integrate physical assessment and ENs do not. Content for physical assessment lacking for ENs.	Strengthen physical assessment skills for ENs 4 weeks.
<b>2. Physics and Chemistry (1<sup>st</sup> Year)</b>	Integrated into A&P	200 hrs	ENs only given basics. Detailed content lacking	Update relevant Physics & Chemistry. x1 week.
<b>3. First Aid ( 1<sup>st</sup> Year)</b>	30 hrs	Integrated into Med/Surg	-	-
<b>4. Sociology ( 1<sup>st</sup> Year)</b>	15 hrs	80 hrs	ENs only given basics. Detailed content lacking	Update x 1 week
<b>5. Psychology ( 1<sup>st</sup> Year )</b>	15 hrs	70 hrs	ENs only given basics. Detailed content lacking	Update x 1 week
<b>6. History, Ethics &amp; Professionalism (1<sup>st</sup> and 3<sup>rd</sup> year)</b>	15 hrs	80 hrs	ENs only given basics. Detailed content lacking	Update course x 1 week
<b>7. Microbiology ( 1<sup>st</sup> Year)</b>	15 hrs	200 hrs	ENs only given basics. Detailed content lacking	Update course x 4 weeks
<b>8. Research ( 1<sup>st</sup> and 3<sup>rd</sup> Year)</b>	-	30+60 90 hrs	All content lacking in the EN programme.	Update course x 4 weeks
<b>9. Nutrition</b>	15 hrs	24 hrs	No significant differences.	Transfer credits.
<b>10. Care of the Individual throughout the Lifespan Med-Surg nursing and Pharmacology ( 1<sup>st</sup> &amp; 3<sup>rd</sup> Year) RN (1<sup>st</sup> and 2<sup>nd</sup> year) = EN</b>	550 hrs	1800 hrs	Med. and Surg. procedures not covered for ENs such as IV, catheterization . Pharmacology basics covered for ENs. In depth content lacking.	Update for deficits x 2 weeks
<b>11. Care of Sick and Well Child (2<sup>nd</sup> year)</b>	Integrated. 80 hrs	480 hrs Theory and Practice	No significant differences.	Transfer credits.
<b>12. Care of Normal Child-Bearing Woman (2<sup>nd</sup> Year)</b>	80 hrs	480 hrs	Theory O.K. but Practical for ENs without midwifery lacking- no exam of Pregnant mother.	Update skills x 4 weeks Exempt EN midwives
<b>13. Community Health Nursing (1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> year) = RN (2<sup>nd</sup> year) = EN</b>	80+60= 140 hrs	1170 hrs	No significant differences.	Transfer credits.
<b>14. Mental Health and Psychological Aspects of Behaviour</b>	80 hrs	480 hrs	No significant differences.	Transfer credits.
<b>15. Nursing Management</b>	-	40 hrs	None for ENs. All content lacking	Intense course x 1 week

### *2.6.2.5 Comparison of Enrolled Nurse and Registered Nurse Curricula*

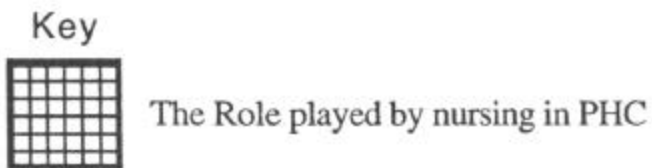
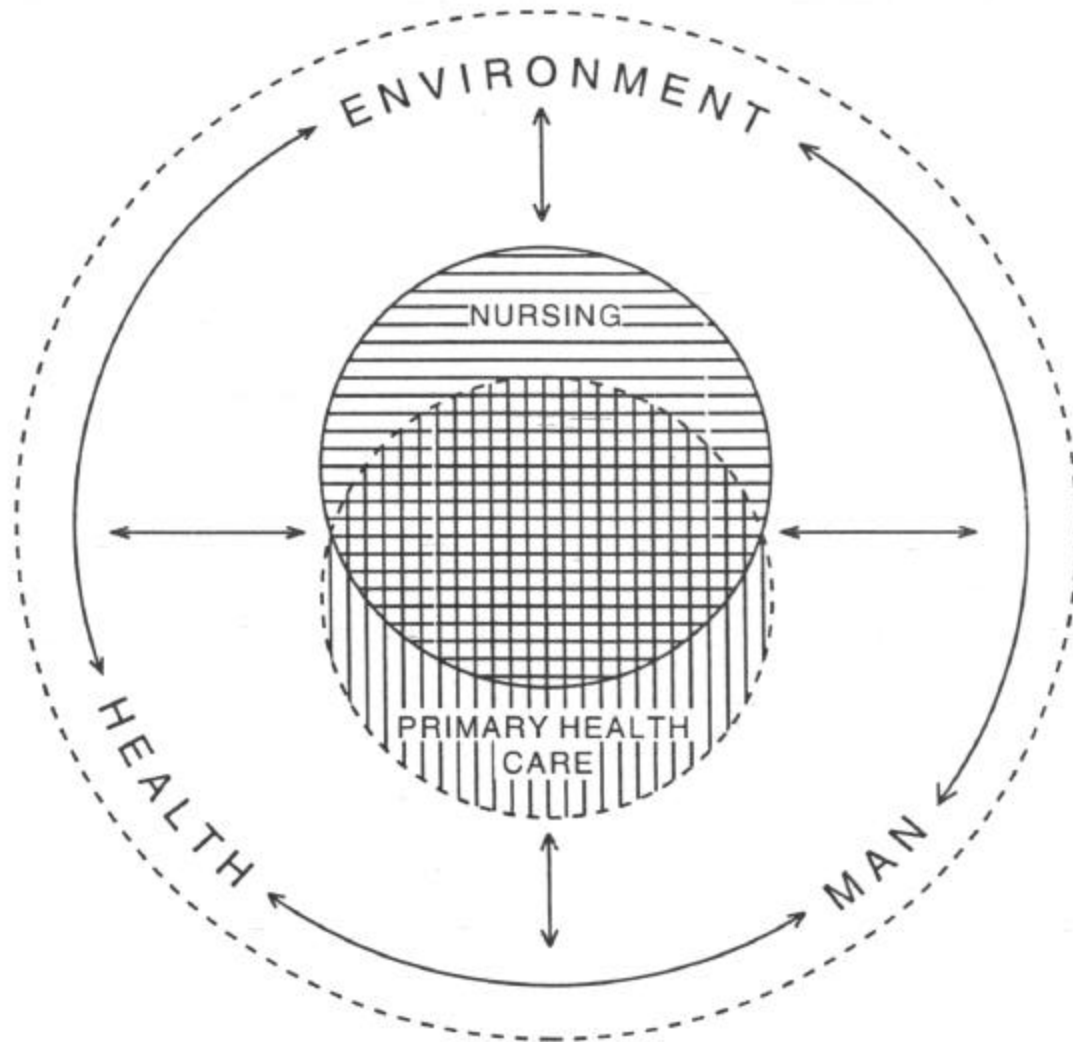
The enrolled nursing curriculum was compared with the revised general nursing curriculum to identify what content was lacking in the basic enrolled nursing curriculum.

The comparison of the enrolled and registered nurse curricula in Table 2.5 revealed that the enrolled nurse programme lacked the following:

- Knowledge and skills in health assessment
- Nursing leadership and management skills
- Primary health care and nursing in primary health care
- Research and professional development in nursing

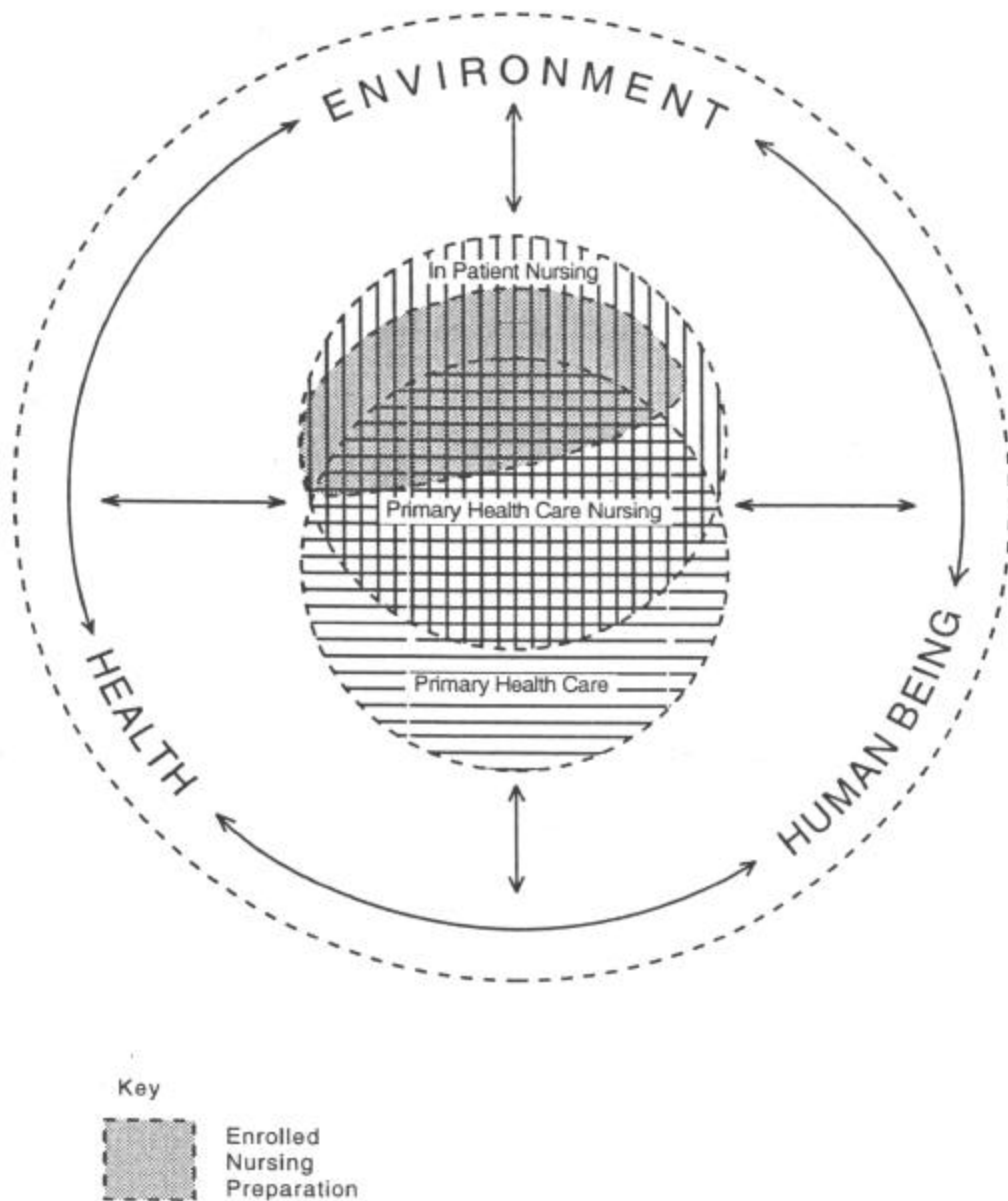
Figure 2.5 depicts the conceptual framework for general nursing curriculum as reflected in the curriculum for Basic Diploma in general nursing upgrade programme (1995:6). The key concepts identified for the conceptual framework are human being, environment, health, nursing, and primary health care. The outer circle represents the openness of the health system to influences from other systems, such as, social, political, economic, psychological and physical factors, which continuously affect the health status of a human being. The second circle shows the human being's continuous interaction with the environment within the context of primary health care. Nursing assists the human being to adapt positively to the environment and therefore maintain and/or regain optimal health. All the circles represent the open systems, and the arrows indicate the interactions among all the concepts.

# Conceptual Framework for General Nursing Curriculum



**Figure 2.5** *Conceptual Frameworks for General Nursing Curriculum. Adapted from Curriculum for Basic Diploma in General Nursing Programme (1995:6)*

# Enrolled Nursing entry knowledge and experience level into the General Nursing Programme



**Figure 2.6** *Conceptual Framework showing Enrolled Nursing Entry Knowledge and Experience Level into the General Nursing Programme. Adapted from Curriculum for Basic Diploma in General Nursing Programme (1995:26)*

The development of the curriculum for upgrading enrolled nurses was based on the content that was lacking in the basic enrolled nurse curriculum and this approach was referred to as deficit model. The model gave credit to the previous academic preparation and professional experiences that the learner brought into the learning environment. The total number of hours that the Curriculum Committee found to be adequate for upgrading enrolled nurses was 779 hours or thirty-six weeks. The following courses were offered as full nursing courses in Curriculum for Basic Diploma in General Nursing Upgrade Programme (1995:36-39) namely:

- GN 111 Health Assessments
- GN 211 Primary Health Care
- GN 311 Primary Health Care Nursing, Maternal & Child Health Care Nursing
- GN 216 Professional Development
- GN 312 Adult Health Nursing
- GN 215 Nursing Leadership and Management

The content that was found to be inadequate in the natural sciences and social sciences was incorporated into other nursing courses. The final examination is the same as the one for the generic registered nursing and it consists of the two papers:

1. Application of concepts and principles of primary health care Nursing.
2. Application of concepts and principles of inpatient nursing and leadership and management

The acquisition of practical skills is assessed on continuous basis in each clinical area during clinical attachment and the ratio of continuous assessment to formal examination shall be 1:1 and there is no final practical examination.

Boyar, Senturia and Paligin (1989) evaluated an accelerated Licensed Practical Nurse-Registered Nurse (LPN-RN) nursing education programme to determine the extent to which the LPN enrolled in the accelerated Associate Degree in Nursing (ADN) was socialized into the professional nursing role. They compared the accelerated programme with the conventional one. The curriculum for accelerating LPN to RN was designed specifically to address the needs of LPNs and the training was one intensive year. Four collaborating hospitals had employed LPNs. The training recognized the extensive work experience and special educational needs of the working LPNs. Class times were arranged to accommodate work schedules and travel demands on the students. The programme included the following same prerequisites as the two-year conventional programme: biology, social sciences, and English courses. Theory and clinical were the same as those for two year conventional programme and included adult medical, surgical nursing, paediatrics, maternal and child health nursing.

The findings of this evaluation study were that there was no significant difference in the role socialization of LPN-RN and the conventional programme. The clinical instructors observed that LPNs had trouble in taking the additional responsibility inherent in the RN practice. The authors indicated that the process by which the observation of RN role is internalised and translated into behaviour is not known. Knowledge of the role may be the first step. The two groups were similar in their



academic performances. The authors concluded that the study supported the viability and effectiveness of an alternative approach to traditional nursing programmes. Though this study was not evaluating a primary health care curriculum, it has similarities with the EN/RN upgrade programme. In both cases, the challenge was to provide appropriate programmes to meet the needs for practising LPNs in the United States of America (USA) and the needs of practising ENs in Botswana to become registered nurses.

#### ***2.6.2.6 Input Evaluation***

The main goal of input evaluation is to determine the system's capabilities for implementing the strategies as planned particularly faculty preparation, financial and material resources to support the programme implementation. The methods used for collecting data under input evaluation may be literature search or visits to other exemplary institutions Stufflebeam (1983: 129). These methods were used in the current study. The review of records from IHS-Serowe reflected that out of the ten teachers none had any experience in developing and implementing completion programmes or distance education.

#### ***2.6.2.7 Faculty Preparation***

In preparation for the implementation of the upgrade programme, the IHS faculty in Serowe was assessed to determine the extent to which they were adequately prepared to run an upgrade programme. According to Table 3.1 on sample size, the intake for 1996 was 96 enrolled nurses. There were only ten teachers for both theory and practice,

and none of these teachers had any preparation in upgrade programme or in distance education as reflected in Table 2.6.

**Table 2.6 Faculty Qualifications at IHS Serowe 1993/4**

<b>Qualification</b>	<b>Number</b>	<b>Percentage (%)</b>
B. Ed	5	50 %
BSc plus diploma	2	20 %
MSc	3	30 %
<b>Total</b>	<b>10</b>	<b>100 %</b>

Table 2.6 shows that out of the ten faculty members who were to operate the programme only three were prepared at master's level. Because of this analysis, two faculty members with B.Ed were sent for Masters Degree in Adult Education and Distance Learning. The two (20%) faculty members with BSc plus diploma were expatriates and according to government policy at that time were not entitled to go for further development under the government sponsorship. The three faculty members with Masters Degrees majored in Maternal and Child Health, Community Health Nursing and Nursing Administration. The officer with major in Community Health Nursing was assigned to coordinate the upgrade programme. Faculty preparation was then undertaken on short and long-term basis to enable them to be ready for the 1996 intake.

In 1993, IHS Serowe joined the Association of Distance Education of Southern Africa to familiarize themselves with the running of distance education programmes. The Nursing Times Open Learning University conducted three workshops for faculty on how to develop and analyze modules. The Centre for International Nursing Education (CINE) conducted workshops on management of distance education programmes in January 1994 and there were on site consultations with the University of South Africa (UNISA) to review and discuss their approach to distance education learning experiences and programming by IHS Serowe faculty and representatives from other training institutions.

A team from IHS faculty comprised of Mrs. Pilane principal IHS Gaborone for generic nursing programme, Mrs. Mogano principal IHS Serowe, Mrs. Mdhuli coordinator EN/RN upgrade programme and from hospital services, Miss Letang from Sekgoma Memorial Hospital and the MOH the researcher who led the team to the following institutions abroad that offer distance education programmes.

1. United Kingdom (U.K) Open University, the Nursing Times and South Bank University were visited. The purpose here was on sharing experiences on programmes that were offered on distance. The Nursing Times modules were used as a guide in the development of modules for the EN/RN upgrade programme.
2. United States of America (USA) Madonna University, Wayne State University, University of California, and High Park College of Nursing were visited to compare the programmes for upgrading licensed practical

nurse (LPN) to registered nursing with that of the EN/RN upgrade programme.

The High Park College of Nursing in the United States of America and South Bank University in the United Kingdom, were offering programmes similar to the upgrade programme. At the University of California, the team was joined by Dr. J. Poindexter, from Wayne State University, and Dr. U. Alberts from Unisa, to assist the team in the development of modules. The teacher student ratios were assessed in terms of the established staffing norms for nurse training that is 1:10 for residential and 1:20 for distance learning according to the NHI Requirement study (1989:26-27). The faculty were seen not to meet these requirements, hence the training of preceptors to supervise students in clinical areas. The needs of other support staff like librarians and preceptors were also assessed. Kellogg consultants assessed the capacity of Serowe Institute of Health Sciences and its satellites to implement the upgrade programme, in terms of funds, library facilities, photo copying facilities, and computers.

#### ***2.6.2.8 Financial Resources for Implementation of the EN/RN Programme***

In collaboration with the University of Illinois, a budget of \$ 148,346 was requested from the Kellogg Foundation to support the workshops for the faculty; teaching /learning materials and equipment and the establishment of a curriculum Unit to oversee the implementation of the restructured nursing education system. Dr. Acheson was seconded to the Ministry of Health from the University of Illinois that was

administering these funds to head the curriculum Unit. Mrs. P. Ncube from the MOH was assigned to understudy the consultant. The MOH was/is responsible for teachers and students' salaries, infrastructure development, and other costs for running the institution.

#### ***2.6.2.9 Process Evaluation***

The purpose of evaluation was to determine the extent to which the EN/RN upgrade programme was implemented the way it was planned. Information was collected on the curriculum, course plans, modules, clinical sites, and preceptors. The Kellogg consultants Poindexter, Todd, & Flucas (1995) were used as external evaluators in addition to the programme coordinator, Mrs B. Mdhuli and Head of the Department, the researcher. The findings of this process evaluation were as follows:

- Students demonstrated a high degree of motivation and excitement about learning and about the community/primary health care involvement. The Bitzer (1997) study also observed in the PBL/CBL programme in one university in South Africa that the students were excited about their programme and they felt challenged about the potential outcome of the programme. Fink (1993:0 also believed that the experiment about a new programme and or a visiting professor or consultant may motivate the students to do well academically.
- Students' living accommodations needed some improvement as well as faculty offices. In the Boyar et al (1989) study, class times were arranged to meet the work schedules and travel demands of the students.

- Library hours needed to be expanded to meet the study time for students from clinical areas
- Resource materials, books, health assessment equipment and other related teaching aids should be available for students, preceptors and for Satellite Resource Centres in order to support learning. Murdock et al (2000:58) in their study of LPN to RN articulation also identified textbook shortages and the problem of access to the learning centres. The students had to travel long distances to enrol into the programme.
- Review of Final Assessment Paper I requirements in EN/GN course to realign it with the year one requirements in the generic nursing curriculum.

## ***2.7 Conclusion***

In conclusion, this chapter gave a historical development of evaluation models and in particular, those evaluation models by Tyler, Scriven, Stake and Stufflebeam that were used in the evaluation of nursing curriculum and programmes. The review of literature has shown that evaluation models are useful in evaluation of curriculum and continuing education programmes in nursing. Models play an important role in improving the quality of patient care and enhancing job satisfaction. They provide information to decision makers about where the problems are in programme, curriculum or an organization that need change. Particular emphasis in the review of models was given to the Stufflebeam CIPP model. The model has been extensively described and used

and has been found to be systematic, comprehensive and costly because it takes long to be implemented. The Petro-Nustas study took three years (was not completed due to financial problems); Clarke et al 1989 study took seven years; Schultz study 1993 took eight years while the current study took eleven years from 1989 to 2000. Though costly, researcher chose this model for evaluation of the EN/RN programme because the model covers the assessment of the needs to be addressed; capacity of the institution to implement the programme; implementation of the programme and identification of modifications if any and evaluation of the programme. It was because of the extensive use of this model that the researcher used it for evaluating the EN/RN upgrade programme.

The literature review has also revealed that since the Alma-Ata (1978) declaration, there has been very little done to orient nursing curriculum to primary health care and evaluate that type of curriculum. There is need therefore to integrate primary health care concepts and principles into the basic nursing curriculum to make it more responsive to the complex health needs of societies and evaluate such curricula.

Literature on evaluation of the primary health care oriented curriculum using the CIPP model was very limited. The Bitzer study was using CIPP model but focusing on formative evaluation and not summative evaluation while the Acheson & Mogobe study focused on summative and not formative evaluation and there was no available literature that focused on both formative and summative evaluations.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### ***3.1 Introduction***

This chapter describes the methodology adopted to evaluate the EN/RN upgrade programme to determine the extent to which the programme's objectives have been achieved. The chapter also describes the evaluation design, target population, sampling and sampling technique, methods and procedure for data collection, validity and reliability of measurements.

The researcher found the evaluation design the most suitable design for evaluating the EN/RN upgrade programme to determine the extent to which the programme objectives had been achieved. The upgrading of enrolled nurses was a new endeavour undertaken by the Department of Health Manpower within the MOH and the feedback on the worth or merit of this programme was needed to be given to the government and the donors. According to Poteet & Pollock (1986:41), an evaluation design gives an opportunity to decision makers, to diagnose where problems, weaknesses or strengths are, within a programme. It also enables the decision makers to take the right type of decision at the right time. The evaluation design also gives an opportunity to collect, analyse and interpret data over a long period, hence its relevance in this study that was undertaken over a six-year period.



### ***3.2 Evaluation Designs***

A design according to Polit and Hungler (1993:129) spells out the kind of strategies the researcher uses to develop information that is accurate, objective, and interpretable.

Fitz-Gibbon & Morris (1978:9) view an evaluation design as a plan, which dictates when and from whom measurements will be gathered during the course of the evaluation. The purpose of a design is to ensure a well-organized study to all the right people who will take part in the evaluation at the right time.

In this study the design ensured that policy makers who are the Ministry of Health officials and University of Botswana, programme implementers who are IHS Serowe Faculty, DRM and BLH and donors who are the Kellogg Foundation Consultants, participated in the evaluation of this study at different times at the right time. The participation of the Kellogg Foundation Consultants and MOH and UB as policy makers was during the needs assessment (context and input evaluations) before the programme was developed, during the programme implementation (process evaluation), and in product evaluation. A design has also been referred to as a structure that is created specifically to appraise a programme's effectiveness objectively and without bias by Dawson & Couchman (1995:39) and is built on independent variables and the frequency and timing of the measurement (Fink 1993:44).

There are different types of evaluation designs as described by Fink (1993:55-61), Bless & Higson-Smith (1995:67-84) and Fitz-Gibbon & Morris (1978:53-123). For the

purpose of this evaluation study, only three types of evaluation designs are described that have relevance to the study under investigation.

### ***3.2.1 Survey Designs***

A survey is designed to obtain information from populations regarding the prevalence, distribution, and interrelations of variables within those populations. Political opinion polls are one such example of a survey. Surveys also collect information on people's knowledge, opinions, attitudes, and values. The three most common methods used in surveys are personal interviews, telephone interviews, and mailed questionnaires. Personal interviews are the most powerful method of obtaining information for a survey. A developed questionnaire is used and the interviewer meets individuals face to face. Telephone interviews are less costly and often less effective. Respondents may be uncooperative if the interviewer is unknown to them. One cannot build rapport with the respondents and that is one of the weaknesses of this method.

Questionnaires, unlike interviews, are self-administered and there is no one to answer questions that may arise. It is therefore very important to develop questionnaires in such a way that they are simple, clear, and not ambiguous. Surveys can be applied to many populations, can focus on a variety of topics and information collected can be used for many purposes. Mailed questionnaires can have many problems in developing countries because of the level of literacy, and so people other than the respondent may fill questions according to Bless & Higson-Smith (1995:108). Response rate to mailed

questionnaires tends to be low due to change of name, place of residence, lack of interest, transport and other factors.

Structured interviews, according to Bless and Higson-Smith (1995:107), have fixed wording and sequence of presentation as well as more or less precise indications of how to answer each question. A questionnaire is presented to each respondent in the same way, to minimize the role and influence of the interviewer, and to provide a more objective comparison of the results.

The use of focus group discussions requires that one should have a skill in facilitating a group discussion. Participants have an opportunity to share their thoughts with others, this may generate new ideas or thoughts, and a consensus is reached. Not all individuals express themselves freely in a group, and therefore there is need to consider this during focus group discussions to enable all individuals to participate. Survey designs are also used to collect data on experimental and control groups to guide programme development. The designs also give data regarding the programme and its environment and they present a cross sectional portrait of one or more groups at a time (Fink 1993:58-59; Polit and Hungler 1991:191-193 and Bless and Higson-Smith 1995:107-113).

In the current study, self-administered questionnaires were used to collect data from the graduates of the upgrade programme while structured group interviews /discussions

were used to collect data from the supervisors of the graduates from primary, district and referral hospitals and from the district health teams, clinics and health posts.

### ***3.2.2 Cohort Designs***

A cohort is a group of people who have something in common, and who remain part of the group over an extended period. It focuses on a specific subpopulation from which different samples are selected at different points in time. The participants are observed over a period to determine the extent to which the programme's effects have lasted and how, and to what extent programme participation has influenced the future.

The design is longitudinal and therefore expensive to use because it takes long to conduct. It is also subject to bias because those who are willing to participate may be different from those who do not participate and there may be problems of attrition during the study (Fink 1993:59 & Bless & Higson-Smith 1995:67). This design was planned to be used at a later stage, to determine the extent to which the EN/RN upgrade programme has influenced the professional development of the graduates.

### ***3.2.3 Self-Control Designs***

A self-control design uses a group of participants to serve as its own comparison. The design depends on the appropriateness of the number and timing of measurements for it to be effective. There is need for repeated measurements. The design requires pre-measures and post measures that are often taken over a long period. The design in this

context is referred to as longitudinal. This type of design is prone to bias according to Fink (1993:57) due to a number of factors such as:

- The experiment about a new programme may motivate participants to do well. The idea of upgrading enrolled nurses to registered nurses was received with a lot of enthusiasm by all enrolled nurses in the country. This could be one of the motivating factors for enrolled nurses to have performed well in their final examinations (94.1% pass rate by 2000) as reflected in Table 4.2 on page 150 in Chapter 4.
- Participants mature physically, emotionally and intellectually during the programme and
- Historical events may intervene such as a visiting lecturer or professor giving inspiring lectures that motivate the students to do well. The visits by the Kellogg Consultants during formative evaluation and during graduation ceremonies could have been other factors for motivating the enrolled nurses to do well as reflected in the song that the graduating class of 1995 composed for the Kellogg Foundation in Appendix V. In addition, the 1995 graduates had also organised a reception for the Kellogg consultants, the chiefs and other dignitaries in the village in appreciation of the programme.

The self-control design was chosen for use in this evaluation because the graduates of the upgrade programme were used in the pre-measures (context and input evaluations)

before the development and implementation of the programme ( process evaluation) and in the post measures during and after the implementation of the programme( product evaluation). Pre-measures are also referred to as formative evaluation and post-measures as summative evaluation.

The researcher was mindful of the bias alluded to by Fink (1993) and as such, the inclusion of the supervisors in the study was to minimize this bias. The pre-measures in this study entailed the following:

- Needs assessment to identify the strengths and weaknesses of the basic enrolled nursing programme. A comparison of the basic enrolled nurse curriculum and the revised registered nurse curriculum was done and the content that was lacking was used in the development of the curriculum for the upgrade programme.
- Characteristics of the practising enrolled nurses to determine their learning needs into the upgrade programme, and other needs that may affect the programme delivery.
- Preparation of the faculty to develop, implement and monitor the upgrade programme, particularly the delivery of the programme through distance learning and development of modules for the students.
- Material and financial needs of the IHS Serowe to coordinate and implement the upgrade programme as well as the needs of other participating institutions.

The pre-measures or formative evaluation were used for the purposes of providing information that leads to summative evaluation or product evaluation, but they are not the main focus of this study. The focus is on product evaluation according to the Stufflebeam's CIPP model that encourages describing the whole process that is context, input, and process evaluations in order to have a complete picture of product evaluation.

The post measures are also referred to as product or summative evaluation. This form of evaluation entailed the following:

- Review of students' achievements tests from the IHS/UB records to determine the acquisition of knowledge and skills of primary health care and the failure rates, the drop out rates and withdrawals.
- Self-administered questionnaires to the graduates to determine their perceptions of acquired knowledge in primary health care in their work settings
- Questionnaires for structured group interviews/discussions of the supervisors of the graduates to determine their perceptions of the graduates' improvement in knowledge in provision of primary health care services.

The self-control design and the survey design were used in this study and the Stufflebeam CIPP model as a framework for a period of about eleven years as reflected in Figure 3.1, which shows how the evaluation models were implemented in this upgrade programme. Chinapah & Miron (1990:41) advised that the use of two or more designs make the evaluation more effective. The use of more than one design is not without problems, particularly in longitudinal studies as identified by Ingersoll et al (1995) in their longitudinal study of a professional practice model that was conducted in five New York hospitals for five years. The authors identified lack of management support and commitment and adequate preparation for change of issues that needed to be addressed before planning a longitudinal study. It was also observed in this study that lack of management commitment was an issue among team members. It was difficult to accomplish the assignments on time for example, the six-member team collected data from the groups of supervisors from 22/01/2001 to 7/02/2001. The team could only meet on the 10/07/2001 to analyse data and to compile the report. As mentioned earlier some officers were assigned other responsibilities at the same time and therefore could not meet as scheduled.



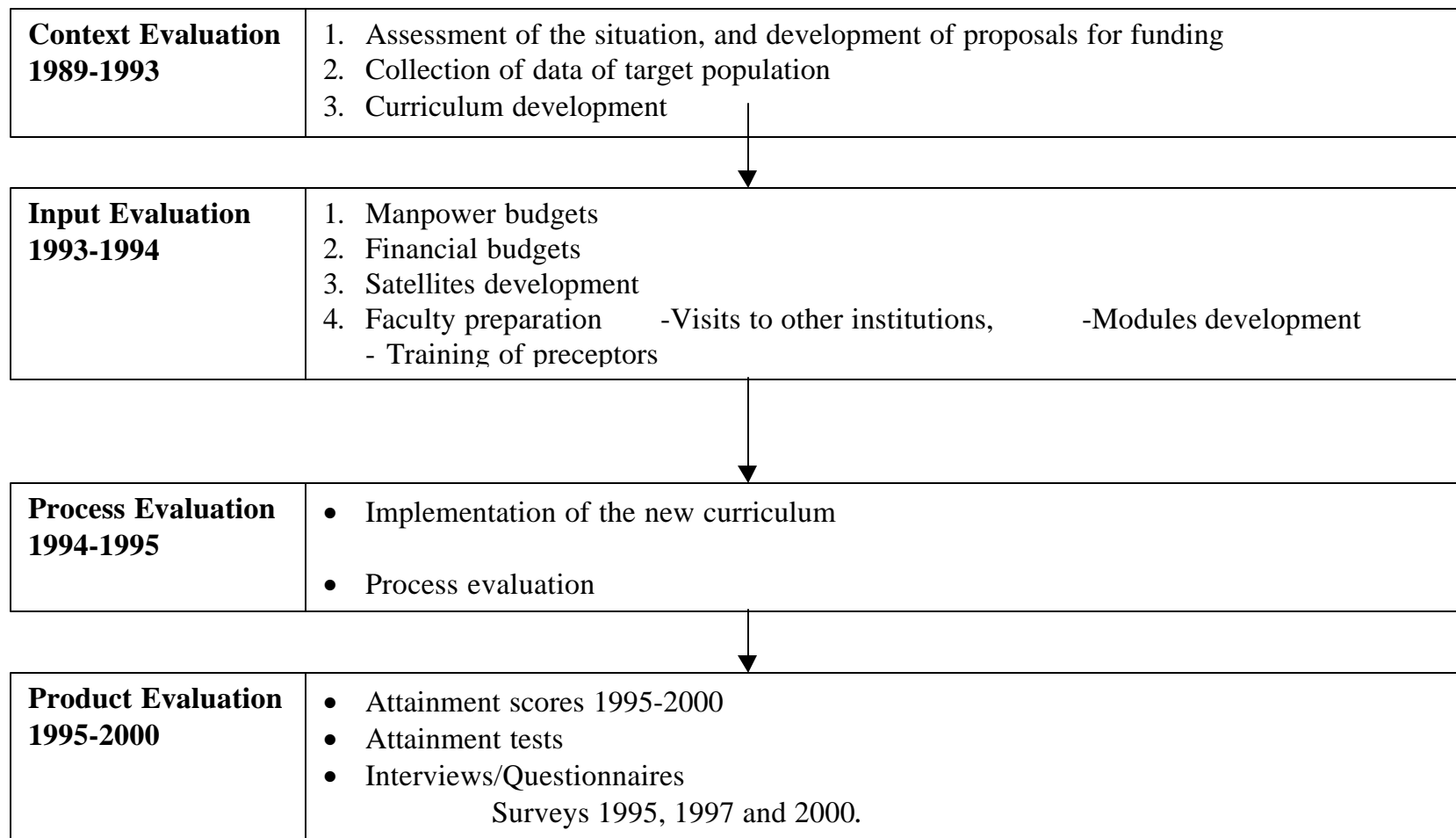


Figure 3.1 Flowchart of the CIPP Model in the Evaluation of EN/RN Upgrade Programme in Botswana

### ***3.3 Population and Samples***

Population refers to the aggregation of cases that meet the designated set of criteria according to Polit & Hungler (1993:173). Population may not necessarily refer to people only but may refer to institutions, problems, and systems to which evaluation findings are to be applied or generalized (Fink 1993:69). Population may also refer to an aggregate of elements sharing some common set of criteria, such as all adult women, all children attending pre-school, or all epochs of sleep during the course of a night (Wood & Catanzaro 1988:97)

In the current study, the target population comprised of 1042 graduates of the EN/RN upgrade programme from 1995-2000 in both central and local government. The graduates of the upgrade programme were working in various health facilities throughout the country such as hospitals for central government and clinics, health posts and district health teams for local government.

The second population was drawn from the supervisors of the graduates EN/RN upgrade programme. The purpose for inclusion of this second population was to determine the supervisors' perceptions about improvement of the graduates' knowledge in provision of primary health care services in respective clinical facilities. The supervisors ranged from registered nurses at matron or sister in charge levels to district medical officers in charge of district health teams under which clinics and health posts operate. The purpose of inclusion of this second population in the study was to validate further information collected from the graduates concerning their

application of knowledge and skills of primary health care services in various health facilities.

The third population was from IHS/UB enrolment records to the EN/RN upgrade programme and the final examination records to determine the pass, failure or dropout rates and the withdrawals. These records were from 1116 students from 1994-2000, that enrolled to the upgrade programme and either graduated, failed or discontinued from the programme for various reasons. The high pass rate would indicate that the programme was efficient and effective while high failure and drop out rates would indicate that the programme was costly and therefore not efficient and effective.

### ***3.3.1 Sampling Technique***

Sampling refers to the process of selecting the sample from a population in order to obtain information regarding a phenomenon in a way that represents the population of interest (Brink 1996:133 & Polit & Hungler 1993:174). It may consist of subset of the units that compose the population. There are two types of sampling namely probability sampling and non-probability sampling.

#### ***3.3.1.1 Probability Sampling***

This refers to sampling where every member of the target population has a known probability of being included in the sample (Fink 1995:93). This type of sampling is considered the best because it ensures the validity of any inferences made about the programme's effectiveness and generalizability.

Simple random sampling is another type of probability sampling that ensures that every subject or unit has an equal chance of being selected and this renders this type of sampling relatively unbiased.

Stratified sampling is when the population is divided into strata or subgroups that are homogeneous. In the current study, probability sampling either simple or stratified was not used.

### ***3.3.1.2 Non-probability or Convenience Sampling***

Non-probability sampling refers to the use of the most conveniently available persons or subjects in the study. This type of sampling is used mostly because it is practical and economical though it is the weaker form of sampling according to Polit and Hungler (1991:254). In non-probability sampling, the participants are selected because they are available and some members have a chance of being selected while others do not (Brink 1996:141, and Polit & Hungler 1993:174). The convenience or purposive sampling method is based on the belief that the researcher knows the population under study and therefore can handpick the cases to be included in the study. The risk of bias is minimized if phenomena under study are homogenous. Convenience samples do not necessarily comprise of individuals known to the researcher.

In the current study, convenience sampling was used for selecting the EN/RN graduates and their supervisors. A list of health facilities where the graduates of the

upgrade programme were deployed was taken from MOH and Local Government Only those facilities where the EN/RN graduates were deployed were visited to collect data from those graduates that were available at that time and were willing to participate in the study. In 1995, the deployment list revealed that the graduates from the one-year residential programme were in ten hospitals, six clinics and five health posts as reflected in Table 3.1 on page 117. A convenience sample of thirty-seven out of ninety-one graduates (40.65%) from the upgrade programme that were found on duty at that time completed the questionnaires. A convenience sample of thirty-seven out of 949 supervisors (3.8%) that were interviewed were those found supervising the graduates at that time in those health facilities and were willing to participate in the study.

In 1997, a deployment list from MOH and local government revealed that the graduates from part-time distance education programme were deployed in ten hospitals and two clinics. These health facilities were visited to collect data from the graduates and their supervisors as reflected in Table 3.5 on page 133. A convenience sample of twenty-five out of eighty graduates (31.25%) that graduated from the distance education programme completed the questionnaires. A convenience sample of twenty-five out of 1025 supervisors (2.43%) that were interviewed were those that were found on duty supervising the graduates at that time in those health facilities and were willing to participate in the study. The belief here was that these supervisors would have a better understanding of whether the upgrade programme had made any impact on the

performance of the upgraded nurses or not. Table 3.5 shows that some hospitals were visited more than once and therefore the numbers in the table do not reflect the actual numbers of the hospitals but the frequency of the visits to those hospitals.

In 2001, a deployment list from MOH and Ministry of Local Government revealed that the graduates from the EN/RN upgrade programme were deployed in thirty-two hospitals and twenty-four health districts. A convenience sample of 120 supervisors was drawn from the fifteen hospitals and fifteen district health teams that were willing to participate within the stipulated time to visit these health facilities. The other criteria was that the staffing situation in those facilities would allow the supervisors to participate in structured group interviews for about an hour or two depending on the size of the group without compromising patient care. A request to visit the facilities was done through the telephone and a schedule of visits to these facilities drawn up and sent to the relevant supervisors of those health facilities. In 1995 and 1997, one officer visited all the health facilities as reflected in Tables 3.2 and 3.3 on page 129 and page 130. As mentioned earlier the other officers were unable to visit due to other commitments and shortage of staff.

In 2001, a team of six officers visited fifteen hospitals and fifteen district health teams to collect the data from the supervisors as reflected in Table 3.4 on page 132. In total a sample size of 182 supervisors from 2794 (6.5%) registered nurses in the twenty-two hospitals, fifteen district health teams, eight clinics and five health posts. From the

district health teams, five out of twenty six medical officers (public health specialists) a sample of five out of twenty four district medical officers (19.2 %) from the twenty-four districts and two city councils.

Sampling in this study, was convenient and purposive because only those graduates that were available at that time of the visits in those health facilities and were willing to participate in the study were included in the sample. The supervisors that were also interviewed were those found on duty supervising the graduates at that time of the visits in those health facilities and were willing to participate in the study. Abdellah and Levine (1994:160) indicate that there is no prohibition against using a convenience sample as long as the researcher recognises the limitations on statistical generalization. All the IHS/UB enrolment records from 1994-1999 and the examination records from 1995 to 2000 in all the three training institutions IHS Serowe, DRM and BLH that were participating in the EN/RN upgrade programme were reviewed to determine the pass, failure, drop out rates and the withdrawals.

### ***3.3.2 Inclusion Criteria/Eligibility***

Eligibility criteria are used to designate the specific attributes of the target population, which selects subjects for participation in the study (Polit & Hungler 1993:435). Health, demographic and or geographic characteristics are often used to determine inclusion or exclusion in the programme (Fink 1993:48). In this study, all the graduates of the one-year full residential programme and the two-year part-time distance

education programmes were eligible to participate. The enrolled nurses who upgraded through other programmes besides the EN/RN upgrade programme were not eligible to participate in this study. All the enrolled nurses who trained outside Botswana were also not eligible to participate because data pertaining to their training records were outside the country therefore would be tedious to obtain and determine what content was missing in their basic enrolled nursing programmes.

### ***3.4 Sample Size***

In this longitudinal evaluation study, multiple methods of data collection (triangulation) were used, drawing samples for each method as follows:

#### ***a) Review of IHS/UB Records***

The records of all the students who enrolled into the EN/RN upgrade programme from 1994-1999 were reviewed to determine the enrolments and withdrawals and records from 1995-2000 to determine the pass rates, failure and dropout rates. According to the UB Academic Regulations for the General Nursing Programme, student's performance is rated as follows:

- Pass with distinction (80+ %)
- Pass with merit (70%-79%)
- Pass with credit (60%-69%)
- Pass (50%-59%) fail and supplement (40-49%)
- Fail and discontinue (39% and below)



From 1994-2000 the review of these records were as follow:

- 1995- Review of ninety-six students enrolment records and ninety-four examination records of students who sat for the final IHS/UB examinations
- 1996- Review of 194 students enrolment records and 192 examination records of students who sat for the final IHS/UB examinations
- 1997- Review of 232 students enrolment records and 231 examination records of students who sat for the final IHS/UB examinations
- 1998- Review of 226 students enrolment records and 224 examination records of students who sat for the final IHS/UB examinations
- 1999- Review of 190 students enrolment records and 188 examination records of students who sat for the final IHS/UB examinations
- 2000- Review of 176 students' enrolment records and 174 examination records of students who sat for the final IHS/UB examinations.

In total, there were 1116 enrolment records and 1107 IHS/UB examinations records that were reviewed. Each training institution keeps an individual student record while IHS Serowe as a coordinating institution keeps all the information from the other two institutions and the Curriculum Unit within the MOH keeps a final record all the students from the three training institutions.

***b) The Graduates***

A sample size of sixty-two out of 170 graduates (36.4%) was used, drawn from twenty-two out of thirty-two hospitals (68.75%), eight out of 182 clinics (3.2%), and five out of 309 health posts (1.6%) throughout the country as shown in Table 3.5 (p.133). The graduates' questionnaires required either "YES" or "NO" responses under each question item and the responses were tallied and analysed manually. Responses on open-ended questions were recorded and then grouped under each fixed alternative of "YES" or "NO" to give reasons for those responses and these were recorded and summarised separately under full-time and part-time distance graduates.

The first convenience sample was thirty-seven graduates out of ninety-one (40.6%) that graduated from the one year full-time residential programme. All thirty-seven graduates (100%) completed the questionnaires that were hand-delivered and collected from them in December 1995 by Mrs Maskey as reflected in Tables 3.2 on page 120 and Table 3.3 on page 130. The graduates had completed their training in June 1995 and had six months experience in their respective clinical areas.

The second convenience sample was twenty-five out of seventy-nine (31.6%) graduates of the distance education programme. All the twenty-five graduates (100%) completed the questionnaires that were hand-delivered and collected from them in March/April 1997. The group had graduated in June 1996 while data were collected in 1997 and had nine experiences after graduation. Lack of work force led to these data

being collected late as compared to the full-time graduates of 1995 where data were collected six months after completion of the programme.

*c) The Supervisors*

A sample of 182 out of 2794 supervisors (4.96%) was drawn from thirty-five visits in twenty-two hospitals, fifteen district health teams, eight clinics and five health posts. The nurse administrators/supervisors or district medical officers who worked with the enrolled nurses before the upgrade programme and were currently supervising the graduates of the upgrade programme were also eligible to participate in the study. The reason for inclusion was that they were familiar with the performance of the graduates before and after the upgrading and secondly to minimize the bias in the use of convenience sampling as mentioned earlier.

In 1995, the first convenience sample of the thirty-seven out of 949 (3.8%) supervisors was drawn mainly from nurse administrators who were found at that time supervising the residential graduates in various health facilities.

The second sample of twenty-five out of 1025 (2.4%) supervisors was also drawn from the nurse administrators who were found at that time supervising the twenty-five two year part-time distance education graduates. The structured group interviews were conducted with all these supervisors in 1995 and in 1997 after the graduates had completed their self-administered questionnaires. The completed questionnaires in

1995 and 1997 were collected and taken to the MOH for analysis by Mrs Maskey from Continuing Education Unit.

The third sample of 120 out of 1720 (6.9%) supervisors was drawn from nurse administrators and district medical officers from twenty-two out of thirty-two (68.75%) hospitals and fifteen out of twenty-four (46.5%) district health teams in 2001. There were 115 out of 1694 (6.7%) nurse administrators and five out of twenty six ( 19.2%) district medical officers. The district medical doctors, though not nurses were included in the sample of the supervisors because they were the only supervisors in some of the district health teams within at that time. As mentioned earlier, a team of six officers travelled to these facilities to conduct structured group interviews as reflected in Table 3.4 on page 132.

**Table 3.1 Sample Size: Summary of completed questionnaires by the graduates and supervisors from 1995-2000**

Year	SAMPLE SIZE
<b>a) IHS/UB Records</b>	
<b>1994/1995</b>	Review of ninety-six enrolment records and ninety-four examination records
<b>1995/1996</b>	Review of 194 enrolment records and 192 examination records
<b>1996/1997</b>	Review of 232 enrolment records and 231 examination records
<b>1997/1998</b>	Review of 226 enrolment records and 224 examination records
<b>1998/1999</b>	Review of 190 enrolment records and 189 examination records
<b>1999/2000</b>	Review of 178 enrolment records and 174 examination records
<b>b) Completed questionnaires by the graduates and supervisors</b>	
<b>1995</b>	<ol style="list-style-type: none"> <li>1. A sample of thirty-seven out of ninety-one (40.6%) full-time graduates completed the self-administered questionnaires from <ul style="list-style-type: none"> <li>• Ten hospitals out of thirty-two (31.2%)</li> <li>• Six clinics out of 182 (3.3%)</li> <li>• Five health posts out of 309 (1.6%).</li> </ul> </li> <li>2. A sample of thirty-seven out of 949 supervisors (3.8%) from above health facilities was interviewed and questionnaires completed.</li> </ol>
<b>1997</b>	<ol style="list-style-type: none"> <li>1. A sample of twenty-five out of the seventy nine (31.6%) part-time distance education graduates completed self-administered questionnaires from <ul style="list-style-type: none"> <li>• Ten hospitals out of thirty-two (31.2%)</li> <li>• Two clinics out of 182 clinics (1.0%)</li> </ul> </li> <li>2. A sample of twenty-five out of 1025 supervisors (2.4%) was interviewed and questionnaires completed.</li> </ol>
<b>2001</b>	<ol style="list-style-type: none"> <li>1. A sample of 120 out of 1720 supervisors (6.9.0%) from fifteen out of thirty-two hospitals (46.8%), and fifteen district health teams out of twenty-four (62.5%) districts health teams were interviewed through focus group discussions.</li> </ol>

### ***3.5 Methods and Procedure for Data Collection***

The purpose of this study was to determine the extent to which the objectives of the EN/RN upgrade programme have been achieved using the Stufflebeam CIPP approach for evaluation as a framework. Chinapah & Miron (1990:41) believe that evaluation should not just be limited to one single method but that two or more methods if used properly can often prove to be complementary and more effective in achieving objectives of the programme. Multiple methods were used for collection of data in this study such as self-administered questionnaires for the graduates of the programme, structured interviews of groups of the supervisors of the graduates and review of enrolment and examination records.

Triangulation is a combination of methods in a study of the same event, object, to predict more accurately the phenomena being investigated (Greene & McLintock 1985:524; Polit and Hungler 1991:383), or it may be referred to as mixed methods that are implemented concurrently, to complement results from each other. The purpose is to strengthen the validity of the overall findings through congruence.

There are four types of triangulation (Denzin 1989) namely:

1. Data triangulation that involves collecting data from multiple sources for analysis in a study with each source focused upon the phenomena of interest. It permits the researcher to discover which dimensions of phenomena are similar, and which are dissimilar across setting, which

change over time, and which groups differ by group membership.

2. Investigator triangulation that uses multiple observers, interviewers, and coders, each with expertise. It reduces any potential of bias by introducing greater reliability in data collection, analysis, and interpretation of results.
3. Theory triangulation that includes multiple perspectives and hypotheses in the same study, to test existing theories and propose new ones.
4. Methodological triangulation that uses multiple methods to address a research problem like observation, interviews, or inspection of documents.

This method is commonly used and it involves the use of two or more methods of data collection procedures within a single study. Greene & McLintock (1985) identified two types of triangulation namely “*within method*” that uses one method and uses different strategies within that method and “*across method*” that uses dissimilar but complementary methods to try to achieve convergent validity. The method provides opportunities to counter-balance the weakness of one method with the strengths of another. It allows for the combination of both qualitative and quantitative methods of data collection within the same study.

In this study, methodological triangulation was used for collection of data by review of IHS/UB academic records, structured interviews of supervisors and self-administered

questionnaires to the graduates. The purpose as Greene & McLintock (1985:524) Polit and Hungler (1991:383) indicate is to complement results from each and hence the rationale for inclusion of data from the supervisors in this study.

A table was made and information on each student record from each institution was recorded under Intake, Pass with Distinction, Pass with Merit, Pass with Credit, Pass, Fail and Discontinue and Withdrawals and the reasons for withdrawing from the programme. Fail and supplement was not included in this analysis because collections of data were done after the supplementary examinations were done. The totals per institution and for the three institutions were then worked out as well as percentages. The purpose for this review was to determine the pass and failure rates that would indicate the effectiveness and efficiency of the upgrade programme. Table 3.5 (p.133) and Table 3.6 (p. 134) show these reviews in detail. The high pass rates would be an indication of the graduates' acquisition of knowledge and skills in primary health care. The students were assessed for acquisition of skills during their clinical attachments to specific clinical areas on a continuous basis and there was no final practical/oral examination (Curriculum for Basic Diploma in General Nursing Programme 1995:10-12). The graduates academic performance was extracted from IHS/UB records already categorised according to distinction, merit, credit, pass, fail and discontinue by both internal and external examiners. The University of Botswana publishes the examination results. The information on those students who did not sit for the final examinations due to ill health or withdrew from the programme was taken from the students'



personal files from each training institution.

Data from the graduates' self-administered questionnaires on their perceptions on the improved knowledge in provision of primary health complemented what the academic records revealed on academic performance of the graduates.

Questionnaires for the supervisors were developed covering the same content areas as for the graduates, and the responses of the supervisors were tallied against each question item requiring a Yes or NO response. A tally sheet was developed and the supervisors' responses recorded under Yes or No response under each question item and counting was done manually using a calculator. Decisions on each open-ended question were reached through consensus after the group had discussed the issues. The responses were then recorded under each fixed alternative and themes drawn up from those responses and then summarised. Data from structured interviews of the supervisors perceptions on improvement of the graduates' knowledge in provision of primary health care services in clinical facilities further complemented the results of the self administered questionnaires and academic performance from IHS/academic records.

### ***3.5.1 Role of the Coordinator in the Evaluation of the EN/RN Upgrade Programme***

The importance of identifying an individual to co-ordinate the evaluation process has been emphasized by a number of authors in the literature review namely, Scriven (1983:229); Brinkerhoff et al (1983: xviii & 175); Clarke et al (1983:57); Waltz & Bond (1985:258); Saunders (1992:7) and Petro Nustas (1996:617). The purpose for this is to avoid delays and to ensure the smooth running of the evaluation process. In support of the importance of the role of the coordinator in evaluation, Waltz & Bond (1985:258) further argue that it is imperative that one individual should be held ultimately responsible for a given evaluation activity to ensure that breakdowns in the total evaluation process and necessary duplication in the effort does not occur. They continue to stress the importance of accountability for the evaluation effort at all levels of the organization from the key administrators to the consumers of the programme services. When an appropriate individual who is held accountable for the effort as well as those who must be kept informed are clearly delineated, the likelihood of accomplishing what should be accomplished in a relevant, timely and least costly manner is increased. Brinkerhoff et al (1983: xviii & 175) also spell out the characteristics of an evaluator as follows:

- Technical competence in the area of measurement and research methods,
- Understanding of the social context and the substance of the evaluation object,
- Human relations skills,
- Personal integrity and objectivity as well as characteristics related to

organizational authority and responsibility.

The authors admit that it is difficult to find such a person and therefore it is necessary that a team should conduct an evaluation and the role of team members be clearly defined. Ediger et al (1983:196) also support this view for strengthening the evaluation team. Bitzer (1997:10) as mentioned earlier, questions the availability of the qualified evaluators for PBL/CBL programmes in South Africa because even with experienced evaluators, theoretical and practical experience might be lacking. Botswana with a young educational system is no exception, and the use of the CIPP model even makes the situation more complex. Petro Nustas (1996) and Clark et al (1983), also recommend coordination of the evaluation team at the highest level possible within an organization.

The evaluator was chosen based on the above argument to chair the Task Force on restructuring the entire nursing education system in the country and foresee its implementation. The officer was at that time responsible for human resources development for health in the country and therefore held accountable for the success and failure of the upgrade programme by government.

### ***3.5.2 The Evaluation Team***

As indicated by a number of authors (Clarke et al 1983; Scriven 1983:229; Bond 1985:258; Saunders 1992:7 and Petro-Nustas 1996:617) roles of officers participating in an evaluation need to be clearly defined. In this study, an evaluation team was made

up of the researcher who was responsible for ensuring that the upgrade programme was developed, implemented and evaluated as planned. The team comprised of the following:

### ***1. Continuing Education Unit 1993-1997***

Dr. K. Bility was head of the Continuing Education Unit that was later renamed Curriculum Unit. He was responsible for the continuing education needs of all serving officers. In this study, he was responsible for the demographic assessment of all the practising enrolled nurses before development of the programme.

### ***2. National Task Force***

As reflected in Chapter 2 the members of the Task Force achieved the following:

- Review of the enrolled nursing curriculum and registered nursing curriculum to determine the content that was lacking in the basic enrolled nursing curriculum.
- Analysis of the costs and duration of training for all levels of nursing cadres in the country.
- An implementation schedule for the new revised basic nursing curriculum was developed.

### ***3. National Curriculum Committee***

The membership of the committee consisted of the following:

Mrs. K. Gasennelwe	Under Secretary, Manpower (MOH) - Chair
Dr. J. Odaro	Ministry of Education
Dr. K. Bility	MOH -Continuing Education Unit
Dr. S. Gaborone	UB -Centre for Continuing Education
Dr. S. Tlou	UB -Department of Nursing
Mrs. K. Mmatli	IHS-Serowe
Mrs. O. Mmolawa	IHS-Serowe
Mrs. B. Mdhuli	IHS-Serowe- Coordinator of EN/RN programme
Mrs. O. Tau	UB -Centre for Continuing Education
Mrs. P. Malikongwa	Nyangabwe Referral Hospital
Mrs. E. Alidi	Botswana Nursing Council
Mrs. O. Mogano	IHS-Gaborone
Mrs. D. Mooka	IHS-Molepolole
Miss. G. Letang	Hospital Services
Mrs. O. Kebiditswe	IHS-Lobatse
Miss. T. Tsheko	IHS-Serowe
Mr. C. Boitshoko	Nyangabwe Referral Hospital
Miss. O. Seitio	IHS-Serowe
Miss. S. Letubo	IHS-Serowe

Mrs. G. Sibanda

IHS-Francistown

Dr. E. Acheson

UB – Department of Nursing- later

transferred to Curriculum Unit in the MOH

The committee developed the generic nursing curriculum into which, the enrolled nurses were being upgrading into and the EN/RN upgrade curriculum.

#### ***4.The Kellogg Consultants***

The following Kellogg consultants, Flucas, Poindexter and Todd were responsible for the process evaluation of the implementation of the EN/RN upgrade programme and the assessment of the library and other support needs of the programme.

#### ***5.MOH Curriculum Unit***

Dr. Acheson and Mrs. P. Ncube were responsible for the storage of data on academic achievements of the students from all the training institutions, permission the visits the health facilities and preparation for the visits to the districts and the hospitals for the 2000 structured group interviews. The visits were ultimately done in 2001 because members of the team had other conflicting assignments and could not meet on scheduled dates.

6. Mrs. B. Maskey, Mrs. B. Mdhuli and the researcher developed the questionnaires for the graduates and structured group interviews/discussions for

the supervisors. Mrs Maskey visited the facilities to collect data from graduates and their supervisors. Mrs. Boile Mdhuli is responsible for the coordination of the EN/RN upgrade programme and keeps all the data on each student record that summarises demographic and academic information. This is in line with the recommendation by Clarke et al (1983) on their study on Curriculum Evaluation using the Stufflebeam CIPP model.

### ***3.6 Product Evaluation***

The purpose of product evaluation was to collect data that would provide information on the extent to which the goals of the programme have been achieved. A methodological triangulation approach was used to collect data such as self-administered questionnaires to the graduates and structured interviews to the groups of their supervisors and review of IHS/UB intake and examination records. Self-administered questionnaires were developed and administered to the graduates of the upgrade programme to determine what they have learned and how they were coping in their new roles as registered nurses. Structured group interviews were conducted to the supervisors of the graduates to determine if they perceived that the graduates knowledge and skills in primary health care had improved. Mrs. B. Maskey travelled to the health facilities to administer and collect self-administered questionnaires to the graduates and their supervisors from 20/11/1995 to 21/12/1995 in 1995 as reflected in Table 3.2 on page 129 and from 26/3/1997 to 28/4/1997 in 1997 as reflected in Table 3.3 on page 130. In 2001, a group of six officers travelled to fifteen hospitals and

fifteen district health teams to collect data from the supervisors of the graduates as reflected in Table 3.4 on page 132.

Group 1 comprised of the following:

1. Mrs. F. Kelobang Principal -IHS-Bamalete Lutheran
2. Mrs. O. Lemo Lecturer -IHS-Molepolole
3. Mrs. P. Ncube Coordinator -MOH Curriculum Unit

Group 2 comprised of the following:

1. Mrs. N. Pilane Principal-IHS-Gaborone
2. Dr. M. Lee Senior Lecturer Department of Nursing UB
3. Mrs. K. Gasannelwe Researcher

Table 3.2 is a schedule of the health facilities that were visited in 1995 to collect data from full-time residential graduates and their supervisors. The supervisors were from eleven groups of twenty-four supervisors from ten hospitals and eight groups of thirteen supervisors from eight district health teams. The supervisors in these health facilities were requested to identify suitable places for the graduates to complete the self administered questionnaires.



**Table 3.2 Data Collection Schedule for the 1995 Graduates and their Supervisors**

<b>Group No.</b>	<b>Date</b>	<b>Place</b>	<b>Number of graduates</b>	<b>Number of supervisors in a group</b>
<b>1.</b>	20/11/1995	Kasane Primary Hospital	2	2
		-Health post	1	1 DHT
<b>2.</b>	23/11/1995	Maun Hospital	2	2
		- Clinic	2	2 DHT
<b>3.</b>	27/11/1995	Gantsi Primary Hospital	2	2
<b>4.</b>	5/12/1995	Nyangabwe Hospital	2	2
		- Clinic	2	2+1 DHT
		- Health post	1	
<b>5.</b>	8/12/1995	Sefhare Primary Hospital	2	2
<b>6.</b>	11/12/1995	Sekgoma Memorial Hospital	2	2
<b>7.</b>	12/12/1995	Palapye Primary Hospital,	2	2
	13/12/1995	-Clinic	1	2 DHT
		-Health post	1	
<b>8.</b>	14/12/1995	Mahalapye Hospital	2	2
	15/12/1995	-Clinic	1	2 DHT
		-Health Post	1	
<b>9.</b>	18/12/1995	Lobatse Mental Hospital	2	2
		-Clinic	2	2 DHT
<b>10.</b>	19/12/1995	Scottish Livingstone Hospital	2	2
		-Health post	1	1 DHT
<b>11.</b>	21/12/1995	Oodi Clinic	2	4 DHT
			2	
<b>TOTAL</b>		10 hospitals 5 health posts and 6 clinics from 8 DHT	37	24 + 13 DHT 37

**Table 3.3 Data Collection Schedule for 1997 Part-Time Graduates and Supervisors**

<b>Group No.</b>	<b>Date</b>	<b>Name of the institution</b>	<b>Number of respondents</b>	<b>Number of supervisors in a group</b>
<b>1.</b>	25/03/1997	Sekgoma Memorial Hospital	3	3
<b>2.</b>	26/03/1997	Nyangabwe Referral Hospital Botswelelo clinic Lobolang clinic from same DHT	4 1 1	4 2 <sub>DHT</sub>
<b>3.</b>	1/04/1997	Bamalete Lutheran Hospital	2	2
<b>4.</b>	2/04/1997	Deborah Retief, Memorial Hospital	2	2
<b>5.</b>	3/04/1997	Scottish Livingstone Hospital	1	1
<b>6.</b>	4/04/1997	Seventh Day Adventist Hospital	2	2
<b>7.</b>	7/04/1997	Athlone Hospital	3	3
<b>8.</b>	27/04/1997	Selebi-Phikwe Government Hospital	3	3
<b>11.</b>	28/04/1997	Bobonong Primary Hospital	1	1
<b>12.</b>	28/04/1997	Madinare Primary Hospital	2	2
<b>TOTAL</b>		<b>10 hospitals + 2 clinics from I DHT</b>	<b>25</b>	<b>23+2<sub>DHT</sub> 25</b>

Table 3.3 is a schedule of the health facilities that were visited in 1997 to collect data from two year-time distance graduates and their supervisors. There were twelve groups of twenty-three supervisors from ten hospitals and only two supervisors from one district health team participated in the interviews. In Table 3.2 and Table 3.3 only those graduates and their supervisors who were on duty at that time and were willing to participate in the study were requested to complete in the questionnaires and be

interviewed and Mrs Maskey conducted the interviews. It was not possible for other officers to visit the facilities because of other assignments that they were given at the same time. The supervisors in these facilities were requested to identify a comfortable place for the graduates to complete the questionnaires. Data were mainly collected from the graduates in different hospital wards in primary, district hospitals and one referral hospital and taken over to the MOH by Mrs Maskey for analysis by her, EN/RN coordinator, Mrs Mdhluli and the researcher.

Table 3.4 on page 132 shows that the six officers in two groups collected data from 120 supervisors of upgrade graduates from the 22<sup>nd</sup> January to 7<sup>th</sup> February 2001. From hospitals, there were fifteen groups of ninety and health districts twelve groups of thirty supervisors. One member in each team explained the purpose for the group interviews to the group, facilitated the interviews/discussions and thanked the group at the end of the interviews. As mentioned, earlier the supervisors from the health facilities visited were responsible for identifying suitable places where the interviews were to be conducted.



**Table 3.5 Summary of Visits to Health Facilities 1995-2001**

	<b>Name of Institution</b>	<b>1995</b>	<b>1996</b>	<b>2001</b>	
1.	Nyangabwe	1H+1C+1HP	1H+2C	1H+1DHT	
2.	Sekgoma Memorial	1H	1H	1H+1DHT	
3.	Palapye	1H+1C+1HP	0	0	
4.	Phikwe	1H	1H	0	
5.	Maun	1H+1C	0	1H+1DHT	
6.	Kasane	1H	0	1H	
7.	Gumare	1HP	0	0	
8.	Gantsi	1H	0	1H+1DHT	
9.	Mahalapye	1H+1C+1HP	0	0	
10.	Princess Marina	1H+1C	0	1H+1DHT	
11.	Deborah Retief Memorial	0	1H	0	
12.	Bamalete Lutheran	0	1H	1H+1DHT	
13.	Seventh Day Adventist	0	1H	1H+1DHT	
14.	Jwaneng	0	0	1H+1DHT	
15.	Scottish Livingstone	1HP	1H	1H	
16.	Masunga	0	0	1H+1DHT	
17.	Tutume	0	0	1H	
18.	Athlone	0	1H	1H+1DHT	
19.	Tsabong	0	0	1H+1DHT	
20.	Bobonong	0	1H	0	
21.	Madinare	0	1H	0	
22.	Lobatse Mental	1H+1C	0	1H+1DHT	
<b>TOTAL</b>		<b>35 visits in 22 hospitals</b>	<b>10+6C+5HP</b>	<b>10H+2C</b>	<b>15H+12DHT</b>
		<b>Key:</b> C - Clinic H - Hospital HP - Health Post DHT - District Health Team			

**Table 3.6 Summary of Visits to Health Facilities and Respondents (Graduates and Supervisors) 1995-2001**

<b>YEAR</b>	<b>HOSPITALS</b>	<b>CLINIC</b>	<b>HEALTH POSTS</b>	<b>DHT</b>
<b>a) Health Facilities</b>				
<b>1995</b>	10	6	5	-
<b>1997</b>	10	2	-	-
<b>2001</b>	15	-	-	15
<b>TOTAL</b>	35(visits)	8	5	15
<b>b) Respondents (Health Personnel)</b>				
<b>1995</b>	26	6	5	-
<b>1997</b>	23	2	-	-
<b>2001</b>	105	-	-	15
<b>TOTAL</b>	154	8	-	15

Table 3.6 shows that a total number of personnel for structured interviews from 1995-2001 was 182 from thirty-five hospital visits in twenty-two hospitals, eight clinics, five health posts, and fifteen district health teams. In all these visits, the matrons or district medical officers identified those nurses who were supervising the graduates and organised meeting rooms in each health facility for the interviews. One team member in each group explained the purpose for the group interviews, facilitated the discussions, and thanked the group at the end of the interview.

### **3.7 Evaluation Instrument**

Since self-control designs require pre measures (formative evaluation) and post measures, (summative evaluation) over a period of time, tools that are used to measure may be many and varied. The following tools were purposely designed to collect data in this longitudinal study. Self-administering questionnaires and questionnaires for structured group interviews. The purpose of the questionnaires according to Jack and

Clarke (1998:176) is to collect data that can be converted into measures of the research question under investigation. The questionnaires were developed and administered to the graduates of the EN/RN upgrade programme to determine their perceptions on improvement of knowledge for delivery of primary health care services. The questionnaires for structured group interviews/ discussions of their supervisors were also to determine their perceptions on the graduates' improvement of knowledge in provision of primary health care services in various health facilities. The supervisors' perceptions would complement the graduates' perceptions on their improvement on knowledge in the delivery of primary health care services.

The questionnaires were developed after review of the objectives and outcomes of the programme in the curriculum on Table 2.6 page 90 and the questions that this study intended to answer that is to determine if the EN/RN upgrade programme had prepared the graduates to deliver primary health care services to the communities.

### ***3.7.1 Development of the Instrument***

A seventeen-item questionnaire was developed by the researcher, the EN/RN upgrade programme coordinator, Mrs. Mdhuli from IHS Serowe and Mrs. Maskey, coordinator for continuing education programme for the MOH. The instrument was developed to collect data from the graduates to determine the graduates' perception of their increased knowledge and skills to deliver primary health care services. The content that was found lacking in the basic enrolled nursing curriculum was used in the

development of the content for self- administered questionnaires to the graduates. As mentioned earlier the WHO Guide (1985:8) on development of a primary health care oriented curriculum was also used as a guide. The questionnaires covered the following areas:

- Health assessment of individuals, families, community-question item 1
- Role of a nurse in primary health care- question item 2
- Role of health education in primary health care- question item 3
- Provision of maternal health services and safe motherhood- question item 4
- Communication skills in primary health care- question item 5
- Problem-solving skills in primary health care- question item 6
- Leadership and management of primary health care services and team approach in primary health care- question items 7 & 8
- Professional development and the role of the Nurses Association- question items 9, 10, 11 and 12
- Unintended outcomes- question items 13, 14 & 15 to determine what the graduates perceived lacking in the programme in order to make improvements in the curriculum. A detailed questionnaire is in Appendix III.

The instrument was pilot tested at the IHS Serowe by the coordinator for the upgrade programme Mrs. Mdhuli and the results were shared with the MOH and the Kellogg consultants. Though the questionnaire took about thirty minutes to complete because it



required a lot of writing it was implemented without modifications. The rationale for this was that the sample size was small and therefore data would not be too tedious to deal with.

Data collected from the graduates' responses were then tallied under each "YES" or "NO" question item and were analysed manually. Responses on open-ended questions were recorded and then grouped under each fixed alternative of "YES" or "NO" to give reasons for those responses and these reasons were recorded separately under full-time and part-time distance graduates.

The second instrument for supervisors was an eleven-item questionnaire for structured group interviews to determine the supervisors' perceptions on knowledge of the graduates in the provision of primary health care services and the questionnaire covered the following areas:

- Health care policies/procedures available in health facilities that facilitate the provision of primary health care services - question item 1
- Health assessment skills for individuals, families and the community- question item 2
- Communication skills in primary health care- question item 3
- Problem-solving skills in primary health care- question item 4
- Leadership and management skills and team approach in primary health care- question items 5 and 6

- Professional development and role of Nurses Association- question item 7
- EN/RN upgrade programme and MOH goals- question item 8
- Achievements of the EN/RN programme- question item 9
- Unintended outcomes- question item 10
- Recommendations for the EN/RN programme- question item 11

This tool was used for collecting data in 1995, 1997 and 2001 without any modification. A detailed questionnaire is in Appendix IV.

Data collected from the responses of groups of supervisors were then tallied under each “YES” or “NO” question item; totals and percentages worked out for each question item using a calculator because data were small and could be analysed manually. The decisions in each group of supervisors were reached by consensus and were recorded under each fixed alternative of YES or NO under each question item. Responses on open-ended questions were recorded and then grouped under each fixed alternative of “YES” or “NO” to give reasons for those responses and the decisions were still reached by consensus. The responses of the supervisors were then grouped according to central government (primary, district and referral hospitals) and local government (district health teams, clinics, and health posts).

A third tool was developed for collection of data from enrolment and examination records of the students from 1994-2000 per institution per year. In each institution, students information was tallied under Intake; Pass with Distinction (80+ %); Pass with Merit (705-79%); Pass with Credit (60%-69%); Pass (50%-59%); Fail and Discontinue (39% and below); Withdrawals and total Output. Data from the institutions were collected after the supplementary examinations were done hence there is no fail and supplement reflected in the analysis. The percentages were then worked out per institution per year and data from full-time graduates were worked out separately from that of the part-time distance graduates and grouped together where the overall performance of the upgrade programme was sought.

### ***3.8 Validity and Reliability***

Validity refers to the degree to which a measure assesses what it purports to assess. Reliability refers to the consistency of a measure while validity refers to its accuracy (Fink 1993:140-144). Data collection methods used in this study vary and measurements have been taken over a period of more than ten years using the CIPP model as a framework by different people namely the researcher, Maskey, Task Force, Kellogg Consultants, Bility and IHS Serowe faculty. This poses a threat to the issue of validity and reliability. Content validity is concerned with the sampling adequacy of content being measured (Polit & Hungler 1993:250). In support of this, Fink (1993:145) states that content validity is the extent to which a measure thoroughly and appropriately assesses the skills and characteristics it is intended to assess.

In this context, the areas of content that the study was addressing were covered after review of the instruments with the Kellogg Consultants, IHS Serowe faculty and the Curriculum Unit within the MOH to ensure content validity.

An instrument is said to be reliable if its measures reflect the true measures of the attribute under investigation. The less variation an instrument produces in repeated measurements of an attribute, the higher is its reliability, Polit & Hungler (1993:245). Though this is important, it was not pursued in detail in this study and therefore this may be a limitation in this study. The researcher assumed that the instrument was reliable because the same instrument was used in 1995 and 1996, and it measured the content of knowledge and skills of the graduates in primary health care as perceived by the graduates themselves and as perceived by their supervisors in various health facilities throughout the country. These perceptions by the graduates and by their supervisors are validated by the academic performance of the graduates as reflected in Table 4.2 in Chapter 4. There was a relationship between what the instrument measured and the graduates' perceptions of their knowledge in primary health care as well as the external examiners comments on the graduates' knowledge in primary health care and the supervisors' perceptions on improvement of knowledge of the graduates in the provision of primary health care services in hospitals, district health teams, clinics, health posts and mobile stops throughout the country.

### ***3.9 Ethical Considerations***

When human beings are used as subjects, care must be taken to ensure that the rights of those human beings are protected (Polit and Hungler 1991:29). The purpose of this study was explained to all the respondents who are the graduates of the EN/RN upgrade programme and consent was sought from the graduates before filling the questionnaires as reflected in Appendix II and their supervisors before participating in the focus group interviews. Anonymity was maintained by allowing the respondents to the questionnaires not to fill in their names. The Ministry of Health Research Committee gave permission to the researcher to undertake this study as shown in Appendix I.

### ***3.10 Conclusion***

This chapter described the design and the methodology used in this longitudinal evaluation study on the EN/RN upgrade programme. The procedure for data collection, sources of data, target population or participants, instruments used, sample and sampling technique were also discussed. Other relevant data collected from the supervisors and academic records from the IHS/UB were described. The chapter also portrayed how different people from the MOH, IHS faculty, and UB and Kellogg Consultants collected data over a period of eleven years. This can be either a weakness or strength since people perceive things differently.

## CHAPTER 4

### ANALYSIS AND PRESENTATION OF FINDINGS

#### *4.1 Introduction*

The purpose of data analysis is to impose some order on a large body of information so that general conclusions can be reached and communicated in a report (Polit and Hungler 1993:329). In this chapter, data were collected from multi-stage sources and analysed to reach conclusions and communicate these in the report.

- IHS/UB students academic records from 1994-2000
- Self-administered questionnaires from the 1995 one full-time residential and 1996 two year part- time distance education graduates,
- Structured group interview questionnaires from the graduates' supervisors.

As mentioned earlier in Chapter 3 in 3.7 on page 115 different people collected data at different times such as IHS Faculty, MOH officials and the University of Botswana and the Kellogg Consultants. Quantitative data from IHS/UB students academic records from 1994-2000 were collected per institution per year under Intake; Pass with Distinction (80+ %); Pass with Merit (70-79%); Pass with Credit (60%-69%); Pass (50%-59%); Fail and Discontinue (39% and below); Withdrawals and total Output. Data from the institutions were collected after the supplementary examinations were

done hence there is no fail and supplement reflected in the tables. The reasons for the students' withdrawals from the programme in each institution were recorded and summaries made for all institutions. Data were then analysed and presented in tables and figures for each institution and combined where the overall performance of the upgrade programme was required.

A seventeen-item self-administered questionnaire was used to collect quantitative data from the graduates that required a Yes or No response. The graduates' responses were then tallied under each "YES" or "NO" question item, analysed and presented in tables and charts. The responses on open-ended questions were recorded and then grouped under each fixed alternative of "YES" or "NO" to give reasons for those responses and then grouped into categories. The categories were derived from the content that was found lacking in the basic enrolled nursing programme. Table 2.5 on page 83; Figure 2.5 on page 85 and Figure 2.6 on page 86 in Chapter 2 all reflect the content in the development of the EN/RN upgrade curriculum. The responses of the one-year full-time residential graduates were recorded separately from those of the two-year part-time distance graduates and summaries from all the three training institutions to reflect the overall results of the graduates of the upgrade programme.

An eleven-item questionnaire that required a "YES" or "NO" response like that of the graduates was used to collect data from the groups of the supervisors of the graduates. The decisions in each group of supervisors were reached by consensus and were recorded under each fixed alternative of "YES" or "NO" under each question item. The

responses on open-ended questions were recorded and then grouped under each fixed alternative of “YES” or “NO” to give reasons for their responses and the decisions were still reached by consensus and then grouped into categories like those of the graduates. The purpose for this was to complement the results of the graduates’ perceptions on their improved knowledge in delivery of primary health care services. The responses of the supervisors were also grouped under central government (primary, district and referral hospitals) and local government (district health teams, clinics and health posts) and data were analysed and presented in tables.

According to Stufflebeam (1983:134-135) the purpose of product evaluation is to measure, interpret and judge the achievement of the objectives of the programme in order to improve the programme. This type of evaluation can be extended to assess the long-term effects and the performance in relation to previously identified needs. In this study, the identified needs were that the enrolled nurses could not adequately provide primary health care services to communities they served. The MOH as stakeholders, Kellogg Consultants as donors, and the graduates of the upgrade programme as recipients participated in the evaluation of this programme from 1995-2000. Product evaluation should also search for intended and unintended outcomes both negative and positive Scriven (1983:232) and Sohn (1987:28). The reports of the evaluation may be done at different stages Stufflebeam (1983:134). In the current study, the reports were done in 1995 for the full-time residential graduates and their supervisors and in 1997 for the part-time distance education graduates and their supervisors, though the students had completed in 1996 as mentioned earlier. For the academic performance,



there were yearly reports from the IHS/UB internal and external examiners from 1995-2000. In 2001, the overall evaluation report to determine the effectiveness of the EN/RN upgrade programme was undertaken by the researcher using the graduates from 1995-2000.

## ***4.2 Product Evaluation***

### ***4.2.1 Data from IHS/UB Academic Records 1995-2000***

Data were collected annually from 1995-2000 from the three training institutions that were offering the EN/RN upgrade programme. The data were then analysed manually at the end of each academic year to determine the extent to which the upgrade programme had strengthened the knowledge of the upgrade graduates to provide primary health care services. The records reviewed were:

1. Yearly enrolments in each training institution
2. Yearly examinations results in each institution
3. Pass and failure rates according to IHS/UB academic regulations  
(1995:64):
  - Pass with Distinction (80%+)
  - Pass with Merit (70%-79%)
  - Pass with Credit (60%-69%) and
  - Ordinary pass (50%-59%)
4. Fail and supplement (40%-49%)
5. Fail and discontinue (39% and below)
6. Yearly withdrawals before sitting for final examinations

In this study, the reader should note that the students who failed, supplemented, and passed were added to those students that passed in that same academic year and therefore fail and supplement is not reflected in the tables. The students who failed and repeated were added to the next academic year enrolment and were not reflected in these tables under fail and repeat. The reason for this is that the study is to determine the overall pass rate and the overall dropout rate during this study period and secondly data were collected after the students had sat for their supplementary examinations where fail and supplement was no longer applicable. It is also important to note here again that both internal and external examiners did the initial analysis of pass and failure rates before the results were published by the University of Botswana. The analysis of the pass, failure and drop out rates in this study was to determine the efficiency and effectiveness of the upgrade programme from 1995-2000 periods. The high failure rates would make students repeat the programme and take long to complete rather than complete in one or two years as planned. The government would therefore incur replacement costs for those students who would be repeating the programmes by employing other nurses to replace them while on training and paying extra salaries for those nurses.

The participating institutions were IHS Serowe, which in 1994 admitted students for one-year full-time residential and two-year part-time distance programme, Deborah Retief Memorial (DRM) which started the programme in 1996 and Bamalete Lutheran Hospital (BLH) which started in 1997 both offering one year full-time residential programme. The IHS Serowe is responsible for the overall coordination of the EN/RN

upgrade programme and the coordinator, Mrs. Boile Mdhluhi, collates all the information from the other institutions. The internal examiners were drawn from the institutions offering the EN/RN upgrade programme. The external examiners were appointed from universities outside the country, particularly those that were known to be offering similar upgrade programmes or distance education programmes for nurses.

The external examiners from 1995- 1997 were from Wayne State University in the United States of America and University of Zimbabwe and from 1998-2000, from University of Malawi. The University of Botswana is responsible for the appointment of both internal and external examiners.

#### ***4.2.2 Summary Academic Performance of EN/RN Upgrade Graduates 1995-2000***

The analyses of data from 1995 to 2000 were to determine the extent to which the upgrade programme strengthened the knowledge of the graduates for provision and management of primary health care services per institution per year.

**Table 4.1 Analysis of Academic Performance per Institution from 1994-2000**

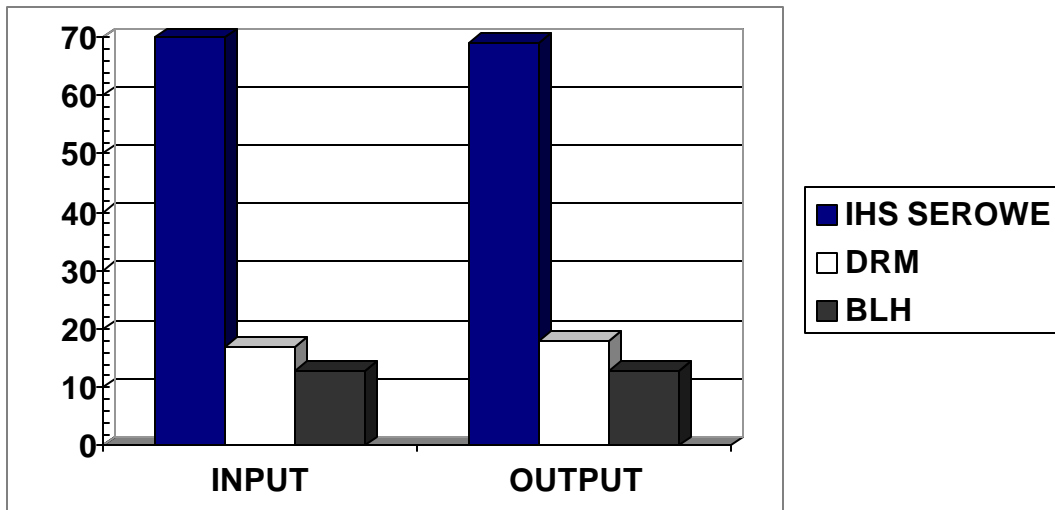
Year	Institution	Intake	Attainment						Output	
			D	M	C	P	F&D	W		
1994/1995	Full-time	BLH	No Intake							
		DRM	No Intake							
		SEROWE	96	0	23	51	17	4	1D	91
	Part-time	80	for two year to write in 1996.							
	<b>SUB-TOTAL</b>	<b>176</b>	<b>0</b>	<b>23</b>	<b>51</b>	<b>17</b>	<b>4</b>	<b>1</b>	<b>91</b>	
1995/1996	Full-time	BLH	No Intake							
		DRM	32	2	7	20	0	3	0	29
		SEROWE	82	0	30	41	3	8	0	74
	Part-time	80	0	21	35	23	1	0	79	
	<b>SUB-TOTAL</b>	<b>194</b>	<b>2</b>	<b>58</b>	<b>96</b>	<b>26</b>	<b>12</b>	<b>0</b>	<b>182</b>	
1996/1997	Full-time	BLH	30	4	13	13	0	0	0	30
		DRM	38	0	13	21	1	3	0	35
		SEROWE	84	2	24	46	0	11	1D	72
	Part-time	80	2	24	41	7	6	0	74	
	<b>SUB-TOTAL</b>	<b>232</b>	<b>8</b>	<b>74</b>	<b>121</b>	<b>8</b>	<b>20</b>	<b>1</b>	<b>211</b>	
1997/1998	Full-time	BLH	30	0	13	12	2	2	1D	27
		DRM	42	0	33	7	0	2	0	40
		SEROWE	96	1	34	52	0	9	0	87
	Part-time	58	0	25	27	2	2	1+1D	54	
	<b>SUB-TOTAL</b>	<b>226</b>	<b>1</b>	<b>105</b>	<b>98</b>	<b>4</b>	<b>15</b>	<b>3</b>	<b>208</b>	
1998/1999	Full-time	BLH	40	0	28	11	0	0	1	39
		DRM	40	0	24	16	0	0	0	40
		SEROWE	8	0	1	5	0	2	0	6
	Part-time	102	1	52	46	2	1	0	101	
	<b>SUB-TOTAL</b>	<b>190</b>	<b>1</b>	<b>105</b>	<b>77</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>186</b>	
1999/2000	Full-time	BLH	38	2	20	10	0	6	0	32
		DRM	39	2	25	11	0	0	1	38
		SEROWE	No Intake							
	Part-time	101	0	42	51	1	5	2D	94	
	<b>SUB-TOTAL</b>	<b>178</b>	<b>4</b>	<b>87</b>	<b>72</b>	<b>1</b>	<b>11</b>	<b>3</b>	<b>164</b>	

**Key:** BLH – Bamalete Lutheran Hospital  
 DRM – Deborah Retief Memorial  
 IHS Serowe-Institute of Health Sciences Serowe  
 D – Pass with Distinction :80%+  
 M – Pass with Merit:70%-79%  
 C – Pass with Credit:60%-69%  
 P – Pass:50%-59%  
 F&D – Fail and discontinue:40%-49%  
 W – Withdrawal and did not sit for final examinations

Table 4.1 shows the intake and output per institution from 1994-2000. In 1994/1995 IHS Serowe was the only institution that enrolled both full-time and part-time students. The institute did not have intake in 2000 because it enrolled generic registered nursing students the same year. The two mission institutions could handle the remaining numbers of enrolled nurses for upgrading. The Deborah Retief Mission institute started training in 1996 with one-year full-time residential students while Bamalete Lutheran Hospital started in 1997 also with one-year full-time residential students.

**Table 4.2 Summary of Intakes, Withdrawals and Outputs from all Training Institutions 1994-2000**

INSTITUTION	YEAR	INPUT	WITHDRAWALS	ENROLLMENT	OUTPUT	%
IHS Serowe	1994/1995	176	1	175	91	70.5% of total intake 66.1% of total output. 0.5% dropout
	1995/1996	82	0	82	153	
	1996/1997	164	1	163	146	
	1997/1998	154	2	152	141	
	1998/1999	110	0	110	107	
	1999/2000	101	2	99	94	
<b>TOTAL</b>		<b>787</b>	<b>6</b>	<b>781</b>	<b>732</b>	
DRM	1994/1995	No Intake				17.1% of total intake  16.4% of total output. 0.08% dropout
	1995/1996	32	0	32	29	
	1996/1997	38	0	38	35	
	1997/1998	42	0	42	40	
	1998/1999	40	0	40	40	
	1999/2000	39	1	38	38	
<b>TOTAL</b>		<b>191</b>	<b>1</b>	<b>190</b>	<b>182</b>	
BLH	1994/1995	No Intake				12.4% of total intake  11.5% of total output. 0.17% dropout
	1995/1996	No Intake				
	1996/1997	30	0	30	30	
	1997/1998	30	1	29	27	
	1998/1999	40	1	39	39	
	1999/2000	38	0	38	32	
<b>TOTAL</b>		<b>138</b>	<b>2</b>	<b>136</b>	<b>128</b>	
<b>GRAND TOTAL</b>		<b>1116</b>	<b>9</b>	<b>1107</b>	<b>1042</b>	



*Figure 4.1 Summary of Intake and Output from Three Institutes 1994-2000*

Table 4.2 and Figure 4.1 further reveal that during the six-year period (1994-2000) IHS Serowe had an enrolment of 776 (70.5%) out of 1116 from all the three training institutions. The enrolment from the two mission institutions was 192 (17.1%) for DRM and 148 (12.4%) for BLH out of the 1116 enrolment. The total enrolment for the mission institutions was 340 (30%) out of 1116 from all the three training institutions. The total number of the students who did not sit for the final examinations was nine (0.8%) out of 1116 that enrolled into the EN/RN upgrade programme from 1994-2000. The total number of students that sat for the final examinations from 1995-2000 was 1107 and 1042 (94.1%) passed. The output from IHS Serowe was 721 (66.1%) while output from DRM was 191(16.4%) and BLH was 138 (11.5%). The two mission institutions did not have the capacity to enrol more students due to financial constraints. The donors to neither these mission institutions nor the government were unable to fund the construction of classrooms and other learning resources. Out of

1433 enrolled nurses that were to be upgraded 1116 (77.8%) had been enrolled into the programme by 2000 and only 317 enrolled nurses were still waiting for upgrading.

**Table 4.3 Summary of Academic Performance of EN/RN Upgrade Graduates from 1995 to 2000 from all Institutions**

Year	Intake	D	M	C	P	F/D	OUTPUT	PASS RATE (%)
1994/1995	95	0	23	51	17	4	91	95.7
1995/1996	194	2	58	96	26	12	182	94.7
1996/1997	231	8	74	121	8	20	211	91.3
1997/1998	223	1	105	98	4	15	208	92.8
1998/1999	189	1	105	78	2	3	186	98.4
1999/2000	175	4	87	72	1	11	164	93.1
<b>TOTAL</b>	<b>1107</b>	<b>16</b>	<b>452</b>	<b>516</b>	<b>58</b>	<b>65</b>	<b>1042</b>	<b>94.1</b>
<b>PERCENT (%)</b>	<b>100</b>	<b>1.4</b>	<b>40.8</b>	<b>46.6</b>	<b>5.2</b>	<b>5.8</b>		
<b>Key: D - Distinction: 80%+</b> <b>M - Merit: 70%-79%</b> <b>C - Credit: 60%-69%</b> <b>P - Pass: 50%-59%</b> <b>F/D - Fail and discontinue: 39% and below</b>								

Table 4.3 shows that from 1995-2000, 1107 students sat for final examinations and 1042 (94.1%) passed. Out of 1042 students that passed, sixteen students (1.4%) passed with distinction, 452 (40.8%) passed with merit, 516 passed with credit (46.6%), fifty-eight (5.2%) passed while sixty-five (5.8%) failed and discontinued. As mentioned earlier under Table 4.2, nine students (0.8%) discontinued from the programme due to ill health/deaths or other personal reasons and there were six (0.5%) deaths. The overall dropouts due to ill health, deaths, withdrawals failures or discontinuations from the programme were seventy-four (6.6%). The reasons for discontinuation or for not sitting



for the final examinations were drawn from each student's personal file in each institution. The calculations of the pass rates did not include the nine students who withdrew from the programme. The students who failed usually repeated the following academic year, and those who fail and discontinue may enrol again in the programme after a year according to IHS/UB Academic Regulations (1995:64). An analysis of how many of these students actually enrolled after discontinuation was not done in this study.

**Table 4.4 Summary of Academic Performance of Full-Time Graduates 1995-2000**

YEAR	INTAKE	D	M	C	P	F/D	OUTPUT	PASS RATE (%)
1994/1995	95	0	23	51	17	4	91	94.8
1995/1996	114	2	37	61	3	11	103	90.3
1996/1997	151	6	50	80	1	14	137	90.7
1997/1998	167	1	80	71	2	13	154	92.2
1998/1999	87	0	53	32	0	2	85	97.7
1999/2000	76	4	45	21	0	6	70	92.1
<b>TOTAL</b>	<b>690</b>	<b>13</b>	<b>288</b>	<b>316</b>	<b>23</b>	<b>50</b>	<b>640</b>	<b>92.7</b>
<b>Key: D - Distinction: 80%+</b> <b>M - Merit: 70%-79%</b> <b>C - Credit: 60%-69%</b> <b>P - Pass: 50%-59%</b> <b>F/D - Fail and discontinue: 39% and below</b>								

Table 4.4 shows the academic performance of the one-year full-time residential students from 1995-2000. Out of the 690 students that sat for the final examinations 640 (92.7%) passed. Thirteen students (1.8%) passed with distinction, 288 (41.7%)

passed with merit, 316 (45.7%) passed with credit and twenty-three (3.3%) with ordinary pass. This indicates that the one-year full-time residential programme has strengthened the knowledge of the graduates to provide primary health services to communities.

**Table 4.5 Summary of Academic Performance of Part-Time Graduates 1996-2000**

<b>YEAR</b>	<b>INTAKE</b>	<b>D</b>	<b>M</b>	<b>C</b>	<b>P</b>	<b>F/D</b>	<b>OUTPUT</b>	<b>PASS RATE (%)</b>
<b>1994/1996</b>	80	0	21	35	23	1	79	98.7
<b>1995/1997</b>	80	2	24	41	7	6	74	92.5
<b>1996/1998</b>	56	0	25	27	2	2	54	96.4
<b>1997/1999</b>	102	1	52	46	2	1	101	99.0
<b>1998/2000</b>	99	0	42	51	1	5	94	94.9
<b>TOTAL</b>	<b>417</b>	<b>3</b>	<b>164</b>	<b>200</b>	<b>35</b>	<b>15</b>	<b>402</b>	<b>96.4</b>
<b>Key: D - Distinction: 80%+</b> <b>M - Merit: 70%-79%</b> <b>C - Credit: 60%-69%</b> <b>P - Pass: 50%-59%</b> <b>F/D - Fail and discontinue: 39% and below</b>								

Table 4.5 shows that out of the 417 students that sat for the final examinations, 402 (96.4%) passed. The 402 students that passed; three students (0.7%) passed with distinction, 164 (39.3%) passed with merit, 200 (47.9%) passed with credit and thirty-five (8.8%) with pass. The overall pass rate is 96.4% during this five-year period (1994-2000) is commendable if one has to consider the conditions under which the distance education students had to study, such as the family problems, work and other

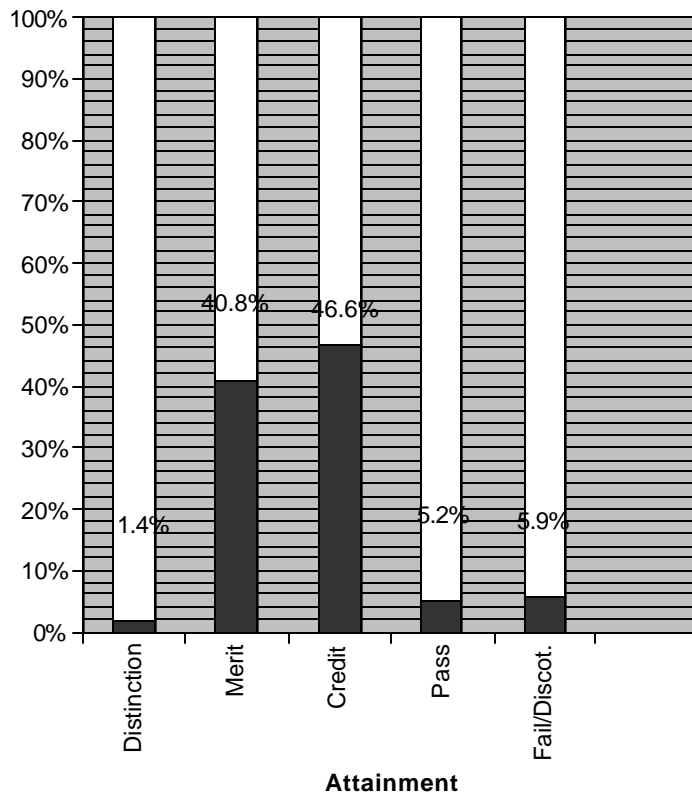
distractions in the home. The graduates performance in the distinction during this five year period was 0.7% while the full-time graduates' performance in the same period was 1.8% as reflected on Table 4.6.below.

**Table 4.6 Summary of Academic Performance of Full-Time and Part-Time Graduates 1995-2000**

Grade	Overall		Full-time		Part-time	
	Total	Total percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Distinction	16	1.4	13	1.8	3	0.7
Merit	452	40.8	288	41.7	164	39.3
Credit	516	46.6	316	45.7	200	47.9
Pass	58	5.2	23	3.3	35	8.3
Fail/Discontinue	65	5.9	50	7.2	15	3.5
<b>TOTAL</b>	<b>1107</b>	<b>100</b>	<b>690</b>	<b>100</b>	<b>417</b>	<b>100</b>

Table 4.6 shows the overall academic performance of both one-year full-time residential students and the two-year part-time distance students. From 1995-2000, out of 690 students that sat for the final examinations from the one year full-time programme, fifty students (7.2%) failed and discontinued and out of 417 students that sat for the final examinations from the two year distance programme, fifteen (3.5%) failed and discontinued. There were sixty-five students (5.8%) that failed and discontinued from both programmes. Williams & Gallimore (1987:21) in their evaluation of the LPN to RN programme saw a drop out of four (8%) out of fifty students in three consecutive intakes as indicative of a very high retention rate.

In this study, the attrition rate (both failure and death rates, and those who discontinued for other reasons) was seventy-four (6.7%), and therefore the retention rate in the EN/RN upgrade is seen as very high using the Williams and Gallimore analysis. The high retention rate also reflects that the programme was efficient and cost-effective because out of 1107 students who sat for the final examinations 1042 (94.1%) passed, 640 (92.7%) within one-year residential programme and 402 (96.4%) within two years part-time distance education. In the previous basic enrolled nursing programme before the restructured upgrade-nursing curriculum, these students could have applied for two years study leave to do Cambridge School Certificate. After passing, they would enrol into one and half year midwifery programme and after passing midwifery, enrol into a three-year general nursing programme. As mentioned earlier the replacement costs and salaries were P156 000 per student per year as reflected in Table 1.3 in Chapter 1.



**Figure 4.2 Attainment Rates of the Full-Time and Part-Time Graduates 1995-2000**

Figure 4.2 shows the summary of the attainment rates of the graduates from both full-time residential programme and part-time distance education programme from 1995-2000 in terms of distinction, merit, credit and pass. During this period, 1.4% of the students passed with distinction; 40.8% passed with merit; 46.6% passed with credit, 5.2% passed while 5.9% failed and discontinued. As shown in Table 4.3 on page 152, the overall pass rate during this period was 94.1%. These high attainment rates indicate that the graduates of the EN/RN upgrade programme did acquire knowledge to provide primary health care services and the programme goals have been met.

The comments from the external examiners (1995-1997) Dr. Washington from Wayne

State University and Dr. Mpanga from University of Zimbabwe indicated that the curriculum had prepared the upgraded nurses for the challenges in the provision of primary health care services. In fact, the external examiners, Washington and Mpanga (1997:3) believe that,

*“The curriculum is comparable to and consistent with the general principles and approaches of nursing education offered in the Southern Africa region and is probably greater than those in other parts of the world.”*

The external examiner in academic year 1998-2000, Mrs. Leah J. Mkumbwa (1999:4) from University of Malawi also shared the same views with the previous external examiners that, *“Botswana has a very educative and practical nursing curriculum aiming at preparing professional nurses to provide comprehensive and quality health care to clients, patients, families, and community for the benefit of the nation.”* The content covered in the final examination questions on primary health care that the external examiners were commenting on is in Appendix VI.

The overall pass rate of 94.1% within the six-year period (1995-2000) revealed that the programme is effective and efficient because there were no replacement costs for those enrolled nurses in the one-year full-time residential and those on two year part-time distance learning. The government policy during that period required only those officers in the civil service who go for further development for more than a year to be replaced. The 695 enrolled nurses who enrolled in the one-year full-time programme during 1994-2000 periods were not replaced according to the policy and therefore the

government did not incur any replacement costs on these students during their training. The 421 enrolled nurses who enrolled into the two-year distance education programme were also not replaced because they were studying while on duty. The salary structure in Table 2.6 in Chapter 2 also revealed that 239 (16.6%) of the enrolled nurses that were upgraded were already in the salary scale for registered nurse at C3/4, and therefore the upgrading did not add any financial burden on the government in terms of payment of salaries.

The efficiency of the programme was also demonstrated in the curriculum structure and conceptual frameworks in Figure 2.5 on page 85 and Figure 2.6 on page 86. The curriculum allowed enrolled nurses to do only that content that was not covered in the basic enrolled nursing programme, therefore the programme was not repetitive and costly, and therefore it was efficient. The duration of the upgrade programme was one to two years, while previously it took eight years for an enrolled nurse to upgrade to a registered nurse as reflected on Table 1.3 page 21.

#### ***4.3 Analysis of Data from Self-Administered Questionnaires of 1995 Full-Time and 1996 Part-Time Graduates***

Quantitative data were collected from thirty-seven full-time and twenty-five part-time graduates using a fifteen-item self-administered questionnaire. The tool required close and open-ended responses and the latter allowed the graduates to use narrative words to express their experiences during the upgrade programme. Burns and Grove (1993:28) believe that this approach allows for subjectivity that is essential for

understanding human experiences because individuals experience situations differently. It was for this reason that the graduates were given an opportunity to express their individual experiences during the upgrade programme. As mentioned earlier a sample size of sixty-two (36.5%) out of 170 graduates that completed from 1995-1996 was used to complete the self-administered questionnaires that determined the extent to which the graduates perceived that their knowledge in provision of primary health care services has been strengthened. A sample size of thirty-seven (40.6%) out of ninety-one graduates that completed the one year full-time residential programme in 1995 and a sample size of twenty-five (31.6%) out of seventy-nine graduates for that completed the part-time distance programme in 1996.

As mentioned earlier under development of the instrument in 3.9.1, a fifteen-item self-administered questionnaire was developed using content that was found lacking in the basic enrolled nursing programme. The purpose was to determine whether the graduates perceived that the upgrade programme had strengthened their knowledge in provision and management of primary health care services and question items covered the following:

1. Health assessment skills in primary health care covering:
  - Health assessment of individuals, families and community- question item 1
  - Role of the nurse in primary health care- question item 2
  - Health education in primary health care - question item 3
  - Maternal and Child health and safe motherhood -question item 4



2. Communication skills in primary health care - question item 5
3. Problem-solving skills in primary health care- question item 6
4. Leadership and management skills and team approach in primary health care- question items 7 and 8
5. Professional development and the role of the Nurses Association- question items 9, 10, 11 and 12.
6. Unintended outcomes- question item 13, 14 and 15.

Scriven (1983:232) and Sohn (1987:28) believe that unintended outcomes should always be included and documented in an evaluation to enable the respondents to spell out fears and hopes that should not be missed when evaluating a programme. Unintended outcomes also tend to minimise bias by the researcher during an evaluation. The unintended outcomes in this study were to give the graduates an opportunity to express themselves freely concerning the merits and demerits of the programme. The closed ended responses from 1995 and 1996 graduates were tallied against each 'YES' and 'NO' question item and analysed manually and presented in tables. The open-ended responses to "YES" and "NO" questions were recorded and then grouped into categories. The responses of the full-time graduates were recorded separately from those of the part-time graduates to determine if there were any differences in preparing the graduates for delivery of primary health care services in the two programmes.

### 4.3.1 Graduates' Responses on Health Assessment in Primary Health Care

Question item 1 addressed health assessment skills in primary health care to determine if the graduates perceived that the programme had prepared them to assess individuals, families and the community.

**Table 4.7 Graduates' Responses on Health Assessment of Individuals, Families and Community**

Question item Did programme prepare you to assess	Graduates' Responses			
	Full-time		Part-time	
	Y	N	Y	N
Individuals	37	0	24	1
Families	37	0	24	1
Community	37	0	24	1
<b>Total</b>	<b>100%</b>	<b>0%</b>	<b>96%</b>	<b>4%</b>

Table 4.7 reveals that all the thirty-seven full-time graduates (100%) and twenty-four-part-time graduates (96%) perceived that the EN/RN upgrade programme had provided them with knowledge to assess individuals, families and communities.

*“We now feel confident to assess individuals, diagnose, and prescribe treatment, plan care and set priorities for our clients. We know when to refer patients to other professionals for further treatment.”*

One (4%) part-time distance education graduate did not feel prepared to assess individuals, families and the community.

*“I need more time and supervision in the clinical areas to acquire health assessment skills.”*

### 4.3.2 Graduates' Responses on the Role of a Nurse in Primary Health Care

Question item 2 addressed the role of a nurse in primary health care settings to determine if the graduates know the different roles of a nurse in those settings.

**Table 4.8 Graduates' Responses on the Role of a Nurse in Primary Health Care**

Question item	Graduates' Responses			
	Full-time		Part-time	
	Y	N	Y	N
Service provider to individuals and families at home, clinics and/or hospitals	37	0	25	0
Educator of individuals, families and community about prevention of diseases, treatment and promotion of health	37	0	25	0
Motivator and advisor of community about the benefits of using health facilities	37	0	25	0
Researcher to identify health problems within the community	37	0	25	0
Liaison officer between community and other sectors involved in health related activities	37	0	25	0
<b>Total</b>	<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>

Table 4.8 shows that all the thirty-seven and twenty-five graduates knew different roles of a nurse in primary health care settings. The graduates' perception of the role of a nurse in primary health care is summarised as follows:

- Service provider to individuals and families in the home, clinic or hospitals, schools or community
- Researcher to identify health problems within the community
- Educator of individuals, families and community about prevention of disease, and treatment promotion of health
- Motivator and advisor of the community about the benefits of using health facilities in their communities.

- Liaison officer between community and other sectors involved in health and health related activities.

There was no response to ‘f’ part of the question from all the graduates.

#### ***4.3.3 Graduates’ Responses on Health Education in Primary Health Care***

Question item 3 addressed the planning and implementing a health education programme in the community to determine if the graduates could identify target groups for health education, plan and implement a health education programme using methods and language that are appropriate to the community.

***Table 4.9 Graduates’ Responses on Health Education in Primary Health Care***

Question item	Graduates’ Responses			
	Full-time		Part-time	
	Y	N	Y	N
Identify target groups for health education	37	0	22	3
Plan a meeting with target groups to discuss and identify needs for health education	37	0	22	3
Select relevant topics for health education and make a schedule for the implementation of the programme	37	0	22	3
Use different methods for teaching the target groups	37	0	22	3
Use methods and language that the community members can understand	37	0	22	3
<b>Total</b>	<b>100%</b>	<b>0%</b>	<b>88%</b>	<b>12%</b>

Table 4.9 shows that thirty-seven full-time graduates (100%) and twenty-two part-time graduates (88%) perceived that the upgrade programme had strengthened their knowledge on health education in primary health care. The graduates indicated how they would identify target groups for health education, plan and implement a health

education programme in a community. The graduates also mentioned the importance of the role of health education in prevention of prevailing diseases in the community and the use of appropriate technology in the treatment of diseases in the community.

Their responses are summarised as follows:

- Ability to identify the target group that needs health education from community assessment.

*“Involvement of the Village Development Committee (VDC), non governmental organizations, clinic staff and extension officers in the identification of the group that needs health education is important because they also understand the needs of the community as they are part of the community as well”.*

- Plan a meeting with the target group to discuss the problem and identify the health needs to be addressed.

*“Community participation and involvement is part of community health care, and the community should be involved at an initial stage.”*

When the people are involved they identify with the problem/need and their participation tends to become high.

- Select relevant topics for health education.

*“The current prevailing health problems should become relevant topics for health education because knowing about these health problems would reduce the incidence of diseases in the community.”*

- Plan for different methods of teaching. The graduates gave examples such as role-play, demonstrations and visual aids as appropriate methods for teaching the community. The use of drama and songs were seen to be more appropriate where communities may not read or write and culturally Batswana seem to like drama and songs.

- Make a schedule for the health education programme and plan for its implementation.

The graduates stressed the importance of liaising with other team members so that activities do not collide as well as getting the support of other team members in the implementation of the programme.

- Use the language and methods of teaching that all members of the community can understand when implementing a health education programme.

*“Use of sophisticated technology or foreign language may discourage the community from participating.”*

When people do not understand the language they become disinterested and they do not participate. The three part-time graduates (12%) from hospital services felt that they were not competent to plan and implement a health education programme. The graduates indicated that they needed in-service education programme to improve their knowledge in planning and implementing a health education programme because this was their first exposure into the community.

#### 4.3.4 Graduates' Responses on Provision of MCH Services and Safe Motherhood

Question item 4 addressed how the graduates perceived that the programme had strengthened their knowledge in provision of MCH and Safe Motherhood services.

**Table 4.10 Graduates' Responses on Provision of MCH Services and Safe Motherhood**

Question item Has the EN/RN programme prepared you to	Graduates' Responses			
	Full-time		Part-time	
	Y	N	Y	N
Identify high-risk mothers and children	37	0	23	2
Educate mothers about the use of health facilities to reduce maternal and infant mortality	37	0	23	2
Conduct MCH and Family Planning (FP) clinics	37	0	23	2
Advise mothers and teenagers on the use of condoms to prevent pregnancy and sexually transmitted diseases	37	0	23	2
<b>Total</b>	<b>100%</b>	<b>0%</b>	<b>92%</b>	<b>8%</b>

Table 4.10 reveals that all thirty-seven full-time (100%) and twenty-three part-time (92%) graduates indicated that they can identify high risk mothers and children, educate them about the importance of using health facilities for antenatal, delivery and post-natal care to reduce maternal and infant mortality and morbidity. They indicated that the programme prepared them to provide maternal, child health care, and safe motherhood services in primary health care settings.

*“We can now conduct MCH and FP clinics and we are able to advise mothers and teenagers on the use of condoms to prevent sexually transmitted disease (STDs), HIV and unwanted pregnancies.”*

The two (2) part-time graduates (8%) did not feel confident to provide Maternal and Child Health Services (MCH) and Safe Motherhood Services because the programme did not prepare them well to provide these services.

*“I am not a midwife and some procedures are too technical for me to learn to perform within the two-year upgrade programme.”*

The researcher did not find out whether the other graduates who felt competent in providing MCH and Safe Motherhood Services were midwives or not. It would be of interest to look into the relationship of midwifery and acquisition of MCH services and Safe Motherhood knowledge in the national study.

#### ***4.3.5 Graduates’ Responses on Communication Skills in Primary Health Care***

Question item 5 addressed how the graduates perceived the upgrade programme had prepared them to communicate with the individuals, families and the community in order to assess their health needs in primary health care settings.



**Table 4.11 Graduates' Responses on Communication Skills in Primary Health Care**

Question item	Graduates' Responses			
	Full-time		Part-time	
	Y	N	Y	N
Has the EN/RN programme prepared you to communicate with patient, family and community members in order to assess their health needs	37	0	25	0
	37	0	25	0
	37	0	25	0
<b>Total</b>	<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>

Table 4.11 shows that the thirty-seven full-time graduates (100%) and twenty-five part-time graduates (100%) perceived that the programme had prepared them to communicate with individuals, families and communities when assessing their health needs. The graduates stressed the role played by communication in health assessment, data collection and ability to listen and be listened to in communication with clients. The graduates also mentioned the importance of knowing the culture of the patient and the family during communication.

#### **4.3.6 Graduates' Responses to Problem-Solving Skills in Primary Health Care**

Question item 6 addressed how the graduates perceived the upgrade programme had prepared them to solve individual, family and the community problems.

**Table 4.12 Graduates' Responses on Problem-Solving Skills in Primary Health Care**

Question item	Graduates' Responses			
	Full-time		Part-time	
	Y	N	Y	N
Individuals/patients	37	0	25	0
Families	37	0	25	0
Community	37	0	25	0
<b>Total</b>	<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>

Table 4.12 shows that the thirty-seven full-time (100%) and twenty-five part-time graduates (100%) perceived that the programme had prepared them to solve individual, family and community problems. Their open-ended responses indicated that they could assess, diagnose, plan, implement and evaluate care and programmes in health facilities.

*“It is important to know the culture, beliefs and other social problems of the families and community that affect their health.”*

The graduates further indicated that they were now comfortable in performing primary health care activities without supervision and that they knew when and how to refer to other health care professionals those issues that they could not handle. The graduates perceived that the health assessment course had helped them to acquire critical thinking skills. The graduates felt that they have acquired knowledge and skills to enable them to:

- Diagnose, prescribe, treat and refer patients if necessary
- Involve communities in their care because of their readiness to change

- Set priorities with involvement of families and communities
- Implement programmes with community/family involvement, and
- Evaluate the programmes implemented in the community.

It is noted here that some of the comments made by the graduates in this question were similar to those they made under the role of the nurse in primary health care especially the last four bullets. The response in the first bullet was also given under health assessment of individuals and families in primary health care.

#### ***4.3.7 Graduates' Responses on Management and Leadership Skills in Primary Health Care***

Question item 7 addressed how the graduates perceived that the management and leadership course had prepared them to manage health facilities such as wards in hospitals or clinics and supervise subordinates in those health facilities.

***Table 4.13 Graduates' Responses on Management and Leadership Skills in Primary Health Care***

Question item	Graduates' Responses			
	Full-Time		Part-Time	
	Y	N	Y	N
Has the management and leadership course prepared you to manage the following				
A hospital ward	33	4	20	5
A clinic with or without maternity beds	33	4	20	5
A health post or a mobile stop	33	4	20	5
Supervise the subordinates	33	4	20	5
<b>Total</b>	<b>89.2%</b>	<b>10.8%</b>	<b>80%</b>	<b>20%</b>

Table 4.13 shows that thirty-three full-time graduates (89.2%) and twenty part-time graduates (80%) perceived that their knowledge in management and leadership has

been strengthened. They indicated that they could manage hospital wards, clinics, mobile stops, or health posts without supervision. The graduates indicated that they could now make a duty roster and allocate their subordinates accordingly and that they could now assess, plan and implement care, and refer patients to other health professionals where appropriate. The five part-time graduates (20%) and the four full-time graduates (10.8%) perceived that their knowledge in management and leadership had not been strengthened. The graduates from the hospitals indicated that they needed assistance in making proper decisions about patient care and managing clinics or health posts.

*“I have never run a clinic or a mobile stop.”*

The experience in the community during training was their first exposure. The four full-time graduates (10.8%) from local authorities felt they needed assistance in the management of wards in hospitals.

*“Working in a ward is a challenge. I need more time.”*

The graduates from hospitals felt they needed more experience in the districts while the graduates from the districts felt they needed more time in the hospitals.

#### ***4.3.8 Graduates’ Responses on Team Approach in Primary Health Care***

Question item 8 addressed how the graduates perceived the upgrade programme had prepared them to function in a health team at different structures of the health care system by indicating the roles and members of different health teams in a hospital ward, a clinic with or without maternity beds, health post and the community.

**Table 4.14 Graduates' Responses on Team Approach in Primary Health Care**

Question item		Graduates' Responses			
Health post/mobile stop membership		Full-Time		Part-Time	
Member	Role	Y	N	Y	N
Headman	Calls Kgotla meetings mobilises the community for health programmes/activities	37	0	25	0
Family welfare educators	Visits and encourages families to use health services	37	0	25	0
Enrolled nurses	Manages health facilities & helps family welfare educators	37	0	25	0
Traditional healers, extension workers and NGOs	Participates in health issues	37	0	25	0
Community health nurse	Supervises district health programmes activities	37	0	25	0
Cleaners/ drivers/ grounds men	Support professionals	37	0	25	0
<b>Total</b>		<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>

Question item		Graduates' Responses			
Clinic with/without maternity beds membership		Full-Time		Part-Time	
Member	Role	Y	N	Y	N
Midwives	Provide MCH services	37	0	25	0
Registered nurses	Provide patient care	37	0	25	0
Doctors	Provide medical care	37	0	25	0
Laboratory technicians	Laboratory services	37	0	25	0
Pharmacy technicians	Pharmaceutical services	37	0	25	0
Cleaners and drivers	Support professionals	37	0	25	0
Community health nurses	Provide community health services	37	0	25	0
<b>Total</b>		<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>

Continuation of Table 4.14...

Question item		Graduates' Responses			
Ward in a primary/district hospital membership		Full-Time		Part-Time	
Member	Role	Y	N	Y	N
Matron	Supervisor of patient care	37	0	25	0
Doctor	Medical treatment of patients	37	0	25	0
Medical laboratory technologist/ technician	Laboratory services	37	0	25	0
Pharmacist/ Technician	Pharmaceutical services	37	0	25	0
Registered nurses	Patient care	37	0	25	0
Orderlies, cleaners and drivers	Support professionals	37	0	25	0
<b>Total</b>		<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>
Question item		Graduates' Responses			
Community membership		Full-Time		Part-Time	
Member	Role	Y	N	Y	N
Parliamentarians/ Community Leaders	Influence the community about the importance of health programmes	37	0	25	0
Headmen	Mobilise community	37	0	25	0
Chairman Village Health Committee (VDC), Extension workers, Church leaders and NGOs	Participate in different ways in the promotion of health in the community	37	0	25	0
District medical officers and Community health nurses	Plan, implement and supervise health programmes in the community	37	0	25	0
<b>Total</b>		<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>

Table 4.14 shows that the responses of all thirty-seven full-time graduates (100%) and twenty-five part-time graduates (100%) indicate that they were knowledgeable about memberships and roles of different members of the various health teams at different levels of the health care system. The graduates' responses are as follows:

a) Membership at a Health post and mobile stop

- Headmen to call Kgotla meetings, disseminate health information, and influence the people to participate in the health programmes and activities.
- Family welfare educators to visit and encourage families to use the health facilities and services within their communities
- Enrolled nurses to manage the health facilities and assist family welfare educators
- Traditional healers, extension workers, members of non-governmental organisations (NGOs) and other influential people within the community to participate in health activities
- Cleaners and drivers to support professional health workers to deliver health services.

b) Membership at a Clinic with or without maternity beds

- Midwives for provision of maternal and child health services
- Nurses (registered and enrolled) to provide patient care
- Doctors for medical treatment of patients
- Laboratory technician and pharmacy technician for support services
- Cleaners and drivers to support health professionals in the delivery of services

- Community health nurse for provision of community health programmes.

c) Membership at a ward in the primary/district and referral hospital

- Matron for overall supervision of patient care
- Doctor for overall medical treatment of patients
- Other health professionals (medical laboratory technologists, physiotherapists, pharmacists etc.) to participate in the patient care
- Nurses (registered and enrolled) to provide patient care
- Orderlies and cleaners to support health professionals

d) Membership at community level consists of:

- Parliamentarians and community leaders to influence the community about the importance of the health programmes
- Headman to call a Kgotla meeting to discuss health problems and encourage the community to participate in health programmes
- Village Development Committee (VDC) chairman, traditional healers, extension workers, especially agricultural officers, church leaders, NGOs available in that community and significant others to participate in promoting the health of the community



- District medical officer and community health nurse to plan, implement and supervise health programmes within the community.

#### ***4.3.9 Graduates' Responses on Professional Development/Involvement***

Question item 9 addressed how the graduates perceived the upgrade programme had developed them professionally to take responsibility as professional nurses and make critical professional decisions. The second part of the question addressed the graduates' perception on the role of Nurses Association and their participation in the professional organization.

***Table 4.15 Graduates' Responses on Professional Roles***

Question item		Graduates' Responses			
		Full-Time		Part-Time	
Has the upgrade programme prepared you to		Y	N	Y	N
Be a role model to basic diploma students		37	0	25	0
Relate patient care issues to	Enrolled nurses	37	0	25	0
	Other nursing professionals	37	0	25	0
	Other health professionals	37	0	25	0
Make critical decisions as a professional nurse		37	0	25	0
<b>Total</b>		<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>

Table 4.15 shows that the thirty-seven (100%) full-time and the twenty-five (100%) part-time graduates indicated that the programme had prepared them professionally to be role models to the basic diploma nursing students. They also indicated that they now relate patient care issues to the enrolled nurses, registered nurses and other health professionals.

*“I now feel comfortable to share knowledge with other members of the health team and getting respect from them”.*

The graduates perceived themselves as supervisors of the enrolled nurses because they now have new knowledge to offer to their subordinates.

*“RN after my signature on patients’ charts has earned the respect I have been waiting for.”*

The two groups, part time and full time graduates, perceived that they could now make critical decisions as professional nurses.

*“I now feel comfortable to assess, diagnose and prescribe treatment to a patient like other registered nurses.”*

The comment was mostly from the graduates who worked for local government in clinics, health posts and mobile stops.

The second part of the question on professional development was focusing on the role of the Nurses Association as a professional organization for nurses to determine their participation in the organization.

**Table 4.16 Graduates' Responses on the Role of the Nurses Association**

Question item		Graduates' Responses			
		Full-Time		Part-Time	
		Y	N	Y	N
As a professional nurse will you now	Participate in the activities of the Nurses Association as a member	37	0	25	0
	Encourage other nurses to join in the Nurses Association	37	0	25	0
	Maintain high practice standards to uphold the image of the nursing profession	37	0	25	0
What do you consider to be the role of the Nurses Association	Advocacy for nurses' conditions of service	37	0	25	0
	Participation in the development of practice standards	37	0	25	0
<b>Total</b>		<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>

Table 4.16 shows the responses from both the full-time graduates (100%) and twenty-five part-time graduates (100%) on perception of their role in the professional Association as follows:

- Will become active members of the Nurses Association will support the activities of the association.

*“I would like to be the president of the Nurses Association one day.”*

- Will encourage other nurses to join the association
- Will maintain high nursing standards to protect the image of nursing

In the second part of the question all the graduates perceived the role of the Nurses Association as advocating for conditions of service for nurses.

*“The Association should negotiate for free housing for all nurses like teachers and the police in the civil service”*

The graduates also indicated that they would participate in the development of practice standards for the nursing profession in order to maintain high standards of practice and enhance the image of nursing.

#### ***4.3.10 Graduates’ Responses on Opportunity for Further Development***

Question item 11 addressed how the graduates perceived the upgrade programme had opened opportunities for them for further development in nursing.

***Table 4.17 Graduates Responses on Opportunity for Further Development***

Question item	Graduates’ Responses			
	Full-Time		Part-Time	
	Y	N	Y	N
Has the EN/RN upgrade programme opened an opportunity for you for further development in nursing	37	0	25	0
<b>Total</b>	<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>

Table 4.17 shows that the thirty-seven full-time (100%) and the twenty-five part-time (100%) graduates perceived that the upgrade programme had opened opportunities for them for further development in nursing.

*“I now have the opportunity to do Bachelor of Nursing Science at the University of Botswana two years from now.”*

The graduates also indicated that they now feel empowered because of acquisition of new knowledge. They expressed their appreciation to MOH, Manpower Department of Health Manpower in particular, the Kellogg Foundation and University of Botswana for development of EN/RN upgrade programme in the country. All the graduates indicated that the programme had developed them personally and professionally. They now feel they have opportunities to earn more money like other health professionals.

*“One day I will be a hospital matron or a lecturer at IHS and earn a good salary.”*

#### ***4.3.11 Graduates’ Responses on In-Service Education***

Question item 12 requested the graduates to list the topics that they would need for their in-service education after the upgrade programme. Data were designated according to central or local government or one year residential or part-time. The following are the areas that the graduates indicated that they needed in service education on:

- There were ten out of sixty two (16.1%) graduates that indicated that they needed in-service education on HIV/AIDS,

- There were nine out of sixty two (14.5%) graduates that needed in-service education on evaluation and auditing, public relations, total quality care/ management,
- For Safe Motherhood and Midwifery, obstetric and gynaecological nursing and family planning there were five out of sixty two (8.0%) graduates and also five (8.0%) for mental health nursing.

#### ***4.3.12 Graduate's Responses on Unintended Outcomes***

The question items 13, 14, and 15 addressed unintended outcomes to determine the graduates' perceptions about the programme and any other observations that they may have made during their training that were not necessarily covered by other question items. As mentioned earlier Scriven stresses that unintended outcomes should always be included in an evaluation to minimise bias by the researcher.

##### ***4.3.12.1 Graduates' Responses on Structure of the EN/RN upgrade programme***

Question item 13 was to determine if the structure of either the one-year full-time residential or the two-year part-time distance education programme needed any improvement in their structures that is the way they are being delivered.

**Table 4.18 Graduate's Responses on the Structure of the EN/RN Upgrade Programme**

Question item	Graduates' Responses			
	Full-Time		Part-Time	
	Y	N	Y	N
One-year full-time residential programme	37	0	0	0
Two-year part-time distance education programme	0	0	3	22
<b>Total</b>	<b>100%</b>	<b>0%</b>	<b>12%</b>	<b>88%</b>

Table 4.18 shows that the thirty-seven full-time graduates (100%) indicated that the structure of the one year full-time residential programme needed improvement. They felt that the one-year residential programme was too short and congested. They requested that the programme be extended to two years like the distance education programme. The 1995 full-time graduates on the other hand composed a song for their graduation to appreciate the Kellogg Foundation support to the programme and organised a party for the members of the community, chief and sub chiefs, hospital, community nurses and the lecturers that participated in the upgrade programme.

*“Behold! Kellogg Foundation has surprised the nations. As a result, Batswana are delighted. They have good things to talk about the Kellogg Foundation.”*

The details of this song can be found in Appendix V.

Table 4.18 also shows that the twenty-two part-time graduates (88%) perceived that the distance education programme was very good because it gave them an opportunity to be with their families while at the same time still studying. They indicated that they could study at their own time, and the social problems did not interfere with their studies.

*“My family gives me the support that I need to study and I have the opportunity to be with my small children while continuing with my studies.”*

The three (3) part-time graduates (12%) indicated that studying at home was difficult and was an additional stress to their social problems and it was difficult to cope with the studies. The graduates also indicated that doing the programme in two years while others were doing the upgrade in one year was not fair, because the one-year group was going to be their seniors in the nursing profession forever.

*“We wish the government could review the duration of the two-year programme and make it one year. We will never catch up with the other group in terms of promotions and further development.”*

#### ***4.3.12.2 Graduates’ Responses on the Achievements of the EN/RN Programme***

Question item 14 addressed how the graduates perceived that the EN/RN upgrade programme achieved the intended goals. The goal of the programme was to upgrade all the enrolled nurses through one-year full-time residential programme and two-year part-time distance education programme.



**Table 4.19 Graduates' Responses on Achievements of the EN/RN Programme**

Question item	Graduates' Responses			
	Full-Time		Part-Time	
	Y	N	Y	N
The EN/RN programme was designed to upgrade enrolled nurses through one-year full-time residential or two year part-time distance education. Do you feel this goal been achieved?	37	0	25	0
<b>Total</b>	<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>

Table 4.19 shows that the thirty-seven full-time (100%) and twenty-five part-time (100%) graduates believed that the upgrade programme has achieved the intended goals. They believe that the upgrading of enrolled nurses through one-year full-time residential and two year part-time distance education has been achieved. They believed that they have performed well in both programmes in terms of output and therefore health facilities will be staffed by registered nurses.

*“The health facilities in local and central governments will be staffed by registered nurses and this will hopefully improve the quality of lives of Batswana.”*

They also believe that the poor interpersonal relationships that existed between the enrolled nurses and registered nurses before the upgrading are now over.

*“We are all now registered nurses and there is no need to fight.”*

#### ***4.3.12.3 Graduates Recommendations for the EN/RN Upgrade Programme***

Question item 15 requested the full-time and part-time graduates to make any recommendations on any aspects that they perceived were necessary for the implementation of the upgrade programme. The data were analysed not according to one year or two-year programme nor whether the graduates were from hospitals or from the districts. Similar ideas were brought together and a list was compiled by summarising these recommendations as follows:

- Enough reading materials in the library and clinical areas to facilitate learning
- Both the teachers and the students should meet more frequently to discuss the students' learning problems and facilitate learning.
- Students should be posted to wards and clinics that are not too busy so that they can learn better in a less busy situation
- In-service education should be done immediately the graduates resume duty so that they are familiar with policies and procedures in health facilities so that they can do their job better.

The participating institutions as mentioned earlier, were IHS Serowe, IHS Deborah Retief Memorial and IHS Bamalete Lutheran and this is where the students were initially planned to do their clinical attachments to the hospitals next to these training institutions. When the intakes were increased, the upgrade students were attached to other training institutions like Kanye, Molepolole, Gaborone and Francistown where the generic nursing students were training due to shortage of preceptors and lecturers

to follow students in the clinical facilities.

#### ***4.4 Analysis of Data from Structured Group Interviews of Supervisors***

Data were collected in 1995 from groups of supervisors of the full-time graduates and in 1997 from the supervisors of the 1996 part-time graduates and in 2001 from the supervisors of other subsequent years through structured group interviews. The purpose for the structured group interviews was to determine the supervisors' perceptions of the graduates' improvement in their knowledge in provision of primary health care services. An eleven-item questionnaire was developed to cover the following areas:

1. Availability of policies/procedures in health facilities – Question item 1
2. Graduates' health assessment skills of individuals, families and community as perceived by their supervisors– Question item 2
3. Graduates' communication skills as perceived by their supervisors – Question item 3
4. Graduates' problem-solving skills as perceived by their supervisors – Question item 4
5. Graduates' leadership and management skills as perceived by their supervisors – Question items 5 and 6
6. Graduates' participation in the activities of the Nurses Association and the community programmes or projects as perceived by their supervisors - question item 7
7. EN/RN programme supportive of the MOH goals of primary health care

– Question item 8

8. The achievements of the EN/RN upgrade programme- question item 9
9. Unintended outcomes- question item 10
10. Recommendations of the EN/RN programme- question item 11.

In 1995, structured group interviews were conducted to collect data from ten groups of twenty-four supervisors from four primary and six district hospitals who were supervising the full-time residential graduates and eight groups of thirteen supervisors from local government as reflected in Table 3.2 on page 129. In 1997 structured group interviews were conducted to collect data from ten groups of twenty-three supervisors of the part-time graduates from two primary, one referral and seven district hospitals and one group of two supervisors from local government as in Table 3.3 on page 130. Mrs. Maskey visited these health facilities and conducted the interviews in 1995 and 1997 as reflected in Tables 3.2 and 3.3 pages 129 and 130.

In 2001, six members in two teams conducted the structured group interviews in fifteen groups of ninety supervisors from one referral, ten district and four primary hospitals and twelve groups of thirty supervisors from twelve district health teams as reflected on Table 3.4 on page 132. The team members were Kelobang, Lemo and Ncube for team one and Lee, Pilane and Gasannelwe for team two. The groups in 1995, 1997 and 2001 were formed according to the number of supervisors found in each health facility and they varied from one to fifteen. The decisions in each group were reached by consensus and an eleven-item questionnaire completed (See

Appendix IV). In three hospitals in 1995 and in two hospitals in 1997, only one supervisor was available and structured individual interviews were conducted. The number of the respondents does not reflect head count but rather the total number of members in the group that were present at that time during the interviews.

May Lon Vancott et al (1997:83) believe that the structured group interviews give the participants an opportunity to understand how co-workers feel about the work environment and the interviews also give them an opportunity to express their concerns and frustrations in a facilitative environment. The purpose of structured group interviews of the graduates' supervisors in this study was to give these supervisors an opportunity to express themselves freely concerning the implementation of primary health care services by the graduates EN/RN programme.

The closed ended responses from groups of supervisors were tallied under each "YES" or "NO" of each question item. The decisions in each group of supervisors were reached by consensus and were recorded under each fixed alternative of YES or "NO" under each question item. Data were then analysed by working out totals and percentages for each question item. Responses on open-ended questions were recorded and then grouped and summarised under each fixed alternative of "YES" or "NO" to give reasons for those responses and the decisions were still reached by consensus. The responses of the supervisors were grouped according to primary, district and referral hospitals from central government and according to the district health teams, clinics, health posts/ mobile stops from local government.

The responses from the 1995, 1997 and 2001 groups of supervisors were then categorised under the same areas as those of the graduates in 4.3. of this Chapter. The purpose for this was to complement the results of the graduates on their perception of improvement of their knowledge in providing primary health care services in health facilities. The responses of the supervisors were grouped according to their place of work namely primary, district and referral hospitals in central government and district health teams, which include clinics, health posts and mobile stops in local government. The supervisors were interviewed in groups ranging from two to ten and categorised according to hospitals and district health teams. The purpose for this was also to see if there was any disparity in the perception of the supervisors from central government and those of the local government on the graduates improved knowledge in provision of primary health care services.

#### ***4.4.1 Groups' Responses on Availability of Policies and Procedures in Health Facilities***

Question item 1 requested information on availability of policies and procedures in health facilities. As mentioned earlier in Chapter 3 on development of the instrument, the inclusion of availability of policies and procedures was to identify if these were available in the health care facilities and whether all health professionals in health facilities were using them to facilitate the implementation of primary health care. Documents on primary health care and other documents pertaining to implementation of health services were produced by MOH and /or distributed to all other participating ministries/departments on request.

**Table 4.20 Groups' Responses on Availability of Policies and Procedures in Health Facilities**

Question item	Groups' Responses			
	Hospitals		DHTS	
	Y	N	Y	N
Procedure manuals	24 (64.9%)	0	0	13 (35.1%)
Reference materials	24 (64.9%)	0	0	13 (35.1%)
Practice standards	24 (64.9%)	0	0	13 (35.1%)
<b>Total (1995) 37 respondents</b>	<b>10 groups</b>			<b>8 groups</b>
Procedure manuals	23 (92%)	0	0	2 (8%)
Reference materials	23 (92%)	0	0	2 (8%)
Practice standards	23 (92%)	0	0	2 (8%)
<b>Total (1997) 25 respondents</b>	<b>10 groups</b>			<b>1 group</b>
Procedure manuals	90 (75%)	0	0	30 (25%)
Reference materials	90 (75%)	0	0	30 (25%)
Practice standards	90 (75%)	0	0	30 (25%)
<b>Total (2001) 120 respondents</b>	<b>15 groups</b>			<b>12 groups</b>

Table 4.20 shows that twenty four (64.9%) respondents from ten hospital groups in 1995; twenty three (92%) respondents from ten hospital groups in 1997 and ninety (75%) respondents from fifteen hospital groups in 2001 all indicated that procedure manuals, reference materials and practice standards were available in their health facilities. The table further shows that thirteen (35.1%) respondents from eight district health team groups in 1995; two (8%) respondents from one district health team group in 1997 and thirty (25%) respondents from twelve district health team groups in 2001 all indicated that there were no procedure manuals, reference materials and practice standards in their health facilities.

*“Matrons keep information to themselves and we never see any materials for reference.”*

The respondents from the district health teams in particular indicated that:

- Some facilities tended to lack reference materials for health workers to use and this hampers the graduates’ ability to do health assess
- The practice standards that were developed by the Nurses Association of Botswana (NAB) are not widely distributed to all health facilities and therefore are not widely used by all nurses. Their impact on patient care was therefore not significantly observed.
- Procedure manuals were not available in some facilities and where available, they were not usually used.

It was further observed by the respondents from the hospitals and the district health teams that induction procedures for newly qualified nurses were not done regularly and the job descriptions tended not to be followed properly due to the shortage of health personnel in the majority of health facilities, particularly clinics, district health teams and health posts. The respondents further indicated that there was a tendency to assume that the graduates from the upgrade programme do not need orientation because they had worked in the health care facilities before. The graduates had also in their recommendations requested for in service education once they resume duty after completion of training.



#### 4.4.2 Groups' Responses on Graduates' Health Assessment Skills

Question item 2 addressed how the supervisors perceived that the graduates' knowledge on health assessment of the individuals, families and the community had improved after the upgrading programme.

**Table 4.21 Groups' Responses on Graduates' Health Assessment Skills**

Question item Do the EN/RN graduates demonstrate ability to assess needs of	Groups' Responses			
	Hospitals		DHTS	
	Y	N	Y	N
Individuals	24 (64.9%)	0	13 (35.1%)	0
Families	24 (64.9%)	0	13 (35.1%)	0
Community/groups	24 (64.9%)	0	13 (35.1%)	0
<b>Total (1995) 37 respondents</b>	<b>10 groups</b>		<b>8 groups</b>	
Individuals	23 (92%)	0	2 (8%)	0
Families	23 (92%)	0	2 (8%)	0
Community/groups	23 (92%)	0	2 (8%)	0
<b>Total (1997) 25 respondents</b>	<b>10 groups</b>		<b>1 group</b>	
Individuals	90 (75%)	0	30 (25%)	0
Families	0	90	30 (25%)	0
Community/groups	0	90	30 (25%)	0
<b>Total (2001) 120 respondents</b>	<b>15 groups</b>		<b>12 groups</b>	

Table 4.21 shows that twenty four (64.9%) respondents in ten hospital groups in 1995 and thirteen (35.1%) respondents in eight district health team groups; in 1997 twenty three (92%) respondents in ten hospital groups; and two (8%) respondents in one district health team group as well as the thirty respondents (25%) from the twelve district health team groups in 2001 all perceived that the graduates' knowledge in assessment of individuals, families and the community had improved.

*“The graduates can now consult, diagnose and prescribe in line with laid down procedures for clinics and hospitals outpatients and are able to suture, put up intravenous drips, naso-gastric tubes without any supervision.”*

In 2001, ninety (75%) respondents from the hospitals agreed only with the 1995 and 1997 respondents on the graduates’ improved knowledge on health assessment of individuals. The responses from the hospital groups indicated that there were problems in family and community assessments due to:

- Heavy workloads in the hospitals tend to have a negative impact on the graduates health assessment skills.
- Plan for discharge of patients into home-based care is not properly implemented by all health workers (doctors, social workers and nurses) and this creates problems for the graduates to assess the family needs
- The current HIV/AIDS stigma has a negative impact on the home visits and family health assessments.

The hospital respondents had observed that some families do not readily allow nurses to visit them because home visits and home based care were initially planned for patients with HIV/AIDS.

Berland (1992:47) in defining what primary health care means for nurses indicated that developing primary health care means meeting the challenges from both nursing perspective and from the perspective of the health care consumer. This requires that

hospital nurses follow patients in health programmes that are run by community agencies and both nurses and consumers should share advocacy, decision-making and self-help. This means that the home visits in Botswana need to be strengthened where both the nurses and the consumers will share decision-making and advocacy together to improve the delivery of primary health services adequately as described by Berland. Currently the home visits in Botswana are done specifically by the nurses from local government who work in clinics and the district health teams.

#### *4.4.3 Groups' Responses on Graduates' Communication Skills*

Question item 3 addressed how the supervisors perceived improvement in the graduates' knowledge in communication. This was particularly focusing on communicating patient and nursing issues in all primary health care facilities by the graduates.

*Table 4.22 Groups' Responses on Graduates' Communication Skills*

Question item Do the EN/RN graduates demonstrate ability to communicate:	Groups' Responses			
	Hospitals		DHTS	
	Y	N	Y	N
Nursing and patient issues and concerns	24 (64.9%)	0	13 (35.1%)	0
<b>Total (37 respondents)</b>	<b>10 groups</b>		<b>8 groups</b>	
Nursing and patient issues and concerns	23 (92%)	0	2 (8%)	0
<b>Total (25 respondents)</b>	<b>10 groups</b>		<b>1 group</b>	
Nursing and patient issues and concerns	0	90 (75%)	30 (25%)	0
<b>Total (120 respondents)</b>		<b>15 groups</b>	<b>12 groups</b>	

Table 4.22 shows that in 1995, twenty four (64.9%) respondents from ten hospital

groups; twenty three (92%) respondents from ten hospital groups in 1997 and from the thirteen (35.1%) respondents from eight district health team groups in 1995; two respondents (8%) from one district health team group in 1997 and in 2001 thirty (25%) respondents from twelve district health team groups all indicated that the graduates generally communicate nursing and patient care issues fairly well and have shown their advocacy for patients' welfare. The local government supervisors also indicated that the graduates communication skills were demonstrated in their ability to manage and supervise subordinates well in clinics; labour wards, child welfare neonatal and eye clinics just to mention a few.

In 2001, ninety (75%) respondents from fifteen hospital groups perceived that, the graduates' communication skills had not improved. The respondents had observed that the graduates tended not to think critically when communicating professional nursing decisions and they attributed this to the newly acquired RN role by the graduates and lack of role modelling in the clinical areas by other nurses. On the other hand, all the graduates perceive that their knowledge in communication has been strengthened and they communicate nursing and patient issues well

#### ***4.4.4 Groups' Responses on Graduates' Problem-Solving Skills***

Question item 4 addressed how the supervisors perceived the graduates' improved knowledge in solving individual, family and community problems in primary health care facilities.

**Table 4.23 Groups' Responses on Graduates' Problem-Solving Skills**

Question item	Groups' Responses			
	Hospitals		DHTS	
	Y	N	Y	N
Individuals	24 (64.9%)	0	13 (35.1%)	0
Families	0	24 (64.9%)	13 (35.1%)	0
Community	0	24 (64.9%)	13 (35.1%)	0
<b>Total (1995) 37 respondents</b>	<b>10 groups</b>		<b>8 groups</b>	
Individuals	23	0	2 (8%)	0
Families	0	23 (92%)	2 (8%)	0
Community	0	23 (92%)	2 (8%)	0
<b>Total (1997) 25 respondents</b>		<b>10 groups</b>	<b>1 group</b>	
Individuals	90 (75%)	0	30 (25%)	0
Families	0	90 (75%)	30 (25%)	0
Community	0	90 (75%)	30 (25%)	0
<b>Total (2001) 120 respondents</b>		<b>15 groups</b>	<b>12 groups</b>	

Table 4.23 shows that thirteen (35.1%) respondents from the eight district health team groups in 1995 and two respondents (8%) from one district health team group in 1997 and in 2001 thirty (25%) respondents from the twelve district health team groups all perceived that the graduates' knowledge in solving problems of individuals, families and the community had improved. The table further shows that twenty four (64.9%) respondents from the ten hospital groups in 1995; twenty three (92%) respondents from the ten hospital groups in 1997 and ninety (75%) respondents from fifteen hospital groups in 2001 perceived that while the graduates' knowledge in solving problems of individuals had improved due to new knowledge in health assessment, the graduates knowledge in solving families and the community problems had not improved. The respondents indicated that the current existing organisational structures

of the health care system, particularly in the district and referral hospitals were seen to contribute to this problem. The respondents from the hospitals further observed that the management system as well seemed not to facilitate problem-solving approach by all health care workers and not necessarily the upgrade graduates. It was the feeling of the supervisors from hospitals that the current performance management system that has been introduced into the civil service should encourage a problem-solving approach for better patient care in the future.

There was a contradiction here between the responses of the graduates and their supervisors like with communication. The graduates in Table 4.12 on page 170 all perceived that their knowledge in solving problems of individuals, families and the community had improved and they solve individuals, families and community problems well. According Schreuder & Theron (2000:29) state that when people have passed examinations well they tend to estimate their ability to perform certain tasks according to certain standards basing this on having passed examinations. The academic performance of the graduates (94.1%) may be what the graduates are basing their ability to deliver primary health care in clinical areas than the actual delivery of care as perceived by the supervisors.

#### ***4.4.5 Groups' Responses on Graduates' Management and Leadership Skills***

Question items 5 and 6 addressed how the supervisors perceived improvement in the graduates' knowledge in leadership and management in primary health care particularly on supervision of the subordinates; management of hospital wards and

clinics and coordination of primary health care activities in the hospitals and the district health teams.

**Table 4.24 Groups' Responses on Graduates' Supervisory Skills**

Question item	Groups' Responses			
	Hospitals		DHTS	
	Y	N	Y	N
Do the EN/RN graduates demonstrate management and leadership skills in provision of primary health care by:				
Organising and supervising subordinates	24 (64.9%)	0	13 (35.1%)	0
Coordinating activities of other professionals	24 (64.9%)	0	13 (35.1%)	0
<b>Total (1995) 37 respondents</b>	<b>10 groups</b>		<b>8 groups</b>	
Organising and supervising subordinates	23 (92%)	0	2 (8%)	0
Coordinating activities of other professionals	23 (92%)	0	2 (8%)	0
<b>Total (1997) 25 respondents</b>	<b>10 groups</b>		<b>1 group</b>	
Organising and supervising subordinates	0	90 (75%)	30 (25%)	0
Coordinating activities of other professionals	0	90 (75%)	30 (25%)	0
<b>Total (2001) 120 respondents</b>		<b>15 groups</b>	<b>12 groups</b>	

Table 4.24 shows that twenty four (64.9%) respondents from ten hospital groups in 1995; twenty three (92%) respondents from ten hospital groups in 1997; thirteen (35.1%) respondents from eight district health team groups in 1995 and two respondents (8%) from one district health team group in 1997 and in 2001 thirty (25%) respondents from twelve district health team groups all perceived that the graduates knowledge in supervising and coordinating the activities of other professionals had improved. The supervisors had observed that the graduates were applying the newly acquired knowledge in supervising the subordinates. The graduates interpersonal skills were perceived to have improved tremendously and they were confident that dealing with grievances and issues were resolved amicably. The

graduates who worked in the clinics and district health teams were perceived to participate well in village health committees, HIV/AIDS campaign activities, village development committees and Kgotla meetings in the villages.

In 2001, ninety (75%) respondents from the fifteen hospital groups perceived that the graduates were not confident in supervising their subordinates and coordinating activities of other health professionals. The supervisors believed that the graduates needed more time to develop confidence in supervision of subordinates and coordination of activities of other health professionals. The supervisors' observation was in agreement with the five part-time graduates (20%) and four (10.8%) full-time graduates who all believed that they were not confident to run hospital wards or clinics with maternity beds. They indicated that they needed more time to sharpen their skills in these areas.



**Table 4.25 Groups' Responses on Graduates' Managerial Skills**

Question item	Groups' Responses			
	Hospitals		DHTS	
	Y	N	Y	N
Do the EN/RN graduates demonstrate ability to run a:				
Hospital ward	24 (64.9%)	0	0	NA
Clinic with or without maternity beds	NA	NA	13 (35.1%)	0
Health post or mobile stop	NA	NA	13 (35.1%)	0
<b>Total (1995) 37 respondents</b>	<b>10 groups</b>		<b>8 groups</b>	
Hospital ward	23 (92%)	0	0	NA
Clinic with or without maternity beds	NA	NA	2 (8%)	0
Health post or mobile stop	NA	NA	2 (8%)	0
<b>Total (1997) 25 respondents</b>	<b>10 groups</b>		<b>1 group</b>	
Hospital ward	90 (75%)	0	NA	0
Clinic with or without maternity beds	NA	NA	30 (25%)	0
Health post or mobile stop	NA	NA	30 (25%)	0
<b>Total (2001) 120 respondents</b>	<b>15 groups</b>		<b>12 groups</b>	

Table 4.25 shows that thirteen (35.1%) respondents from eight district health team groups in 1995 and two respondents (8%) from one district health team group in 1997; thirty (25%) respondents from twelve district health team groups in 2001 all indicated that the graduates are demonstrating their ability to run clinics with or without maternity beds, health posts and mobile stops. The twenty-four (64.9%) respondents from ten hospital groups in 1995; twenty-three (92%) respondents from ten hospital groups in 1997 and ninety (75%) respondents from the fifteen hospital groups in 2001 indicated that though the graduates could run hospital wards fairly well they had made some observations concerning the graduates decision making skills. They had observed that:

*“The graduates tended to take long to make decisions especially in emergencies.”*

The supervisors had attributed the graduates' inability to make decisions quickly and to think critically when faced with issues due to poor leadership skills from their supervisors in the clinical areas. This observation on lack of critical thinking skills of the graduates was in agreement with the four full-time graduates (10.8%) in 1995 and the five of the part-time graduates (20%) in 1997 who did not feel confident in their management and leadership roles and requested in-service education in order to sharpen their management and leadership skills particularly managing wards and clinics.

#### ***4.4.6 Groups' Responses on Graduates' Professional Development***

Question item 7 addressed how the supervisors perceived that the graduates' knowledge on professional development had improved. Professional development in this context will be demonstrated by the graduates becoming members of the Nurses Association of Botswana and participating in the activities of the professional organization and community programmes and projects that require nursing input

**Table 4.26 Groups' Responses on Graduates' Professional Development**

Question item	Groups' Responses			
	Hospital		DHTS	
	Y	N	Y	N
Do EN/RN graduates make contributions to the profession and community by:				
Becoming members of the Nurses Association	0	24 (64.9%)	13 (35.1%)	0
Participating in the activities of the Association	0	24 (64.9%)	13 (35.1%)	0
Participating in community programmes/projects	0	24 (64.9%)	13 (35.1%)	0
<b>Total (1995) 37 respondents</b>		<b>10 groups</b>	<b>8 groups</b>	
Becoming members of the Nurses Association	0	23 (92%)	2 (8%)	0
Participating in the activities of the Association	0	23 (92%)	2 (8%)	0
Participating in community programmes/projects	0	23 (92%)	2 (8%)	0
<b>Total (1997) 25 respondents</b>		<b>10 groups</b>	<b>1 group</b>	
Becoming members of the Nurses Association	0	90 (75%)	0	30 (25%)
Participating in the activities of the Association	0	90 (75%)	0	30 (25%)
Participating in community programmes/projects	0	90 (75%)	0	30 (25%)
<b>Total (2001) 120 respondents</b>		<b>15 groups</b>		<b>12 groups</b>

Table 4.26 shows that thirteen (35.1%) respondents from the eight district health team groups in 1995 and the two respondents (8%) from one district health team group in 1997 perceived that the graduates were members of the Nurses Association; participating in the activities of the Association and community programmes and projects. The supervisors had also indicated that the graduates who work in clinics, health posts and the district health teams were participating in community activities such as HIV/AIDS campaigns, village development committees and in Kgotla meetings. This response was also given under graduates' abilities in solving problems

of individuals, families and communities.

The twenty-four (64.9%) respondents from ten hospital groups in 1995; twenty three (92%) respondents from ten hospital groups in 1997 and ninety respondents (75%) from fifteen hospital groups and thirty (25%) respondents from district health team groups in 2001 indicated that the graduates were not members of the Nurses Association and were not participating in the activities of the Association nor in the community programmes and projects. The respondents had observed that there is a general lethargy by nurses in becoming and participating in the activities of the Nurses Association including the new upgrade graduates.

Witt (1992:155) also identified that nurses who upgraded from RN to BSN did not join the American Nurses Association (ANA) in large numbers. There was a contradiction between what the graduates said about their involvement in the Nurses Association and what their supervisors had observed. There was a feeling among supervisors from hospitals that professional accountability seems to be lacking, particularly among male and newly qualified nurses during the first six months after graduation. This lack of accountability was associated with lack of role modelling by the supervisors who were usually younger than their subordinates were. In some facilities (hospitals in particular), some graduates tend not to perceive themselves as RNS and not ENS anymore.

#### ***4.4.7 Groups' Responses on Unintended Outcomes***

As mentioned earlier Scriven believes, unintended outcomes should always be included in an evaluation. Question items 8, 9, 10 and 11 addressed unintended outcomes that the supervisors had observed in the EN/RN upgrade programme. This was important because the graduates were working within their facilities and they are in a better position to complement the perceptions of the graduates.

##### ***4.4.7.1. Groups' Responses on EN/RN Curriculum***

Question item 8 addressed how the supervisors perceived that the EN/RN upgrade curriculum was supportive of the Ministry of Health goals of provision of primary health care throughout the country. The Ministry of Health goal here was referring to provision of primary health care services and training workers to provide these services in all the communities.

***Table 4.27 Groups' Responses on EN/RN Curriculum***

<b>Question item</b>	<b>Groups' Responses</b>			
	<b>Hospitals</b>		<b>DHTS</b>	
	<b>Y</b>	<b>N</b>	<b>Y</b>	<b>N</b>
Is the EN/RN upgrade curriculum supportive of the MOH goals of provision of primary health care	24 (64.9%)	0	13 (35.1%)	0
<b>Total (1995) 37 respondents</b>	<b>10 groups</b>		<b>8 groups</b>	
Is the EN/RN upgrade curriculum supportive of the MOH goals of provision of primary health care	23 (92%)	0	2 (8%)	0
<b>Total (1997) 25 respondents</b>	<b>10 groups</b>		<b>1 group</b>	
Is the EN/RN upgrade curriculum supportive of the MOH goals of provision of primary health care	90 (75%)	0	30 (25%)	0
<b>Total (2001) 120 respondents</b>	<b>15 groups</b>		<b>12 groups</b>	

Table 4.27 shows that all the respondents from hospital groups and district health team groups in 1995, 1997 and 2001 perceived that the EN/RN curriculum is supportive of the Ministry of Health goals and objectives. The supervisors believe that all the upgraded nurses are now familiar with the primary health care approach as laid out in Ministry of Health Policy and the graduates are now able to apply primary health principles both in curative and community settings. The health assessment skills that the new graduates have acquired were seen as strength in the upgrading of enrolled nurses and the improvement of delivery of primary health care services by nurses in the country.

#### ***4.4.7.2 Groups' Responses on Achievements of the EN/RN Upgrade Programme***

Question item 9 was to determine if the supervisors perceived that there were achievements in the EN/RN upgrade programme. The groups were required to mention those achievements if any and these were documented as the groups mentioned, discussed and agreed on them. The responses from 1995 -2001 supervisors were then summarised.

There was a general feeling among all the respondents from hospitals and local authorities that effacing of enrolled nursing programme and upgrading enrolled nurses to registered nurses has unified the nursing profession and enhanced its image in the country. The respondents believed that the dissatisfaction of enrolled nurses in the past had lowered their morale and compromised quality of care.

*“Enrolled nurses are no longer rebellious to the health care system because they now have opportunities to become registered nurses. The self-esteem of the graduates has been enhanced and professional conflicts minimised.”*

Witt (1992:155) also identified the issue of using self in a skilful and effective way while carrying out professional responsibilities in her study of upgrading RN to BSN. The positive perception according to the author is because when the graduates have learned to value themselves and nursing, then they see the importance of nursings' contribution to the health care system.

#### ***4.4.7.3 Groups' Responses on Issues and Concerns of the EN/RN Programme***

Question item 10 requested the supervisors to indicate if there were any issues and concerns that they have observed or perceived to affect the implementation of the EN/RN upgrade programme. The programme was initially planned to be offered in one institution in Serowe but was later offered in the two mission institutions before the expansions were done in these institutions as well as staffing situations especially in the clinical areas in terms of the preceptors.

**Table 4.28 Groups' Responses on Issues and Concerns of the EN/RN Programme**

Question item	Groups' Responses			
	Hospitals		DHTS	
	Y	N	Y	N
Are there issues and concerns that affect the implementation of the EN/RN programme	24 (64.9%)	0	0	13 (35.1%)
<b>Total (1995) 37 respondents</b>	<b>10 groups</b>			<b>8 groups</b>
Are there issues and concerns that affect the implementation of the EN/RN programme	23 (92%)	0	0	2 (8%)
<b>Total (1997) 25 respondents</b>	<b>10 groups</b>			<b>1 group</b>
Are there issues and concerns that affect the implementation of the EN/RN programme	90 (75%)	0	30 (25%)	0
<b>Total (2001) 120 respondents</b>	<b>15 groups</b>		<b>12 groups</b>	

Table 4.28 shows that thirteen (35.1%) respondents from eight-hospital groups in 1995 and two respondents (8%) from one district health team group in 1997 felt that there were no issues and concerns that affect the implementation of the EN/RN upgrade programme. Table 4.28 further shows that twenty-four (64.9%) respondents from ten hospital groups in 1995; twenty-three (92%) respondents from the ten hospital groups in 1997; ninety (75%) respondents from the fifteen hospital groups in 2001 and thirty (25%) respondents from the twelve district health team groups all believed that there were issues and concerns that affect the implementation of the EN/RN programme. They believed the supervision of the students during their clinical attachments was compromised because of the heavy workloads in the hospitals. The supervisors had also observed that the preceptors that were trained to help with the students' learning in clinical areas had many other responsibilities in addition to clinical teaching and this impacted negatively on the students' learning. The supervisors from the hospitals in particular had observed that:



*“Some doctors now withdraw from their responsibilities on patient care because majority of nurses can now consult, diagnose, prescribe and implement treatment.”*

Maclaire (1998:163) when she was clarifying the higher-level roles in nursing practice between nurse practitioners and clinical nurse specialists observed that the medical profession has witnessed the tasks and patient care that can be off loaded onto nurses. This is what the supervisors of those graduates from the hospitals had also observed especially in the outpatients departments because nurses would consult the patients first and then refer to the doctors and this makes patients wait for a long time because they queue twice. Barnes et al (1995:8) also believe that primary health care was meant to make nurses become resources to people rather than to physicians, and that the nurses would become the leaders of primary health care teams. With this belief, the upgrading of enrolled nurses in Botswana should strengthen the delivery of primary health care services by nurses particularly in the districts where they are in charge of clinics, health posts and mobile stops and community programmes.

#### ***4.4.7.4 Recommendations for the EN/RN Programme***

The supervisors from both hospital services and district health teams all believe that effacing the enrolled nursing programme and upgrading them to registered nurses through distance learning and full residential programmes was the right decision that the government of Botswana has made. They believe nursing has been unified and this will improve the delivery of primary health care services to communities in the

country. The supervisors also recommended that the current basic diploma programmes should be effaced and the graduates upgraded to Bachelor of Nursing Science through distance learning. The supervisors felt the distance learning approach is quite appropriate for upgrading because the students learn while on duty and this does not create any shortages in the clinical areas. This recommendation was in line with the twenty-two (88%) part-time graduates who indicated that the distance education programme gave them an opportunity to study at home with their families who gave them the support. The supervisors also felt that the one-year residential programme was too short and both programmes should be offered in two years. This observation by the supervisors was similar to what all the year one full residential graduates perceived about their programme. The graduates indicated that the one-year residential programme was too congested and they did not have enough time to internalise what they had learned. The supervisors also recommended that the facilities where students are placed for clinical attachments should be staffed with reading materials and well-qualified staff who should not be too busy to support the students. Some supervisors also felt that all nurses be transferred to central government as this would enhance their opportunities for further development.

#### ***4.5 Conclusion***

In conclusion, this chapter summarised the analysis of data collected from the IHS/UB academic records from 1995-2000 to determine the academic performance of the students and the dropout rates. Data from academic records were analysed initially

by external examiners and later collated by the researcher from 1995-2000 and presented according to full-time residential programme or two year part-time distance education in tables, percentages and bar charts.

From 1994-2000, there were 1116 students that enrolled into the EN/RN upgrade programme and nine (0.8%) dropped out of the programme before sitting for the final examinations. Out of the 1107 students that sat for the IHS/UB final examinations, 1042 (94.1%) passed and sixty-five (5.8%) failed and discontinued. The overall pass rate was 94.1%, which indicates that the EN/RN upgrade programme was efficient and effective. Out of 695 students that enrolled into the one year full-time residential programme, five (0.7%) dropped out of the programme before sitting for the IHS/UB final examinations due to ill health or personal reasons and the 690 who sat for the final examinations 640 (92.7%) passed. In the distance education programme 421 students enrolled in the programme and four (0.9%) dropped out of the programme before sitting for the IHS/UB final examinations also due to ill health and personal reasons. Out of the 417 that sat for the final examinations 402 (96.4%) passed.

Data from self-administered questionnaires by the graduates were analysed to determine if the graduates perceived that the upgrade programme had strengthened their knowledge in provision of primary health care services in different clinical facilities. The analysis of data revealed that the graduates generally perceived that their knowledge in provision of primary health care services has been strengthened. Some graduates indicated that they still need to improve their knowledge in provision

of maternal and child health services; planning and implementation of a health education programme and leadership and management in primary health care. The graduates believe that the decision by government to upgrade enrolled nurses to registered nurses was the right decision because they now have opportunities for further development and nursing has been unified.

Data analysed from the structured group interviews of the supervisors of the graduates from the hospitals and the district health teams further validated the improvement of knowledge of the graduates in the provision of primary health care services in various clinical facilities. The supervisors were matrons, nursing sisters and public health specialists drawn from the hospitals and district health teams throughout the country. The supervisors from hospitals had observed that the graduates needed to improve on family and community assessment; communicating nursing and patient issues; solving family and community problems; ward management and supervision of subordinates. It was observed by supervisors that the graduates and other nurses were not participating in the activities of the Nurses Association though the graduates themselves believed that they were participating. The supervisors from local government feel the graduates were participating well in community activities such as HIV/AIDS campaigns, village health committees and Kgotla meetings in the villages. The supervisors like the graduates believe that the upgrading of enrolled nurses has unified nursing and has enhanced the self-esteem of the graduates.

Analysis of the academic records, self-administered questionnaires and structured

group interviews reveal that the graduates' knowledge had improved in areas that were found lacking in the basic enrolled nursing programme, namely:

- Health assessment in primary health care covering
- Individual, family and community assessment
- Role of a nurse in primary health care
- Provision of maternal and child health and safe motherhood services
- Role of health education in primary health care
- Communication in primary health care
- Problem-solving skills
- Nursing management and leadership skills and
- Professional development

Generally, all the one year full-time residential and the two year part-time distance education graduates perceive that their knowledge in provision of primary health care services has been strengthened. They feel empowered after the upgrading programme because of the new knowledge that they have acquired and their opportunities for further development are enhanced. The supervisors generally felt that the upgrading programme has improved the graduates' knowledge in delivery of primary health care.

## CHAPTER 5

### SUMMARY OF RESULTS AND INTERPRETATIONS, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

#### *5.1 Introduction*

The upgrading of enrolled nurses to registered nurses in Botswana started in 1994 because of the Botswana Government Directive of April 1993 to restructure the entire nursing education system in the country. A longitudinal study was undertaken to determine the effectiveness of the upgrade programme using the Stufflebeam CIPP model as a framework. Data were collected from those graduates that completed the upgrade programme from 1995-2000 to determine if the graduates had acquired knowledge for the provision of primary health care. The findings were interpreted using the CIPP model though the actual focus of this study was on product and not context, input or process. The other three evaluations, context, input, process, were used as formative evaluation and product as summative evaluation.

Under context evaluation, the needs of the target population were identified namely the enrolled nurses inability to provide primary health care services to communities. The curriculum for basic enrolled nursing was then compared with a revised registered nursing curriculum and the content that was found lacking in the basic enrolled nursing was used to develop the upgrade programme namely:

- Health assessment

- Primary health care
- Primary health care nursing, maternal and child health nursing
- Professional development
- Nursing leadership and management
- Adult health nursing

The total hours of theory and practice were equivalent to 779 or thirty-six weeks as reflected in Table 2.6 in Chapter 2 under comparison of the enrolled nurse curriculum with the registered nurse curriculum. Natural and social sciences that are prerequisites to the nursing courses were integrated into each of the relevant six nursing courses. The curriculum was then developed using the deficit model as in Figures 2.5 and 2.6 on pages 85 and 86. The programme was designed to be completed either in one-year full-time residential or in two-year part-time distance education.

The characteristics of the practising enrolled nurses that were to be upgraded were also assessed to determine their qualifications, years of experience, ages, salary scales and their places of employment. The data revealed that according to Directorate of Public Service Management (DPSM) 1993/4 Establishment register there were 1433 enrolled nurses, 755 (52.7%) were employed by central government, 590 (41.2%) by local government and eighty eight (6.1%) by the missions and the private sector. Out of the 1433 enrolled nurses, 1194 (83.3%) were in the B salary scale while 239 (16.6%) were in the C3/4 salary scale. There were 286 (20%) enrolled nurses that

were above forty years of age, while 701 (58.9%) were between 30-39 years and 446 were 29 years and below. All these data were useful in the planning for the needs of the EN/RN upgrade programme.

Under input evaluation, one of the training institutions mentioned earlier, was designated for the upgrading of enrolled nurses and the capabilities of this institution in implementing the programme in terms of work force, financial requirements and other teaching materials were assessed. Data revealed that out of the ten lecturers at IHS Serowe, three (30%) were prepared at Masters Degree levels in Community Health Nursing, Maternal and Child Health and Nursing Administration. The remaining seven (70%) lecturers were prepared at BSc and B.Ed nursing levels but none had any preparation or exposure in running a distance education or a completion programme. A programme of orientation of these teachers was developed and study visits to UK, USA and RSA to institutions that are offering distance education programmes and upgrading/completion programmes were well planned and undertaken. The three faculty members with B.Ed nursing were sent for Masters Degree programmes in Adult Education and Distance Education. The registered nurses with post basic qualifications were trained locally as preceptors to meet the students learning needs in clinical areas where the students would be attached. A budget of \$148,346 was requested from the Kellogg Foundation to help the government support the programme while the University of Illinois seconded a consultant, Dr. Acheson, to work with the MOH Curriculum Unit in the development



and implementation of the upgrade programme.

The EN/RN upgrade programme started in 1994 for one-year full-time residential and two year part-time distance education programmes as mentioned earlier. In 1995, the Kellogg consultants with faculty members conducted a process evaluation and the findings revealed that the students were motivated and excited about the programme and learning primary health care in rural areas and villages in the country. Learning resource materials such as books, health assessment equipments and other teaching aids that were found to be inadequate were purchased and improvements were made to the students' accommodation, classrooms and faculty offices. The purpose of doing formative evaluation before product evaluation was, as Beyer (1995:7) believes,

*“To improve the quality of the product being developed so that it will be as likely as possible in everyday use, to achieve the objectives it was designed for.”*

The formative evaluation in this study, that is context, input and process, was done to ensure that the upgrade programme was designed and implemented to achieve the desired objectives.

The objectives of this evaluation study as described in Chapter 1 on page 25 were to determine the extent to which:

1. The EN/RN upgrade programme has strengthened the graduates' knowledge for direct provision and management of primary health care services.
2. The graduates of the upgrade programme perceived that their

knowledge in provision of primary health care services had been strengthened.

3. The supervisors of the graduates perceived improvement in the graduates' knowledge in provision and management of primary health care services.
4. The EN/RN upgrade programme has been efficient and effective.

This study is an attempt to explore the use of the Stufflebeam CIPP model as a framework in the evaluation of a primary health care oriented nursing programme. The application of this model has been a challenge to the researcher because of lack of literature on evaluation of primary health care nursing programmes using the CIPP model for evaluation. The literature on evaluation of primary health care oriented curriculum since WHO (1986) developed a model for reorienting nursing curriculum to primary health has also been lacking as mentioned earlier in the Bitzer study in chapter 2 under literature review.

### ***5.2 Limitations of the Study***

While measures were taken to ensure validity and reliability in this study, the reader must have in mind the following limitations in this study:

- Literature on evaluation of upgraded programmes for nurses and in particular enrolled nurses, that incorporated primary health care particularly enrolled nursing programme was lacking. Of note, Sohn

(1987:27), in her description of programme evaluation in nursing observed that nursing programmes were not evaluated with a comprehensive and systematic approach. Mpaka & Uys (1995:15) also identified that literature on bridging programmes in nursing was very limited. Out of the eight studies on evaluation models for nursing that were reviewed in this study, only two had some relevance to primary health care oriented curriculum. The two studies, Acheson and Mogobe (1993) was on summative evaluation of the B.Ed nursing programme that produced teachers for schools of nursing and the Bitzer (1997) study was on formative evaluation of the problem based/community based learning. The discussions in this study therefore are mainly on the principles of primary health care but not on the programmes that have incorporated primary health care principles and how these programmes were evaluated.

- The use of the CIPP model in evaluation of primary health care nursing programmes is also new and lacking in the nursing profession. Literature on both formative and summative evaluations using the CIPP model is still lacking. Bitzer (1997) alluded to this in his formative evaluation of the problem based learning/community-based learning programme at one university in South Africa. He also indicated that skills in evaluating primary health care oriented nursing programmes and literature on this area are still lacking. To support this observation

by Bitzer on lack of literature in this area, the evaluation studies by Clark et al (1983), Yeaw (1987), Acheson & Mogobe (1993), Schultz (1993), Petro-Nustas (1996), and Bitzer (1997) that the researcher reviewed were also not necessarily evaluating primary health care oriented nursing programmes for enrolled nurses. The studies were using some aspects of the CIPP model for evaluation of nursing programmes. The WHO technical Series (1985,1986 and 1990) were also not on evaluation of primary health care oriented programmes but were on guidelines on development of a primary health care oriented curriculum; regulatory mechanism for nurse training and practice and education and training of nurses for primary health care. The LPN to RN study by Boyar et al (1989) though an LPN is similar to an enrolled nurse, the study was also not evaluating a primary health oriented programme. Though community based curriculum in the Hege (1995) study, has some similarities with the primary health care approach, the focus was on the model for restructuring nursing curriculum for community-based care but not on evaluation of a primary health care oriented nursing curriculum.

- Convenience sampling that was used for data collection from both the graduates and their supervisors may be a limitation. Some potential useful participants may have been excluded because of the use of this approach. The convenience sample of the supervisors may also be a

limitation. It may have happened that only those supervisors who had a keen interest in the new upgrade programme volunteered for the structured group interviews and people in authority may have influenced the group decisions.

- The small samples for the self-reporting questionnaires by the graduates, sixty-two (36.4%) out of 170 were seen as another limiting factor, as this may not be representative of the entire population of the EN/RN graduates. The rationale for using small samples was to support the attainment tests of the graduates to determine if they actually acquired knowledge to provide primary health care services in the clinical areas. The use of the CIPP model in this study covered a long period of time (1989-2001) as reflected in Figure 3.1 on page 105. It should be noted therefore that during this time, different people participated at different times namely; the Kellogg consultants, MOH and MOE officials, University of Botswana lecturers, representatives of Institutes of Health Sciences, Nurses Association of Botswana and the Nursing and Midwifery Council of Botswana. Because people's perceptions of phenomena sometimes do differ, some changes could have therefore taken place between data collection, analysis and the time of reporting of the findings of this study.

### ***5.3 Summary of Results and Interpretations***

The evaluation of the EN/RN upgrade programme was done using the Stufflebeam CIPP model as a framework as mentioned earlier. The context, input and process evaluations were used as formative evaluation and product as summative evaluation. The conclusions and recommendations are made in line with the objectives of the study. Where appropriate, the findings were compared with the findings of other authors with similar studies though the studies were not necessarily on evaluation of a primary health care oriented curriculum using the Stufflebeam CIPP model of evaluation as mentioned earlier.

#### ***5.3.1 Summary of Interpretation of Results from IHS/UB Academic Records***

Data collected from multi-stage sources namely students academic records, self-administered questionnaires and structured group interviews were analysed, interpreted and conclusions reached. Rossi & Freeman (1993:425) have observed that evaluations in higher education were viewed primarily as a way of testing the effectiveness with little emphasis on efficiency and yet evaluations should account for both. In this study, both effectiveness and efficiency of the upgrade programme were addressed. The students' academic records from 1994–2000 revealed that out of 1116 enrolled nurses admitted in the upgrade programme, nine (0.8%) withdrew from the programme before writing examinations. There were sixty-five students (5.8%) that failed and discontinued and the total number that dropped out from the programme due to ill health, deaths and fail and discontinue were seventy-four (6.6%). The drop

out rate of (6.6%) is indicative of high retention rate in the programme. Williams and Gallimore (1987:21) also saw a drop out rate of four out of fifty students (8%) as indicative of very high retention rate during their evaluation of the LPN to RN programme.

Out of 1107 students who sat for the IHS/UB final examinations, 1042 (94.1%) passed, sixteen passed with distinction (1.4%), 452 passed with merit (40.8%), 516 passed with credit (46.6%) and fifty-eight passed (5.2%), sixty-five failed (5.8%) and discontinued and the total drop outs and discontinuation from the programme were seventy-four (6.6%). The total number of students who passed in the one year full-time residential programme was 640 (92.7%) and in the two year part-time distance programme was 402 (96.4%) and a total of 1042 (94.1%) were upgraded during 1995-2000. The implementation schedule on Table 1.2 on page 19 had projected that 520 enrolled nurses should have been upgraded by year 2000. The upgrade programme is therefore seen as effective and efficient. The overall high academic performance of 94.1% pass rate indicates that the EN/RN upgrade programme has strengthened the graduates' knowledge to provide and manage primary health care services. The high pass rate is commendable for adult learners who have been out of school for some years and majority of these adult learners had junior certificate when they enrolled into the upgrade programme. The comments of external examiners, Washington and Mpanga (1997:3) and Mkumbwa (1999:4) also indicated that the EN/RN upgrade curriculum has prepared the upgraded nurses well for the challenges in primary health

care to provide comprehensive and quality health care to clients, patients, families and communities.

The use of the deficit model in the development of the curriculum for upgrading contributed to the efficiency of the programme because it was not repetitive. The students covered only the content that was lacking in the basic enrolled nursing programme and therefore the programme could be completed either in one year for full residential or in two years for part-time distance learners with no replacements costs. The previous upgrading was done in eight years with replacements costs as reflected in the analysis of costs and duration training for nurses in Botswana in Table 1.2 under Chapter 1 on page 19. The high academic performance and the high retention rate also indicate that the programme was effective because there were no replacements costs for both one-year full-time residential programme and the two-year part-time distance education programme. The one-year programme did not require officers to be replaced and in the two-year distance education, the students were upgrading while on duty providing services. Data analysis under context evaluation also revealed that there were 239 (16.6%) enrolled nurses at salary scale C3/4 and these would not be adding any financial burden on the government as far as salaries were concerned.



### ***5.3.2 Summary of Interpretation of Results from the Graduates' Self-Administered Questionnaires and Supervisors' Structured Group Interviews***

Self-administered questionnaires were used to collect data from the sixty-two (36.4%) out of 170 graduates who completed the programme in 1995 from one year full-time residential and in 1996 from the two year part-time distance education programmes to determine the extent to which the graduates perceived that the upgrade programme had strengthened their knowledge to provide primary health care services. The results from the graduates' self-administered questionnaires complemented what the students' academic records revealed in relation to the upgrade programme strengthening the graduates' knowledge to deliver primary health care services. The results from the structured group interviews of the graduates' supervisors further complemented the attainment tests and graduates' perceptions on improvement of their knowledge to deliver primary health care services.

In order to draw conclusions on whether the graduates' knowledge had been strengthened, the responses from the graduates and their supervisors were compared to validate the improvement of the graduates' knowledge for provision of primary health care services. The supervisors were used in this study because they were working with the graduates in different clinical health facilities to provide primary health care to individuals, families and communities. The responses from both the graduates and their supervisors were then summarised under the question items they were responding to draw conclusions.

### ***5.3.2.1 Availability of Policies and Procedures in Health Facilities***

The question on availability of policies and procedures in health facilities was addressed to the supervisors only but the graduates' responses on the recommendations for improving the EN/RN upgrade programme implementation covered part of this question. The purpose for this was to determine if policies and procedures that facilitate the implementation of primary health care were actually available for the graduates and other health professionals to facilitate delivery of primary health care services in health facilities. The supervisors are responsible for requesting these policies in their respective health facilities and ensuring that they are followed. The results from data analysis from the ten hospital groups of twenty four respondents (64.9%) in 1995, ten hospital groups of twenty three respondents (92%) in 1997 and fifteen hospital groups of ninety respondents (75%) in 2001 indicated that policies and procedures were available in their health facilities. The results from eight district health team groups of thirteen respondents (35.1%) in 1995, one district health team group of two respondents (8%) in 1997 and twelve district health team groups of thirty respondents (25%) in 2001 revealed that the policies and procedures were not available in their health facilities except in some few districts. The supervisors indicated that,

*“Matrons keep these policies and procedures for themselves and do not distribute them for use by other health professionals”.*

The local government supervisors had further observed that even where some of the policies and procedures were available they were hardly used The graduates responses

also supported the observations of the supervisors from local government about absence of policies and procedures in health facilities by recommending that there should be “*enough reading/learning materials in clinical areas.*” It should be noted here that the graduates did not specify in which clinical areas the reading materials were not enough. The interpretation of these results is that there is need for all health facilities to have policies and procedures at the disposal of all those who deal with patients and health care issues in order to ensure that primary health care is implemented by all health professionals. If the officers cannot use these materials then learning in clinical areas would not be facilitated and patient care will be compromised. The same local government supervisors further indicated that orientation of the new graduates was usually not done because there is a feeling among some supervisors that the graduates have worked in those facilities before as enrolled nurses and therefore there was no need to orientate them. The interpretation of this assumption by the supervisors is that they are not aware that the graduates were there initially as enrolled nurses and they are back now as registered nurses and the orientation should be on the new role and not on the facilities. There is an urgent need for the teachers to assess the clinical areas that are adequately staffed to meet the learning needs of the students and to orientate the supervisors about the new role of the graduates. The orientation of the new graduates should be implemented as planned by the training institutions, as failure to do so would compromise the students learning and quality of patient care. The supervisors in local government facilities should also guide and monitor what their subordinates do in health facilities to ensure proper

implementation of primary health care by all health professionals. The copies of the new curriculum and the practice standards should be widely distributed to all the health facilities where the students are learning. Currently some nurses were not aware of these practice standards and the impact of these standards of patient care was therefore negligible due to their non-availability in some health facilities.

### ***5.3.2.2 Health Assessment Skills***

The results from both the data analysis of the self-administered questionnaires revealed that sixty-one (96%) graduates in both full-time residential and part-time distance programmes perceived that their knowledge in assessment of individuals, families and the community has been strengthened.

*“We now feel confident to assess individuals, families and the community and set priorities for our clients. We know when to refer patients to other professionals for further treatment.”*

The results from the structured group interviews of thirty-seven supervisors (100%) in 1995 and twenty-five supervisors (100) in 1997 from local and central government and in 2001, thirty supervisors (25%) from local government also revealed that the graduates’ knowledge in assessment of individuals, families and the community had improved. The supervisors indicated that the graduates could *“consult, diagnose and prescribe in line with laid down procedures for clinics, outpatients in hospitals and are able to suture lacerations, put up intravenous infusions and naso-gastric tubes with out being supervised”*.

However, ninety (75%) supervisors from the hospitals agreed with other supervisors only on the graduates' improvement of knowledge on health assessment of individuals and not on the family and community assessments. These supervisors had observed that family and community assessments were problematic and not necessarily for the graduates but for other health personnel as well for the following:

- *All health workers do not properly plan for the discharge of patients into home-based care and family assessment is compromised*
- *Heavy workloads, inadequate staffing, lack of transport particularly in those facilities that are awaiting upgrading tend to impact negatively on the nurses ability to assess families and the community*
- *Unwillingness of some family members to have nurses visit them in their homes because of HIV/AIDS stigma also interferes with family assessment.*

Though local government supervisors indicated that the graduates knowledge on health assessment had improved they had observed that:

- *Lack of reference materials, procedure manuals and the unavailability of policies and procedure in some health facilities and frequent transfers particularly for local government authorities tend to disrupt proper implementation of programmes and graduates ability to implement the newly acquired skills.*

There was one part-time graduate (4%) from hospital services who needed assistance in all aspects of health assessment yet in the recommendation for in service education health assessment did not come out as one of the areas of need by any of the graduates. The interpretation of the results from both the graduates and their supervisors indicate that the upgrade programme had strengthened the graduates' knowledge in the assessment of individuals, families and the community.

#### ***5.3.2.3 The Role of the Nurse in Primary Health Care***

The analysis from the responses from full-time and part-time graduates revealed that the graduates were knowledgeable about the role of a nurse in primary health care and their responses are summarised as follows:

- Provider of health services to individuals and families in the home, clinics, hospitals, schools and the community at large.
- Researcher who identifies health problems within the community or hospital.
- Educator concerning the prevention of prevailing diseases and treatment and promotion of health.
- Motivator and advisor of the community concerning the benefits of using health facilities and services, and
- Liaison officer between the community and other sectors that are

involved in health and health related activities.

Data analysis from the structured group interviews of the supervisors supported the graduates' perceptions that their knowledge on the role of a nurse in primary health care had improved. The supervisors alluded to the graduates improved knowledge of the role in primary health care by indicating that the graduates were

*“Actively participating in village development committees, Kgotla meetings and HIV/AIDS campaigns”*

which are part of the activities of a nurse in primary health care. The results indicate that the upgrade programme had strengthened the graduates' knowledge in the role of a nurse in primary health care.

#### ***5.3.2.4 Health Education in Primary Health Care***

The results from data analysis from the graduates' self-administered questionnaires revealed that fifty-nine (95.1%) of the graduates perceived that their knowledge in planning and implementing a health education programme has been strengthened. The graduates feel that they are now competent to plan and implement a health education programme to educate the community about disease prevention, promotion of health and utilization of health services in their communities. From analysis of the community assessment, the graduates indicated that they would:

*“Identify a group that needs health education, discuss the problem with the concerned group, select the relevant topics for health education and implement*

*the health education programme”.*

The supervisors perceived the graduates’ participation in HIV/AIDS campaigns as indicative of their knowledge in health education as these campaigns require identification of the target groups, selecting relevant topics and participating in the campaign itself.

There were three part-time graduates (12.5%) from the hospitals that did not feel competent to plan and implement a health education programme. As mentioned earlier, the graduates indicated that it was their first time to be exposed to community programmes. From this analysis, it is interpreted that planning for health education seems to be only problematic to those three graduates (12.5%) who were working in hospitals rather than those from district health teams who were always involved in preventive, promotive and rehabilitative services in the clinics, health posts and mobile stops. Though the percentage is small (12.5%), there is still need to strengthen health education activities in the hospital departments such as out patient departments, medical and surgical clinics, ante natal and post natal clinics and the under five clinics so that all health professionals are involved in educating clients and patients all the time about prevention of prevailing diseases and promotion of health in their localities. It is evident that health education is a very important component in the success and implementation of primary health care.



### ***5.3.2.5 Maternal and Child Health and Safe Motherhood***

Analysis of data revealed that sixty (96.7%) out of sixty-two graduates perceived that their knowledge to provide Maternal and child health and Safe Motherhood services has been strengthened. The graduates indicated that they can identify high-risk mothers and children and they were able to plan for their health needs by conducting maternal, child health services, and family planning services in the clinics. The supervisors supported the graduates improved knowledge in provision of maternal and child services and safe motherhood in their comments on the graduates ability to run clinics with maternity beds and wards in the hospitals. The two part-time graduates (8%) who did not feel competent to conduct maternal, child health and safe motherhood services indicated that they were not trained midwives and they found the procedures in MCH and Safe Motherhood too technical for them to learn in two years. There is need for close clinical supervision of the students who are not midwives during the maternal and child health and safe motherhood course to ensure that all the students become competent to provide these services to benefit the community. There were no responses from the supervisors on this question item because the nurses who are not midwives are usually not deployed in the maternity wards in the hospitals, clinics and MCH units.

### ***5.3.2.6 Communication Skills in Primary Health Care***

The analysis of data from the sixty-two graduates (100%) revealed that the graduates perceived that their knowledge in communication has been strengthened. The graduates indicated that they now communicate nursing and patient issues well.

In support of this, data analysis from the twenty-four (64.9%) supervisors from hospital services and thirteen (35.1%) district health teams in 1995 and in 1997 twenty-three (92%) from hospitals and two (8%) from the districts and thirty (25%) supervisors from district health teams in 2001 revealed that the supervisors perceived that the graduates' knowledge in communication had improved. The supervisors indicated that the graduates were advocating for patients' welfare in various health facilities where they were working such as clinics, labour wards, and eye clinics. The data analysis from the ninety (75%) supervisors from the hospitals in 2001 revealed that the graduates' knowledge on communication had not improved.

*“The graduates tend not to think critically when communicating patient and nursing issues”.*

The hospital supervisors believed that the graduates' lack of ability to think critically was due to lack of role modelling by senior registered nurses to the newly acquired roles as registered nurses. The graduates' knowledge in communicating nursing and patients issues in the hospitals need to be strengthened through in-service education or role modelling.

### ***5.3.2.7 Problem-Solving Skills in Primary Health Care***

Data analysis from all the sixty-two graduates (100%) revealed that the graduates perceived that the upgrade programme had strengthened their knowledge on solving problems. They believe they have acquired problem-solving skills to enable them to assess, diagnose, plan, implement and evaluate care and programmes. The graduates also indicated that they have acquired critical thinking skills and they are now able to:

- Diagnose, prescribe, treat and refer patients if necessary
- Involve communities in their care because of their readiness to change
- Set priorities with involvement of families and communities
- Implement programmes with community/family involvement, and
- Evaluate the programmes implemented in the community.

Data analysis from the thirteen (35.1%) supervisors from the district health teams in 1995, two supervisors (8%) in 1997 and thirty supervisors (25%) in 2001 revealed that the supervisors perceived that graduates' knowledge in solving problems of individuals, families and the community had improved. The supervisors from the hospitals on the other hand perceived that the graduates' knowledge improvement was limited to the individuals during health assessment but the graduates' knowledge in solving problems of families and the community had not improved. On the other hand, all the sixty-two graduates (100%) perceived that their knowledge in problem solving and critical thinking had been strengthened and they felt confident in performing these skills. There is a contradiction between the graduates' perceptions

about their knowledge in communication skills and the supervisors' perceptions about the graduates' knowledge in communication skills.

In her study on the relationship of critical thinking ability to professional nursing competence, Maynard (1996) observed that there was no relationship that was demonstrated between critical thinking ability and professional competence. Experience emerged as the main influential factor in the development of professional competence and critical thinking. The two evaluations were done when the 1995 group had six months experience after graduation and the 1997 group had ten months experience. It is therefore not surprising if Maynard's observation is taken into consideration that the EN/RN graduates lacked critical thinking skills in the cognitive and affective domains of learning due to short or inadequate professional experience. The same supervisors also felt that the existing hierarchical organisational structures of the health care system did not facilitate the graduate's ability to solve problems and think critically.

#### ***5.3.2.8 Management and Leadership Skills in Primary Health Care***

Analysis from thirty-three full-time (89.2%) and twenty part-time graduates (80%) suggests that the graduates' knowledge in management and leadership in primary health care had improved. The graduates indicated that the programme had prepared them well to manage and supervise subordinates in a clinic or hospital ward. The graduates also indicated that they feel confident in making a duty roster and allocating

subordinates and supervising them, and coordinating activities of other health professionals. Data analysis from all thirteen (35.1%) supervisors from local authorities in 1995, two (8%) in 1997, and thirty (25%) 2001 revealed that the supervisors perceived that the graduates' management and leadership skills had improved. The supervisors had observed that the graduates were managing clinics and health posts well and they were supervising their subordinates. The interpersonal relationship of the graduates had improved and they were now solving problems amicably. This is in contradiction to what the five graduates (20%) from local authorities felt about their leadership and management skills. The graduates indicated that they needed more assistance in managing hospital wards.

*“Working in a hospital ward is a challenge. I need more time to learn how to manage a hospital ward.”*

Data analysis in 2001 from ninety hospital supervisors (75%) revealed that the supervisors perceived that the graduates' knowledge in management and leadership in primary health care had improved but the application of this knowledge in clinical areas needs to be improved. This observation is in line with the comments from the four full-time graduates (10.8 %) from the hospital services and the five part-time graduates (20 %) from local government who all believed that they needed in-service education to sharpen their management and leadership skills and assistance in managing a clinic and a health post and a hospital ward.

### ***5.3.2.9 Team Approach in Primary Health Care***

Analysis of data revealed that all the sixty-two graduates (100%) were knowledgeable about team approach and membership to different health teams such as a health post, a clinic, a ward and the community. The reasons for the membership were also well explained. Larson (1995:181) recommended that universities should develop higher education policies that could encourage collaboration among health professionals because faculty members were not necessarily good role models of collaborative interaction. This view was shared in a WHO seminar on “*Equity and Health Policies for Survival in Southern Africa*” (1997:5). The participants of this seminar recommended that successful interdisciplinary work and effective collaboration require communication across disciplines and should be emphasised at all training institutions in Southern Africa. The existing structures in the district health teams in Botswana made up of matron, doctor, pharmacist, nutritionist, and laboratory technologist and extension workers seemed to have fostered a good team spirit among the upgrade graduates. The graduates from local authorities were perceived by their supervisors to coordinate the activities of HIV/AIDS campaigns and village health communities well. The supervisors believed that the inter-personal relationships of the graduates had improved tremendously and they were now resolving conflicts in their areas amicably.

#### ***5.3.2.10 Professional Development- Role as a Registered Nurse***

Data analysis revealed that all the sixty-two graduates (100%) perceived that their knowledge on professional development had improved. The graduates expressed the feeling that the new knowledge and skills that they have acquired have empowered them to make critical professional decisions. They believed the programme has prepared them well to be role models to the basic diploma students and make critical decisions as professional nurses and they relate patient issues to other professionals well. Based on this, they are now role models to the basic diploma students, they relate patient care issues to their subordinates, and other members of the health team who now respect them, because they make professional decisions based on scientific knowledge.

*“RN after my signature in patients’ charts has earned me the respect I have been waiting for. I now feel comfortable to share knowledge with other members of the health team and I am getting respect from them.”*

The acquisition of the registered nurse diploma had opened opportunities for them for further development, and they feel that they have been personally and professionally developed and empowered. Chally (1992:117-120) identified positive self-concept, creativity, resources, information and support as important tools of empowerment. Teaching according to the author is of particular importance to empowerment because as the teacher and the student work together, they begin to share the same vision. When managers recognise excellence and expertise among subordinates, self-

confidence and higher self-esteem are developed (Tomey 2000:94). The supervisors of these upgrade graduates were supportive of the EN/RN upgrade programme and the new graduates felt comfortable to test out their newly acquired knowledge and skills under their supervision and professional guidance. The upgrading programme had enhanced the self-esteem of the graduates according to the perceptions of the supervisors. The supervisors further indicated that the effacing of enrolled nursing has unified the nursing profession as the entry point into the profession now is at a diploma level. The supervisors of the upgraded nurses indicated that the graduates are no longer rebellious to the health system because of opportunities for further development and conflicts within the nursing profession have been minimised.

As mentioned earlier there was a feeling among hospital supervisors that some the new graduates still see themselves as enrolled nurses rather than as registered nurses. According to the supervisors, there was a tendency by some nurses and graduates inclusive, not to be cautious about privileged communication in communicating patients' issues. As mentioned earlier supervisors from the hospitals in particular observed lack of professional accountability particularly among male graduates and the newly qualified nurses. The supervisors associated lack of professional accountability with lack of role modelling by the supervisors who were younger than their subordinates were. It was recommended that the supervisors of these graduates should assist the graduates to acquire new roles in their respective clinical facilities.



### ***5.3.2.11 Professional Development- Role of the Nurses Association***

Analysis of data from all the full-time and part-time graduates revealed that the graduates perceived that the professional development course has strengthened their knowledge on the role of a professional organization. They perceived the role of Nurses Association as advocating for conditions of service for nurses and as such, the graduates indicated that they would:

- *Become more active members of the Nurses Association of Botswana*
- *Encourage other nurses to become members of the Association and some of them saw themselves as presidents of the organization in future and negotiate for free housing for nurses.*

Data analysis from thirteen (35.1%) supervisors in 1995 and two (8.0%) supervisors in 1997 revealed that the supervisors perceived that the graduates' knowledge on professional development had improved and that the graduates were now members of the Nurses Association and were participating in its activities. This was in agreement with data from the sixty-two (100%) graduates who indicated that they were members of the Nurses Association and were participating in its activities. On the other hand data analysis from the twenty-four (64.9%) supervisors in 1995, twenty-three (92%) in 1997, and in 2001, ninety (75%) supervisors from hospitals and thirty (25%) from local government revealed that the supervisors perceived that graduates' knowledge in professional development had not improved the graduates were not participating in the activities of the Nurses Association. The supervisors had further observed that

there was a general lethargy by nurses to become active members of the Nurses Association and not just the new graduates. It should be noted here that in the current study, membership of the graduates in the Nurses Association was not validated. There is need therefore to further determine in the national study if the graduates are actually participating in the activities of the Association as members. Witt (1992:155) also identified that nurses who upgraded from RN to BSN did not join the American Nurses Association in large numbers.

#### ***5.3.2.12 Opportunities for Further Development***

The analysis of data from all the thirty-seven full-time (100%) and the twenty-five part-time graduates (100%) revealed that the graduates perceived that the EN/RN upgrade programme had opened opportunities for them for further development in nursing. The graduates believed that they are now eligible for promotions to matrons' positions and are also eligible for admission to the University of Botswana for a degree in nursing and can then join the Institutes of Health Sciences as lecturers. The graduates expressed their appreciation to the government of Botswana, MOH, University of Botswana and the Kellogg Foundation for supporting the EN/RN upgrade programme. There was no question item to the supervisors on opportunities for further development. There was question item to the supervisors on opportunities for further development but the supervisors indicated that the upgrading had unified the nursing profession and the graduates were no longer rebellious to the health care system because they now have opportunities for further development.

### ***5.3.2.13 In-Service Education Needs of the Graduates***

The following is an analysis of what the graduates perceived were their needs for in-service education to improve performance in various health facilities where they were working. The graduates were requested just to make a list without necessarily giving any explanations and the information was not categorised as fulltime or part-time or according to hospital services or local government. The following is a list of what the graduates perceived were their needs for in-service education:

- There were ten out of sixty two (16.1%) graduates that indicated that they needed in-service education on HIV/AIDS,
- There were nine out of sixty-two (14.5%) graduates that needed in-service education on evaluation, auditing, public relations, total quality care/ management and
- There were five out of sixty-two graduates (8.0%) that needed in-service education in Safe Motherhood and Midwifery, obstetric and gynaecological nursing and family planning and for mental health nursing there were also five out of sixty-two graduates (8.0%).

Data from the supervisors were not calculated but a list was drawn from what they perceived were the areas the graduates needed more assistance. The supervisors' perceptions of the in service education needs of the graduates were not the same as the perceptions of the graduates as revealed in the following list:

a) ***Problem solving and critical thinking skills particularly dealing with families and the community***

The hospital supervisors in particular emphasised that the graduates needed more assistance in their problem solving and critical thinking skills while the graduates all perceived that their knowledge had been strengthened. As mentioned earlier, Maynard (1996:17) in her study of relationship of critical thinking ability to professional nursing competence found out that it was not clear what factors influence or inhibit the development of critical thinking ability neither was there any relationship of critical thinking ability to professional competence or expertise. She believes that a student nurse demonstrates a certain level of critical thinking ability even during the educational process. It is therefore not surprising that all the graduates perceived that their knowledge in problem solving and critical thinking had improved after completion of the upgrading programme.

b) ***Application of management and leadership skills in clinical facilities***

The graduates did not perceive application of management and leadership skills in clinical areas as an area of need. Though the supervisors from the hospitals perceived that the graduates knowledge in management and leadership had improved they needed assistance in decision-making and critical thinking particularly in making decisions

during emergencies. Quality decision making according to Catolico et al (1996:153) is the ability and willingness to make frequently required decisions that may or may not be in the province of nursing. It is central to professional nursing and has a vital and direct link to patient outcomes. The authors go on to state that decision-making is needed to place nurses in an effective clinical leadership and patient advocacy role. It is therefore important for the supervisors that decision-making skills of the graduates during emergencies be strengthened as these decisions impact on patient outcomes.

c) ***Professional accountability and role as a registered nurse***

The thirteen (35.1%) supervisors from the district health teams in 1995, two (8%) in 1997 and thirty (25%) in 2001 while from hospitals twenty-four (64.9%) supervisors in 1995 and twenty-three (92%) in 1997 perceived that the graduates' knowledge in professional development had improved. In 2001, ninety (75%) supervisors from the hospitals perceived that the graduates needed assistance in demonstrating their roles as registered nurses particularly during the first six months after graduation. Generally, the results reveal that the graduates' knowledge in professional development had improved.

**d) *Orientation into clinical areas after graduation***

The supervisors from the district health teams recommended that orientation into clinical areas should be done after graduation so that the graduates can perform their duties better. The supervisors had observed that orientation of the graduates seems to be done only in some districts. The graduates also in their suggestions/ recommendation for the programme requested that orientation of the newly qualified nurses should be done immediately nurses resume duty to enable them to do their job better. It is important to note here that the graduates had been in the clinical areas after graduation for six months for full-time and nine months for part-time and therefore the supervisors should have done the orientation on time. The supervisors from local government had indicated that the heavy workloads and transfers tended to interfere with proper orientation of the new graduates. Watson & Herbener (1990:320) recommended that the graduates should be evaluated within three to six months after graduation to allow transition from being a student to being a practitioner and orientation into the new positions and roles. If Watson and Herbener's recommendation is used as a guide, the evaluation was done at the right time for the supervisors to have orientated the graduates into their new roles. The health facilities should have clear policies on orientation of the new graduates and the management should ensure that the policies are followed to ensure that

the graduates acquire their new roles at the right time to provide primary health care services. It is important to note that what the graduates perceived as their needs for in-service education, their supervisors' perceptions on their in-service education needs were quite different. While the graduates perceived that they needed in service education on HIV/AIDS, the supervisors particularly from district health teams indicated that they were participating well in the HIV/AIDS campaigns, village development committees and in Kgotla meetings to disseminate HIV messages.

#### ***5.3.2.14 Structure of the EN/RN Upgrade Programme***

As Scriven (1983:232) suggests in an evaluation, the evaluator should search for both intended and unintended outcomes as the later reduces bias in an evaluation. In this study, unintended outcomes were covered by three question items on structure of the EN/RN programme, achievements of the programme and the respondents were requested to make any suggestions/recommendations to improve the implementation of the programme. Analysis of data from all the full-time residential (100%) and the three part-time (12%) graduates indicated that the structure of the programme needs to be improved while the twenty-two-distance education graduates (88%) believed there was no need to improve the structure of the programme. The graduates felt that the programme was good as it was because it gave them an opportunity to study at home with their families and they got the support they needed from the family members.

The three part-time graduates (12%) indicated that it was difficult for them to study at home because it puts additional stress onto their social problems. The same three graduates (12%) indicated that the one-year residential programme was better than the two-year programme because the graduates of the former were going to permanently become their seniors in terms of promotions and further development. The part-time distance education graduates indicated that it was not fair for their programme to be completed in two years while the other programme was done in one year.

*“We wish the government could review the duration of the two year programme and make it all one year. We will never catch up with the other group in terms of promotions”.*

This feeling may cause friction between the two groups later on in their different areas of deployment and the supervisors need to closely observe that this does not lead to other problems that may affect patient care. On the other hand, the thirty-seven (100%) one-year full-time residential graduates felt that their programme was congested and this did not give them enough time to internalise what they had learned. This is contrary to the perceptions of the two-year graduates. The supervisors of the graduates indicated that the two-year distance education graduates performed better in clinical areas than those from the one-year graduates in clinical areas and they attributed this to the longer period of training of the two year part-time distance education graduates.



### ***5.3.2.15 Achievements of the EN/RN Programme***

All the sixty-two graduates (100%) believed that the upgrade programme had achieved the intended goal of upgrading enrolled nurses to registered nurses through one-year full-time and two-year part-time programmes. The graduates perceived that they are now prepared to meet the challenges in providing primary health care services in the hospitals and the health districts. Reutter et al (2000:33) believe that a carefully developed curriculum can provide the new graduates with practical skills to meet challenges in the nursing and health care system and to effectively cope with their work environment. The graduates also believe that the effacing of enrolled nursing programme and their being upgraded to registered nurses has unified the nursing profession and as a result, the poor relationships that used to exist between the registered nurses and enrolled nurses are now over. The ability of majority of nurses to diagnose, prescribe and treat patients will now ease the congestion in the out patients departments and the clinics. It was also observed by their supervisors from the hospitals that since the majority of the nurses have acquired health assessment skills, some doctors withdraw from patient care activities, particularly in outpatient departments and within the hospitals wards. The supervisors believed that the revised curriculum encourages taking the services to the people rather the people coming to the hospitals and clinics to receive the services and this is in line with the principles of primary health care. They also recommended that the training institutions should identify a ward within a hospital or a specific community to use for model teaching in order to improve the quality of teaching and the learning process. Linda &

Williamson (2000:33) in agreement with the supervisors perceptions about the revised curriculum also believe that educational programmes should keep up with the changing times and any programme that ignores the socio political forces in the external environment is doing a disservice to its graduates.

It was the general feeling of the graduates and their supervisors that the government should efface the current basic nursing diploma programme and upgrade it into Bachelor of Nursing Science through distance education to enable to upgrade while on duty providing services. They believed that upgrading diploma nurses would further increase the attractiveness of the nursing profession to the potential entrants and empower the nurses.

#### ***5.3.2.16 Recommendations/Suggestions to Improve the EN/RN Programme Implementation***

The graduates and their supervisors were requested to make any suggestions or recommendations that they thought would improve the implementation of the EN/RN upgrade programme. The full-time and part-time graduates all recommended that there should be improvements in the clinical areas to facilitate teaching /learning in those areas. They recommended that books, journals, equipment and other relevant teaching/learning materials should be made available in the clinical areas and the libraries for both students and teachers to use. The supervisors also supported the improvements in the clinical areas and they suggested that these should be well

staffed and equipped to enhance students' learning. The supervisors had also observed that the preceptors had other responsibilities in addition to clinical teaching and this does not provide the students with enough supervision during their learning. The results of the process evaluation by the Kellogg consultants in 1995 also identified that resource materials such as books, equipment for health assessment were lacking in the libraries and the clinical areas and a budget was submitted to the Kellogg Foundation to address this need. The graduates had also recommended that students should not be allocated to the wards and clinics that are busy because this tends to compromise their learning. Some supervisors had suggested that the government should consider transferring all nurses to central government so that opportunities for further development for all nurses are enhanced because nurses from local government tend not to have same opportunities like those from central government.

#### ***5.4 Recommendations***

In view of the fact that this study is the first attempt to use the Stufflebeam CIPP model as a framework to evaluate a primary health care oriented nursing curriculum, it is recommended that the CIPP model be used for evaluation of other primary health care oriented nursing curricula in the country. This approach has been found to be efficient and effective because it uses both formative and summative evaluations to improve the quality of the product being evaluated. Ediger et al (1983:195) also observed that the model supplies a systematic approach to evaluation and it specifies the relationships of the parts in the evaluation. The CIPP model is quite systematic

and comprehensive though it takes long to be implemented because it takes into consideration all what goes into the curriculum to train a student in order to improve the quality of the product. The model is decision making and it gives an opportunity to involve all the stakeholders such as decision makers in an organization, the faculty, the donors and the students themselves in the evaluation process to make effective decisions based on defensible grounds. Using the four evaluations reflected in Figure 5.1 on page 256, the CIPP model is beneficial in evaluating a nursing programme as follows:

**1. *Context Evaluation***

Under context evaluation, the situational analysis helps to identify the needs to be addressed. Such needs could be the target population and its problems or needs. The results of context evaluation are used to defend the goals and priorities. On Table 1.2 on page 19 the number of years of upgrading enrolled nurses to registered nurses that took eight years at the cost of P156,000 was used to justify the effacing of the programme and to upgrade the enrolled nurses through one year residential and two year part-time distance education. An inventory of the strengths that could be used to remedy the situation, deficiencies or weaknesses are diagnosed in order to improve the situation. After identifying the needs that have to be addressed, appropriate objectives that address the real needs of the target population are then developed. In this study, an inventory of the all the practising enrolled nurses, their qualifications,

salary scales ages and places of work were done to determine the enrolment patterns in the programme. The basic enrolled nursing curriculum was compared with the revised general nursing curriculum in order to develop a curriculum that addresses the needs of the enrolled nurses to provide primary health care services.

## **2. *Input Evaluation***

Under input evaluation, an assessment of the capabilities of the system to address the identified needs is undertaken to determine if the system can actually address the identified needs. The capabilities of the system could be clinical or educational facilities where the students will be learning; faculty preparation and the costs for addressing those identified needs. Input evaluation helps to develop workable plans to avoid undertaking projects that are likely to fail and in this way decision makers make decisions or choices they can afford and account for. Input evaluation can be used to prepare budgets for funding. It was through input evaluation that in this study, a budget to support faculty preparation, training of preceptors to assist students in their clinical attachments and teaching /learning materials were developed and submitted to the Kellogg Foundation and the Ministry of Finance and Development Planning for funding the upgrade programme. Input evaluation helps the institution to assess its capability in addressing the

identified needs under context evaluation to facilitate the smooth implementation of the programme.

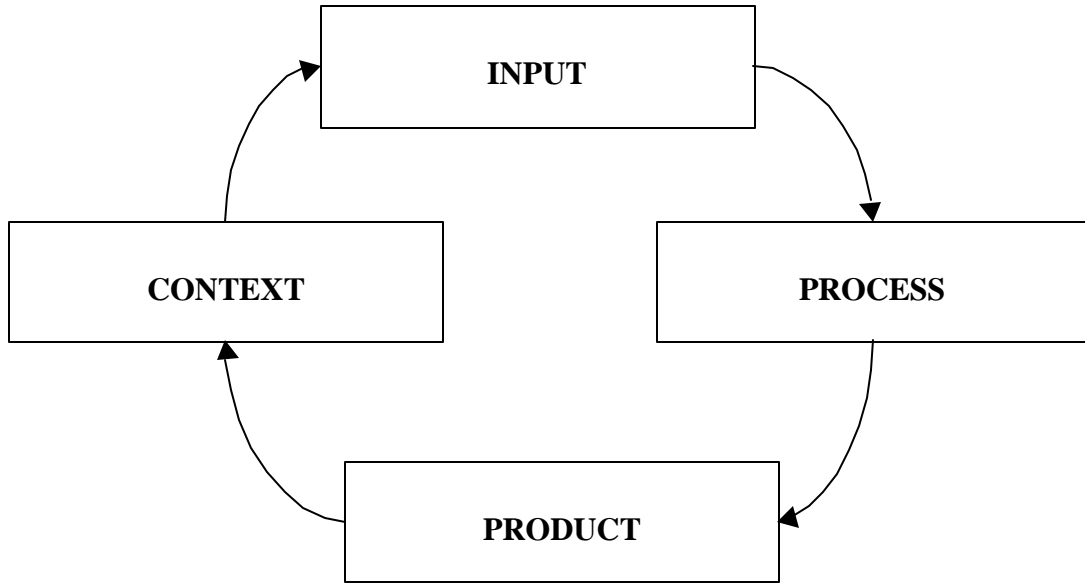
**3. *Process evaluation***

The purpose for process evaluation is to provide feedback to the managers, donors and staff about the achievement of the objectives of the programme. The evaluation process gives information about how the students have accepted the programme, costs incurred in running the programme and the overall quality of the programme from the stakeholders' perspective. It helps to make judgements about what was implemented against what was actually planned to determine improvement, support and accountability. The programme is refined and implemented and modifications made if any. This gives the faculty an opportunity to reflect on how the programme is progressing in order to prepare for the final product evaluation. The process evaluation in 1995 revealed that the graduates were excited about learning primary health care in villages and communities but there was need to improve learning materials in libraries and clinical areas to facilitate students learning.

**4. *Product evaluation***

The purpose of product evaluation is to measure, interpret and judge the attainment of the programme objectives and both the stakeholders and

the consumers of the programme may assess the performance of the programme. The evaluation is the main component of accountability and can be used for political support and funding because it is decision making in nature (Brinkerhoff 1983:12 & Popham 1988:37). It is the belief of Scriven (1983) that product evaluation is the most important because it focuses on accountability and whether the programme should continue or not because the outcomes of the programme are analysed to determine the merit or worth of the product. In the implementation of this model one evaluation leads into another in a cycle and this enhances the quality of the product. Evaluation of a nursing programme using the Stufflebeam CIPP model is quite comprehensive and systematic. In using this model, the needs of the EN/RN upgrade programme were adequately assessed and the programme was properly designed, implemented and evaluated by both the stakeholders (government, donors and staff) and the recipients of the programme to determine its effectiveness.



*Figure 5.1 Use of CIPP Model in the Evaluation of a Nursing Programme*

#### ***5.4.1 Recommendations for Further Study***

Since the evaluation of the entire EN/RN upgrade programme determined the overall effectiveness of the programme from 1995-2000 and the upgrading exercise ended in 2002 it is recommended that:

1. A study of the actual costs of the whole upgrading exercise, i.e. consultancies, travelling seminars, should be determined and be compared with the costs that the government incurred during NDP 6 when the other enrolled nurses were upgraded to registered nurses.



2. A comparative study of the academic performance of the generic graduates and the upgrade graduates that used the same revised curriculum that focused on primary health care approach.
3. A study to determine the extent to which the upgrading of enrolled nurses to registered nurses has:
  - Increased the attractiveness of nursing as a career to potential entrants.
  - Supported carrier development for practicing nurses should be done on a larger scale.

There were assumptions by both the graduates of the upgrade programme and their supervisors that this was achieved. The graduates as well as their supervisors believed that the upgrading exercise had opened opportunities for further development and there is need to explore this further.

4. The structured group interviews/discussions that extend to the recipients of care/consumers be done to get wider views on the performance of both the upgrade and the generic graduates of the new revised curriculum in providing primary health care services. The impact and effectiveness of the new revised curriculum (upgrade and generic) on the quality of life of Batswana throughout the country should also be determined. This would give the government an overview of the achievement or otherwise of equity and access in health in the country

through the upgrading of nurses. Mills (1998:3) recommends that investment in human development should be seen as one of the major factors that contribute to equity in health for countries.

5. A study to determine whether other health professionals at certificate levels such as health assistants and medical laboratory assistants who were trained during the same time as enrolled nurses can be upgraded using the same CIPP model particularly through distance learning. This approach would allow the officers to improve their knowledge and skills to provide quality care without affecting the current shortage of health professionals in the health facilities.

### ***5.5 Conclusion***

This chapter has summarised the findings of the evaluation of EN/RN upgrade programme in Botswana from 1995 to 2000. Out of 1107 students that sat for the final examinations, 1042 (94.1%) passed. The 94.1% pass rate indicates that the graduates have acquired knowledge and skills to provide primary health care services to communities in Botswana. The results of the graduate self-administered questionnaires indicate that the graduates perceive that their knowledge and skills in provision of primary health care has improved after the upgrading exercise.

In addition, the results of the analysis of structured group interviews/discussions of the supervisors (nurses and doctors) also support that the knowledge and skills of the graduates of the upgrade programme had improved to provide primary health care services to individuals, families and groups within communities. These services are preventive, promotive and rehabilitative services in safe motherhood, maternal and child health, in and out patient and community out reach. The programme was offered either in one-year full-time residential or in two year part-time distance education with no replacement costs in both programmes. It is therefore concluded that the programme has been efficient and effective when compared to the previous upgrading of enrolled nurses that took eight years with replacement costs of P156, 000 per student per year during NDP 6 (1985-1991).

The Government of Botswana in its Human Development Report (1997:3-4) believe that the essence of sustainable human development is to increase the opportunities available to people across the spectrum of human experience in terms of education, healthier living and so on. Since the focus of development is the people, sustainable development must therefore be of the people, by the people and for the people. In this context, the upgrading of enrolled nurses to registered nurses has focused on development of enrolled nurses as people so that they can better deliver primary health care services to the people of Botswana to improve their quality of life. Smith (1997:33) in her address on Health Care partnerships declared that:

*“Investment in people is the greatest investment a country can make in its future and reaps the highest dividends towards economic growth and prosperity.”*

Botswana government will indeed reap the highest dividends in future through the upgrading of enrolled nurses to registered nurses by improving the quality of life of Botswana to enable them to lead economically and socially productive lives.

The WHO Representative to Botswana, Dr. T. Guerma (2000:21), in support of Smith’s statement stated that:

*“the development of human resources for health, although the basis of the health system, is often neglected by countries that are facing other health priorities.”*

She applauded the Government of Botswana for making human resources development a priority in order to improve the quality of life of its people and those countries that have not yet done so can emulate this approach. The upgrading of enrolled nurses to registered nurses was seen as one of the priorities that the government identified to address to improve the quality of life of its people in line with the primary health care concepts and principles.

Finally, the purpose of the upgrading of enrolled nurses to registered nurses in Botswana was to invest in human resources development for health in order to improve the quality of life of Botswana through provision of primary health care services. The upgrading of enrolled nurses to registered nurses has strengthened the capability of the nursing profession to improve the quality of life of Botswana through

the provision of appropriate primary health care services. The study has revealed that the EN/RN upgrade programme in Botswana has significantly contributed to the realisation of Vision 2016 (1997:8) that will enable Botswana to be a *“compassionate, just and caring nation”*

by strengthening the graduates’ skills for delivery of primary health care services to the people.

## **Bibliography**

1. Abdellah Faye and Levine Eugene. 1994. Preparing Nursing Research for the 21<sup>st</sup> Century: evolution, methodologies and challenges. Springer Publishing Co. New York.
2. Acheson E and Mogobe K. 1993. Evaluation of the Bachelor of Education nursing programme. Unpublished Report. University of Botswana, Gaborone.
3. African Development Bank. 1992. National Health Institute Implementation Study: 38-39. Ministry of Health, Gaborone.
4. Barnes Donelle, Eribes Carman, Juarbe Teresa, Nelson Martha, Saul Muriel, Meleis Ibrahim Afaf, Proctor Susan, Sawyer Linda. 1995. Primary Health Care and Primary Care: A confusion of philosophies. Nursing Outlook vol. 43 (1): 7-16.
5. Berk, Richard A. and Rossi Peter H. 1999. Thinking about Program Evaluation. Second Edition, Sage Publications, Thousand Oaks.
6. Berland Alex. 1992. Primary Health Care: What does it mean for nurses? Internal National Nursing Review 39 (2): 47-52.
7. Beyer K. Barry. 1995. How to Conduct a Formative Evaluation. Association for Supervision and Curriculum Development. Alexandria, United States of America.
8. Bility Khalipha. 1993. A proposal for improving primary health care and nursing services through distance education in Botswana. MOH, Gaborone.
9. Bitzer E. M. 1997. Program Evaluation in Problem-Based and Community-

- Based Nursing Education. Curationis vol. 20 (1): 8-10.
10. Bless and Higson-Smith. 1995. Fundamentals of Social Research Methods. An African Perspective. Second Edition, Cape Town. Juta & Co. Ltd.
  11. Boyar Dawn, Senturia Brenda B, Paligin Helen. 1989. Accelerated LPN-RN Nursing Education: Is role socialisation lost along the way? Journal of Nursing Education vol.28 (8): 361-365.
  12. Brady Linda and Netusil Anton. 1988. A National Study of Nursing Educator's use of a Model of Program Evaluation. Journal of Nursing Education vol. 27 (5): 225-226.
  13. Brink Hilla L. 1996. Fundamentals of Research Methodology for Health Care Professionals. Juta & Co. Ltd. Cape Town.
  14. Brink P. J. and Wood H. J. 1989. Advanced Design in Nursing Research, Newberry Park. Sage Publishers.
  15. Brinkerhoff Robert O., Brethower Dale M., H. Lucky Terry, and Nowakowski Jeri Ridings. 1983. Program Evaluation: A Practitioner's Guide for Trainers and Educators. Kluwer-Nijhoff Publishing, Boston.
  16. Burns, N and Grove, S. K. 1993. The practice of Nursing Research: Conduct, Critique and Utilization. 2<sup>nd</sup> Edition. Philadelphia. W. B. Saunders.
  17. Callister Clark Lynn. 1996. Maternal Interviews: A teaching strategy for fostering critical thinking. Journal of Nursing Education vol. 35 (1): 29-30.
  18. Catalico Olivia, Navas Marybeth, Sommer K. Cynthia & Collins Mary Anne. 1996 Quality of Decision Making by Registered Nurses. Journal of

- Nursing Staff Development vol.12 (3) 49-154.
19. Chally S. Pamela. 1992. Empowerment through Teaching. Journal of Nursing Education vol. 31 (3): 117-120.
  20. Chinapah Vinayagum and Miron Gary. 1990. Evaluating Educational programmes and projects: holistic and practical considerations, UNESCO, Belgium.
  21. Clarke Toni, Goodwin Marsha, Mariana Mary, Marshal Mary J. and Moore Susan. 1983. Curriculum Evaluation: An Application of the Stufflebeam Model in a Baccalaureate School of Nursing. Journal of Nursing Education vol. 22 (1): 54-58.
  22. Cobin Joan. 1990. Botswana Nurse Manpower Development and Utilisation project to the Kellogg Foundation. MH 9/84 vol. (1). MOH.
  23. Couchman Wendy and Dawson Jane 1995. Nursing and Health Care Research. A practical guide. Second Edition. Scutari Press, London.
  24. Cowman Seamus. 1993. Triangulation: a means of reconciliation in nursing research. Journal of Advanced Nursing 18, September: 788-792.
  25. Denzin N. K. 1978. Researcher Act: An introduction to sociological methods. New York. Macro-Hill in Evaluation Review vol. 9 (5) 1985.
  26. Directorate of Public Service Management. 1993/4. Establishment Register 1993/4. Government Printer. Gaborone.
  27. Ediger Joan, Snyder Mariah and Corcoran Sheila. 1983. Selecting a Model for use in Curriculum Evaluation. Journal of Nursing Education vol. 22 (5): 195-



- 199.
28. Fink Arlene. 1993. Evaluation Fundamentals: Guiding health programmes, research, and policy. Sage Publications, Newbury Park, London.
  29. Fink Arlene. 1995. Evaluation for Education and psychology. Sage Publications, Thousand Oaks, London.
  30. Freire Paulo .1990. Pedagogy of the Oppressed. The Continuum Publishing Company, New York.
  31. Fitz-Gibbon Carol Taylor and Morris Lynn Lyons. 1978. How to Design a Program Evaluation. Sage Publications, California.
  32. Fülöp Tamas and Roemer Milton. 1987. Reviewing health manpower development - a method of improving national health systems. WHO, Geneva.
  33. Good C. V. 1973. Dictionary on Education. 3<sup>rd</sup> Edition. McGraw Hill, New York.
  34. Goode Colleen. 1995. Evaluation of Research Based Nursing Practice. Nursing Clinics of North America vol. 30 (3): 421-428.
  35. Greene Jennifer & McLintock Charles. 1985. Triangulation in Evaluation: design and analysis issues. Evaluation Review vol. 9 (5): 523-545.
  36. Hamilton Glenys A. 1993. An Overview of Evaluation Research Methods with Implications for Nursing Staff Development. Journal of Nursing Staff Development vol. 9 (3): 148-154.
  37. Hegge Marge. 1995. Restructuring Registered Nurse Curriculum. Nurse Educator vol. 20 (6): 39-44.

38. Herbener Debra and Watson Joan E. 1992. Models for Evaluating Nursing Education Programs. Nursing Outlook vol. 40 (1): 27-32.
39. Horan Mary, Knight Louise, McAtee Sally, and Westrick Joanne. 1984. A model for Curriculum Evaluation. Journal of Nursing Education vol. 23 (7): 319-322.
40. Hyde-Price Caroline. 2000. Enrolled nurse training in New Zealand ceased in 1993, but surprise it looks set to make a comeback. Nursing Standards vol. 15 (3): 17-18.
41. Ingersoll, Gael L; Brooks Marien Ann; Fischer Marian S; Lodge Rosaleah H; Wigsten Kathrine S; Costello Deborah A; Kierman Maureen; Parrinello Kathleen M; Schultz Alison W. 1995. Professional Practice Model Research Collaboration: Issues in Longitudinal, Multisite Designs. Journal of Nursing Administration vol. 25 (1): 39-46.
42. Institute of Health Sciences/ University of Botswana. 1996. Academic Regulations for Affiliated Health Training Institutions: 57-60. Government Printers, Gaborone.
43. Institute of Health Sciences/University of Botswana. 1995. Curriculum for Basic Diploma in General Nursing. Government Printer. Gaborone.
44. Institute of Health Sciences/University of Botswana. 1995. Curriculum for Basic Diploma in General Nursing upgrade programme. Government Printer, Gaborone.
45. Jack Barbara & Clarke Angela M.1998. The purpose and use of questionnaires

- in research. Professional Nurse vol.14 (3)
46. Johnson Joyce H. & Olesinski Nina. 1995. Program Evaluation: Key to Success. Journal of Nursing Administration vol. 25 (1): 53-60.
47. Jones Wendy. 1996. Triangulation in clinical practice. Journal of Clinical Nursing vol. 5 July: 319-323.
48. King James. 1982. Holy Bible: Lamentations 3:23. Academy Enterprises, Inc Oklahoma. USA.
49. Krichbaum Kathleen, Rowan Mary, Duckett Laura, Ryden Muriel B., Savik Kay M. S. (1994). The Clinical Evaluation Tool: A measure of the Quality Clinical Performance of Baccalaureate Nursing Students. Journal of Nursing Education vol. 33 (9): 395-403.
50. Larson L. Elaine. 1995. New Rules for the Game: Interdisciplinary Education for Health Professionals. Nursing Outlook vol. 43 (4): 180-185.
51. Lengacher Cecile A, Mabe Patricia R, Kent Karen, Alfred Rosalie. 1995. Design, Implementation and Evaluation of the Educational Program for a New Practice Model. Journal of Nursing Staff Development vol. 11 (4): 195-199.
52. Lengacher Cecile A., Keller Rosemary. 1992. Comparison of role conception and role deprivation in LPN-Transitions students and traditional ADN Students in a specially designed associate programme. Journal of Nursing Education vol. 31 (2): 79-84.
53. Luker Karen A. 1981. An overview of evaluation research in nursing. Journal of Advanced Nursing vol. 6: 87-93.

54. Macgregor Tony 1991. Towards human-centred development: primary health care in Africa. Africa Insight vol. 21 (3): 145-152.
55. Maclaine Katrina 1998. Clarifying higher-level roles in nursing practice. Professional Nurse Vol. 14 (3): 159-163.
56. Madeus George F, Scriven Michael S, and Stufflebeam Daniel L. 1983. Evaluation Models: Viewpoints on Educational and Human Services Evaluation. Kluwer-Nijhoff Publishing, Boston.
57. Maskey B. 1995. Report of the EN/RN upgrade programme. Ministry of Health, Gaborone.
58. Maskey B. 1997. Report of an assessment of the distance Education Learner graduates. Ministry of Health, Gaborone.
59. Maynard A. Carlene. 1996. Relationship of Critical thinking ability to Professional Nursing Competence. Journal of Nursing Education vol. 35 (1): 12-18.
60. Milazzo Chormick Nancy. 1991. Evaluation of an integrated Curriculum; The Waltz Model. Nurse Educator vol. 16 (5): 35.
61. Mills Clair (1998). Equity and Health: Key Issues and WHO's role. WHO, Geneva.
62. Ministry of Finance and Development Planning. 1970-1975. National Development Plan 2. Government Printers, Gaborone.
63. Ministry of Finance and Development Planning. 1985-1991. National Development Plan 6. Government Printers. Gaborone.

64. Ministry of Finance and Development Planning. 1991-1997. National Development Plan 7. Government Printers. Gaborone.
65. Ministry of Health Botswana. 1995. National Health Policy 1995. Government Printers, Gaborone.
66. Ministry of Health. 1970. Curriculum for Enrolled Nurse Training. Government Printer. Gaborone.
67. Ministry of Health. 1988. Health Manpower for Botswana 1988 to 2002. Government Printers. Gaborone.
68. Ministry of Health. 1989. National Health Institute Requirement Study. Government Printers. Gaborone.
69. Ministry of Health. 1992. Report of Task Force on Kellogg Consultancy Report on Nursing Educational System in Botswana. Ministry of Health, Gaborone.
70. Ministry of Health. 1993. Botswana Government Directive of April 1993.
71. Ministry of Health/University of Botswana. 1995. Curriculum for General Nurse Training. Government Printers, Gaborone.
72. Mkumbwa Leah A. J. 1998-1999. External Review of the Basic Diploma and General Nursing Program in Botswana. MH 56 vol. III. MOH, Gaborone.
73. Molosiwa Ross and Nkarabang Keboeletse. 1999. Botswana Handbook. Government Printers, Gaborone.
74. Mpaka NM and Uys L. R. 1999. The Critical Thinking Ability of Diplomats from Different Types of Bridging Programs. Curationis 22 (3): 14-19.

75. Munro Barbara, Hazard. 1983. A useful Model of Program Evaluation. Journal of Nursing Administration Spring: 35-38.
76. Murdock Jane E., McMorrow, Diantha R., L. Coursiere, Sheryl Perrault, Scriven Cynthia. 2000. LPN to RN Articulation: A Collaboration Solution. Journal of Nursing Education vol. 39 (2): 57-84.
77. National Archives .1972. Government Paper (1): 1-3. National Archives. Gaborone.
78. Ngcongco Vuyelwa, Gasannelwe Kegalale, Selelo-Kupe Serara, Tlale Kelesitse. 1989. Botswana Country Proposal to the Kellogg Foundation. MH 9/84 vol. 1. MOH.
79. Nolan Mike and Grant Gordon. 1993. Service Evaluation: Time to open both eyes. Journal of Advanced Nursing 18 (1): 1434-1442.
80. Nurses Association of Botswana. 1973. A Position Paper on Primary Health Care by nurses, nursing responsibility and accountability. Nurses Association Botswana.
81. Nursing and Midwifery Council of Botswana. 1995. Practice Standards.
82. Petro-Nustas Wasileh. 1996. Evaluation of the process of introducing a quality development programme in a nursing department at a university hospital: the role of a change agent. International Journal of Nursing Studies. vol. 33 (6): 605-618.
83. Poindexter Jeannette and Shaw-Nickerson Ethelrine. 1990. Report of Consultation visit to Botswana. W. K. Kellogg Foundation. Battle Creek.

Michigan.

84. Poindexter Jeannette, Flucas Sadie and Todd Mae Oretta. 1995. Report of Consultation visit to Botswana. "Implementation of the General Nursing Program". W. K. Kellogg. Battle Creek. Michigan.
85. Polit Denise F. and Hungler Bernadette P. 1991. Nursing Research: principles and methods. 4<sup>th</sup> Edition. Lippincott, Philadelphia.
86. Polit Denise F. and Hungler Bernadette P. 1993. Essentials of Nursing Research, methods, appraisal and utilization 3<sup>rd</sup> edition: J. B. Lippincott Company.
87. Popham James W. 1988. Educational Evaluation. Second Edition, Prentice Hall, Englewood Cliffs.
88. Poteet Gaye W. and Pollok Clementine S. 1986. Increasing Accountability through programme evaluation. Nurse Educator vol. 11 (2): 41-47.
89. Presidential Task Force (1997). Vision 2016: Towards Prosperity for All. Government Printers. Gaborone.
90. Republic of Botswana. 1995. Nurses and Midwives Act. Chapter 61:03. Government Printers. Gaborone.
91. Reutter Linda and Williamson L. Deanna. 2000. Nursing and Health Care Reform: Advocating public health policy. Journal of Nursing Education. Vol. 39 (1)
92. Republic of Botswana. 1997. Nurses and Midwives Act. Chapter 61:03. Government Printers. Gaborone.

93. Rossi Peter H. and Freeman Howard E. 1993. Evaluation: A Systematic Approach, Sage Publications, Newbury Park.
94. Sanders James R. 1992. Evaluating School Programs, an Educational Guide. Sage Publications, Newbury Park.
95. Sarnecky Mary T. 1990. Program Evaluation Part 1: Four Generations of Theory. Nurse Educator vol. 15 (5): 25-28.
96. Sarnecky Mary T. 1990. Program Evaluation Part 2: A Responsive Model Proposal. Nurse Educator vol. 15 (6): 7-11.
97. Schreuder A M G & Theron A L. 2000. Careers: An Organizational Perspective. Second Edition. Juta & Co.
98. Schultz Alison W. 1993. Evaluation of a Clinical Advancement System. Journal of Nursing Administration vol. 23 (2): 13-19.
99. Selelo-Kupe 1993. An Uneasy walk to Quality: The evolution of Black Nursing Education, in the Republic of Botswana. W. K. Kellogg Foundation. Battle Creek, Michigan.
100. Smith Gloria. 1991. Report of consultant visit to Botswana. W. K. Kellogg Foundation. Battle Creek, Michigan.
101. Smith Gloria. 1997. Health Care Partnerships: meeting the needs of underserved communities around the world. W. K. Kellogg. Battle Creek, Michigan.
102. Sohn Sook Kum. 1987. Program Evaluation in Nursing. Nurse Educator vol. 12 (2): 27-34.



103. Staropoli Charles and Waltz Carolyn F. 1978. Developing and evaluating educational programmes for health care providers. F. A. Davis Company, Philadelphia.
104. Stein Alice. 1995. Structure, Process and Outcome for Total Programme Evaluation in Continuing Nursing Education. Journal of Nursing Staff Development. Nov/Dec: 322-324.
105. Strickland Ora. 1990. Report on Nursing programmes Curriculum Review in Botswana. MOH.
106. Tarimo E. and Webster E. G. 1996, Primary health care concepts and challenges in a changing world, Alma-Ata revisited. WHO paper No.7 Geneva.
107. The Dag Hammarskjöld Foundation and Then National Institute of Development Research and Documentation (1997). Equity in Health Policies for Survival in Southern Africa. University of Botswana, Gaborone.
108. Tomey Mariner Ann. 2000. A guide to Nursing Management and Leadership. 6<sup>th</sup> Edition Mosby. St Louis, London.
109. University of Botswana and Ministry of Health .1985. University of Botswana/Ministry of Health Affiliation Document. University of Botswana. Gaborone.
110. University of Botswana. 1995. Academic Regulations for General Nurse Training. University of Botswana. Gaborone.
111. United Nations Development Programme. 1997. Botswana Human Development Report 1997: Challenges for Sustainable Human Development;

- A longer Term Perspective. T. A. Publications. Botswana.
112. United Nations Development Programme .1999. Country Review for Botswana. UNDP. Gaborone.
113. Vancott Mary Lou, Lengacher Cecilia A, Heinemann Denise, Mabe Patricia, Sawymer Sunday, Bistriz Darlene. 1997. The use of Focus Groups to assist in the Design and Implementation of a new Nursing Practice Model. Nursing Staff Development vol. 13 (28): 83-87.
114. Waltz Carolyn F. and Bond Susan B. 1985. How can a Program Evaluation be Comprehensive and Yet Cost Efficient? Journal of Nursing Education vol. 24 (6): 258-261.
115. Washington Olivia G M and Mpanga K. G. 1995-1997. External Review of the Basic Diploma and General Nursing Upgrade Program in Botswana. MH 56 vol. I-II. Gaborone.
116. Watson Joan E. and Herbener Debra. 1990. Program Evaluation in Nursing Education: The State of the Art. Journal of Advanced Nursing 15 May: 316-323.
117. WHO. 1971. Planning and Programming for Nursing Services. Public Health Paper (44), Geneva.
118. WHO. 1978. Primary Health Care. Alma-Ata. 1978. WHO, Geneva.
119. WHO. 1985. A guide to curriculum review for basic nursing education-orientation to primary health care and community health. Geneva.
120. WHO. 1985. Health Manpower requirements for the achievement of health for

all by the year 2000 through primary health care. Technical Report Series 717.

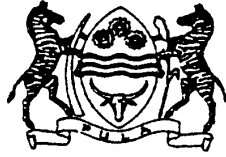
WHO, Geneva.

121. WHO. 1986. Regulatory Mechanisms for Nursing training and practice. Report Series 738. Geneva 1986
122. WHO. 1990. Coordinated Health and Human Resources Development. Technical Report Series 801, Geneva, 1990.
123. WHO. 1990. Education and training of nurse teachers and managers with special regard to primary health care. Technical Report Series 708, Geneva, 1984.
124. WHO .2000. Towards Unity for Health: Coordinating Change in Health Services and Health Professions Practice and Education. WHO no. 1 April
125. Williams Clara and Gallimore Karen. 1987. Educational Mobility in Nursing: LPN to RN. Journal of Nursing Education vol. 12 (4): 149-157.
126. Witt Barbara S. 1992. The Liberating Effects of RN to BSN Education. Journal of Nursing Education vol. 31 (4): 18-21.
127. Wood N. F. & Catanzaro M. 1988. Research, Theory and Practice. C. V. Mosby.
128. Worthen Blaine, Sanders James, and Fitzpatrick Jody L. 1997. Program Evaluation: Alternative Approaches and Practical Guidelines. Second Edition, Longman Publishers, New York.

129. Yeaw Evelyn M. J. 1987. A Theoretical Model Based on Evaluation Theories and Application to Continuous Education Programs in Nursing. Journal of Continuing Education in Nursing vol. 18 (4): 123-126.

## APPENDIX I

TELEPHONE: 305169  
FAX: 314697  
TELEGRAMS: RABONGAKA  
TELEEC: 2818 CARE BD  
REFERENCE:



MINISTRY OF HEALTH,  
PRIVATE BAG 0038,  
GABORONE.

REPUBLIC OF BOTSWANA

Ref: MH 13/18 I

21<sup>st</sup> September 2000

Mrs Kegalale Jocelyn Gasennelwe  
Ministry of Health  
Private Bag 0038  
Gaborone

Dear Mrs K.J.Gasennelwe

### GRANT OF A RESEARCH PERMIT

Your application for a research permit refers:

I am pleased to inform you that you have been granted permission to conduct research by Health Research Development Committee on the following study:

#### **THE EVALUATION OF THE ENROLLED NURSE/REGISTERED NURSE UPGRADE PROGRAMME IN BOTSWANA**

The permit does not give authority to enter any premises, private establishment or protected area without permission of concerned parties. Such permission should be negotiated with those concerned. You may also need to request permission from other relevant authorities, i.e. Hospital Management, Chiefs, Headmen, etc.

You are also requested to submit at least one copy of the findings of your study to the Ministry of Health, Health Research Unit.

Yours sincerely

Pilate Khulumani  
for/PERMANENT SECRETARY

PK/ms

## APPENDIX II

Facility

Date

### Consent to participate General Nursing Curriculum Evaluation

The National Nursing Curriculum Committee is conducting an evaluation of the General Nurse Upgrade Program curricula. It is hoped that through a systematic evaluation of these programmes continuing improvement in nursing and nursing education will result.

We are asking graduates and the people in health service to participate in the evaluation. To participate in the evaluation, means that you are willing to complete the attached questionnaire. Participation in the evaluation is voluntary and you can decide to stop your participation at any time after you have started to complete the questionnaire. Completion of the instruments should take approximately 30 minutes. Agreement to participate in this evaluation will in no way affect your present or future relationships with nurses or the nursing community and your responses to the question will be anonymous.

Your willingness to complete the questionnaire will be evidence of your consent to participate in the evaluation. Thank you for your consideration of this request. If you choose to participate, we appreciate your contribution and time.

Sincerely,

National Nursing Curriculum Committee  
Chairperson

## APPENDIX III

### Questionnaire for graduates of EN/RN upgrade programme

Name of facility:

Date:

1. To provide primary health care services, a nurse has to do an assessment to understand the needs of individuals, families and community.

Did the EN/RN programme prepare you to assess the needs of:

- a) Individuals
- b) Families
- c) Community

Y	N
Y	N
Y	N

If yes, state your reasons

If no, state your reasons

2. Is the following a correct description of the role of a nurse in primary health care?

- a) Service provider to individuals, and families at home, clinics and/or hospitals
- b) Educator of individuals, families and community about prevention of diseases, treatment and promotion of health
- c) Motivator and advisor of community about the benefits of using health facilities
- d) Researcher to identify health problems within the community
- e) Liaison officer between community and other sectors involved in health related activities

Y	N
Y	N
Y	N
Y	N
Y	N

f) Other Please specify.....

3. Health education has a major role to play in the prevention of diseases and promotion of health in the community. Has the EN/RN programme prepared you to:

a) Identify target groups for health education?

Y	N
---	---

If yes, state your reasons

If no, state your reasons

b) Plan a meeting with target groups to discuss and identify needs for health education?

Y	N
---	---

If yes, state your reasons

If no, state your reasons

c) Select relevant topics for health education and make a schedule for the implementation of the programme?

Y	N
---	---

If yes, state your reasons

If no, state your reasons



- d) Use different methods for teaching the target groups? 

Y	N
---	---

  
If yes, state your reasons

If no, state your reasons

- e) Use methods and language that the community members can understand? 

Y	N
---	---

  
If yes, state your reasons

If no, state your reasons

4. Provision of Maternal and Child Health (MCH) and Safe Motherhood Services are important components of primary health care. Has the EN/RN programme prepared you to:

- |    |   |   |   |
|----|---|---|---|
| a) | Identify high risk mothers and children   | Y | N |
| b) | Educate mothers about the use of health facilities to reduce mortality (maternal and infant)              | Y | N |
| c) | Conduct MCH and Family Planning (FP) clinics  | Y | N |
| d) | Advise mothers and teenagers on the use of condoms to prevent pregnancy and sexually transmitted diseases | Y | N |

If yes, state your reasons

If no, state your reasons

5. Communication skills are important in assessing the health needs. Has the EN/RN programme prepared you to communicate with patient, family and community members in order to assess their needs.

Y	N
---	---

If yes, state your reasons

If no, state your reasons

6. A primary health care nurse uses a problem-solving approach at all levels of health facilities in order to assess, diagnose, plan, implement and evaluate care and programmes. Has the EN/RN programme prepared you to solve problems of:

a) Individuals/patients

Y	N
Y	N
Y	N

b) Families

c) Community

If yes, state your reasons

If no, state your reasons

7. Has the management and leadership course prepared you to manage the following:

a) A hospital ward

Y	N
Y	N
Y	N
Y	N

- b) A clinic with or without maternity beds
- c) A health post or a mobile stop
- d) Supervise the subordinates

If yes, state your reasons

If no, state your reasons

8. Team approach has a positive impact on the delivery of primary health care services. Please indicate if the following are members of a health team at various levels of health facilities, and state what the role of each member is in these facilities.

- a) Health post/mobile stop membership

Member	Role	Y	N
Headman			
Family welfare educator			
Enrolled nurses			
Traditional healers			
Community health nurse			
Cleaners/drivers /grounds men			

- b) Clinic with/without maternity beds membership

Member	Role	Y	N
Midwives			
Registered nurses			

Doctors			
Laboratory technicians			
Pharmacy technicians			
Cleaners and drivers			
Community health nurse			

c) Primary, district and referral hospital ward membership

Member	Role	Y	N
Matron			
Doctor			
Medical laboratory technologist/ technician			
Pharmacist/ pharmacy technician			
Registered nurses			
Orderlies, cleaners and drivers			

d) Community membership

Member	Role	Y	N
Parliamentarians			
Traditional/ Community leaders			
Headmen			
Chairman Village Health Committee			

Extension workers			
Church leaders			
NGOs			
District medical officers			
Community health nurse			

9. Professional development course prepares a nurse to take up his/her role as registered nurse and make critical decisions and professional judgements. Has the EN/RN programme prepared you to:

a) Be a role model to basic diploma students?

Y	N
---	---

If yes, state your reasons

If no, state your reasons

b) Relate patient care issues to:

- i) Enrolled nurses
- ii) Other nursing personnel
- iii) Other health professionals

Y	N
Y	N
Y	N

If yes, state your reasons

If no, state your reason

c) Make critical decisions as a professional nurse?

Y	N
---	---

If yes, state your reasons

If no, state your reasons

10. The Nurses Association plays an important role in the advancement of the nursing profession and protects the welfare of nurses.

a) As a professional nurse will you now:

i) Participate in the activities of the Nurses Association as a member

Y	N
---	---

ii) Encourage other nurses to join the Nurses Association

Y	N
---	---

iii) Maintain high practice standards to uphold the image of the nursing profession

Y	N
---	---

If yes, state your reasons

If no, state your reasons

b) What do you consider the role of the Nurses Association?

Y	N
Y	N

- i) Advocacy for nurses' conditions of service
- ii) Participation in the development of practice standards

If yes, state your reasons

If no, state your reasons

11. Has the EN/RN programme opened an opportunity for you for further development in nursing?

Y	N
---	---

If yes, state your reasons

If no, state your reasons

12. List below the topics for in-service education that you need

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*Unintended Outcomes*

13. The EN/RN upgrade programme is offered as a one-year full-time residential, or as a two-year part-time distance education programme. Is there a need to improve the structure of:

- a) One-year residential programme
- b) Two-year part-time distance education programme

Y	N
Y	N

If yes, state your reasons

If no, state your reasons

14. The EN/RN programme was designed to upgrade enrolled nurses through one-year full-time residential or two year part-time distance education. Do you feel this goal been achieved?

Y	N
---	---

If yes, state your reasons

If no, state your reasons

15. What recommendations do you have about the EN/RN programme?

.....

.....

.....

.....

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.....

.....



## APPENDIX IV (a)

Questionnaire for structured group interviews of the supervisors of the EN/RN graduates. Matrons, doctors and nursing sisters from hospitals and district health teams (clinics, health posts and district health teams). Consensus in each structured group was reached on the responses of the group members.

Name of the group:

Date:

1. Policies and procedures are important to enhance the delivery of primary health care services. Do the graduates of the EN/RN programme have access to:

- a) Procedure manuals in your health facility
- b) Reference materials
- c) Practice standards
- d) Other. Please specify

Y	N
Y	N
Y	N
Y	N

If yes, state your reasons

If no, state your reasons

2. Do the EN/RN graduates demonstrate ability to assess needs of:

- a) Individuals
- b) Families
- c) Community/groups

Y	N
Y	N
Y	N

If yes, state your reasons

If no, state your reasons

3. Do the EN/RN graduates demonstrate ability to communicate nursing and patient issues and concerns?

Y	N
---	---

If yes, state your reasons

If no, state your reasons

4. Do the EN/RN graduates demonstrate ability to solve problems of:

- a) Individuals
- b) Families
- c) Community or groups

Y	N
Y	N
Y	N

If yes, state your reasons

If no, state your reasons

5. Do the EN/RN graduates demonstrate management and leadership skills by:

a) Organising and supervising their subordinates

Y	N
---	---

If yes, state your reasons

If no, state your reasons

b) Coordinating activities of other health professionals in the provision of primary health care

Y	N
---	---

If yes, state your reasons

If no, state your reasons

6. Do the EN/RN graduates demonstrate ability to run a:

a) Hospital ward

Y	N
---	---

b) Clinic with or without maternity beds

Y	N
---	---

c) Health post or mobile stop

Y	N
---	---

If yes, state your reasons

If no, state your reasons

7. Do the EN/RN graduates make any contributions to the profession and community by:

- a) Becoming members of the Nurses Association
- b) Participating in the activities of the Nurses Association
- c) Participating in community programmes/projects

Y	N
Y	N
Y	N

If yes, state your reasons

If no, state your reasons

8. Is the EN/RN upgrade curriculum supportive of the MOH goals of provision of primary health care?

Y	N
---	---

If yes, state your reasons

If no, state your reasons

9. What are the major achievements of the EN/RN programme?

.....  
.....  
.....  
.....  
.....

10. Are there issues and concerns that affect the implementation of the EN/RN programme?

If yes, state your reasons

Y	N
---	---

If no, state your reasons

11. What recommendations do you have for the EN/RN programme?

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

## APPENDIX IV (b)

Questionnaire for structured group interviews of the supervisors of the EN/RN graduates. Matrons, doctors and nursing sisters from hospitals and district health teams (clinics, health posts and district health teams). Consensus in each structured group was reached on the responses of the group members.

Name of the group:

Date: 06 / 02 / 01

- ① Princess Maria Hospital (PMH) made up of 10 members from:  
 Maternity wards, medical wards, Out Patient Department  
 Surgical/Medical clinics (ENT & ORTHOPAEDICS) FP, ANC & PNC CLINICS
- ② DISTRICT HEALTH TEAMS made up of 5 members from CLINICS.

1. Policies and procedures are important to enhance the delivery of primary health care services. Do the graduates of the EN/RN programme have access to:

- a) Procedure manuals in your health facility  
 b) Reference materials  
 c) Practice standards  
 d) Other. Please specify

	PMH	DHT
a)	Y ✓	N ✓
b)	Y ✓	N ✓
c)	Y ✓	N ✓
d)	Y ✓	N ✓

If yes, state your reasons

PMH: All the health facilities have policies and procedures available to enhance the delivery of primary health care services.

If no, state your reasons

DHT: "Not all health facilities have policies and procedures and where available they are not being used or followed."

- ① "Matrons tend to keep these documents for themselves and we never see these reference materials"
- ② Practice Standards by NAB not widely distributed and impact on patient care is insignificant. All these hamper the students ability to learn/acquire health assessment skills.

2. Do the EN/RN graduates demonstrate ability to assess needs of:

- a) Individuals
- b) Families
- c) Community/groups

	DHT/PMH	
	Y	N
	Y	N
DHT	Y	N

If yes, state your reasons

DHT & PMH: Graduates can now consult, diagnose and prescribe treatment for patients/clients. They suture, put up intravenous infusions (drips) naso-gastric tubes without supervision. DHT also indicated that the graduates do community assessment well. They participate in HIV campaigns & Kgotla meetings.

If no, state your reasons

PMH: Graduates need supervision in family and community assessment due to the following that have interfered good assessment skills:

- a) Heavy workloads impact negatively on health assessment skills
- b) HIV/AIDS stigma leave negative impact on home visits
- c) No proper plan for discharging patients for home-based care by all professionals not necessarily the upgrade graduates.

3. Do the EN/RN graduates demonstrate ability to communicate nursing and patient issues and concerns?

	DHT	PMH
	Y	N

If yes, state your reasons

DHT: Graduates communicate patient and nursing issues well. They run clinics, maternity wards and child welfare clinics. Community these issues and delegating to subordinates.

If no, state your reasons

PMH: Graduates do not communicate nursing and patient issues well, because they are still new in acquired RN roles. They lack role modelling from the senior nursing staff.

4. Do the EN/RN graduates demonstrate ability to solve problems of:

- a) Individuals
- b) Families
- c) Community or groups

	PMH	
DHT	Y	N
PMH	Y	N
DHT	Y	N

If yes, state your reasons

DHT & PMH: Graduates solve problems of individuals well.  
DHT: Graduates solve family and community problems well. Health assessment course has strengthened their ability to solve problems.

If no, state your reasons

PMH: "Graduates problem solving is centred around individuals doing health assessment but <sup>in</sup> family and community problem solving graduates need to improve. (2) The current organizational structure seems to be a barrier to graduates demonstration of their problem solving skills.

5. Do the EN/RN graduates demonstrate management and leadership skills by:

- a) Organising and supervising their subordinates

DHT	PMH
<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N

If yes, state your reasons

DHT: Graduates supervise and organise activities of their subordinates well.

If no, state your reasons

PMH: Graduates seemed not confident to supervise subordinates or coordinate activities of other health professionals well.

- b) Coordinating activities of other health professionals in the provision of primary health care

DHT	PMH
<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N

If yes, state your reasons

DHT: Graduates participate in Kgotla meetings as well as VDC and village committee meetings, and HIV/AIDS Campaigns.

If no, state your reasons

PMH: Graduates seemed not confident in coordinating activities of other health professionals and community activities.

6. Do the EN/RN graduates demonstrate ability to run a:

- a) Hospital ward
- b) Clinic with or without maternity beds
- c) Health post or mobile stop

PMH	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
DHT	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
DHT	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N

If yes, state your reasons

PMH: "Graduates run hospital wards well though they tend to take long to make decisions in emergencies." (2) Graduates role modelling seems lacking and this contributed to graduates inability to think critically and make critical professional decisions.

DHT: The graduates run clinics with or without maternity beds well as well as health posts and mobile stops.



If no, state your reasons

7. Do the EN/RN graduates make any contributions to the profession and community by:

- a) Becoming members of the Nurses Association
- b) Participating in the activities of the Nurses Association
- c) Participating in community programmes/projects

DHT & PMH

Y	N ✓
Y	N ✓
Y	N ✓

If yes, state your reasons

If no, state your reasons

- ① DHT & PMH: Graduates were not members of the Nurses Association or in participating in activities of the Association or community programmes or projects.
- ② There is a general lethargy by ~~the~~ majority of nurses and not just the graduates about joining NAs and participating in its activities.

8. Is the EN/RN upgrade curriculum supportive of the MOH goals of provision of primary health care?

PMH & HT

Y ✓	N
-----	---

If yes, state your reasons

- ① Health assessment skills has added into the improvement of delivery of primary health care services by nurses
- ② All nurses from central and local government are familiar with "primary health care concepts and principles and their application in health care / patient care."

If no, state your reasons

9. What are the major achievements of the EN/RN programme?

- ① Upgrading has unified nursing and enhanced its image in the country.
- ② Enrolled nurses (now graduates) are no longer rebellious to the health care system because they have opportunities for further development.
- ③ Conflicts have been minimised and the graduates self-esteem enhanced.

10. Are there issues and concerns that affect the implementation of the EN/RN programme?

If yes, state your reasons

bHT	
PMH	
Y	N
✓	

- PMH: Because majority of nurses now consult, diagnose and prescribe for patients "some doctors now withdraw from patient care responsibilities particularly in OPD."
- bHT & PMH: ① Preceptors leave many responsibilities in addition to assisting the students and this compromises learning.  
② Heavy workloads also compromise students learning.  
③ Lack of role modelling by senior nurses to the new graduates compromises patient care.

If no, state your reasons

11. What recommendations do you have for the EN/RN programme?

- ① Students be attached to health facilities that are well staffed and with reading materials.
- ② Current basic diploma programmes be axed and graduates upgraded to BSN through distance learning.
- ③ RN nurses from local government be transferred to central government to enhance opportunities for further development for all nurses.

Gasennelwe  
K. Gasennelwe

06/02/01

## APPENDIX V

### THE KELLOGG SONG

BAKAE! BAKAE! BA KELLOGG x 2

BAKILE BA MAKATSA SECHABA

BA BOTSWANA BA A ITUMELA x 2

BA BUA KA LONA BA KELLOGG

BEHOLD! BEHOLD! KELLOGG FOUNDATION

THAT HAS SURPRISED THE NATIONS

AS A RESULT BATSWANA ARE DELIGHTED

THEY HAVE GOOD THINGS TO TALK ABOUT

THE KELLOGG FOUNDATION

## APPENDIX VI

UNIVERSITY OF BOTSWANA/INSTITUTE OF HEALTH SCIENCES  
FINAL EXAMINATION  
BASIC DIPLOMA IN GENERAL NURSING UPGRADE PROGRAMMWE

PAPER 1  
APPLICATION OF CONCEPTS AND PRINCIPLES  
OF PRIMARYHEALTH CARE NURSING

DATE: JULY 1995 EXAMINERS: B. P. MDLULI

C.CHISENGANTAMBU

TIME ALLOWED: 3 HOURS

TOTAL MARKS: 100 EXTERNAL EXAMINERS: O. G. WASHINGTON

### INSTRUCTIONS

1. Read instructions very carefully
2. Write only your candidate number on each page of your answer booklet.
3. Answer all questions in each section
4. Use the booklet provided for answering questions
5. Start the first question in each section on a separate sheet of paper in your booklet
6. You will lose points for not following instructions.

G O O D L U C K

&

G O D B L E S S

## SECTION A

### PART 1 – MULTIPLE CHOICES. INSTRUCTIONS

Circle the letter with the most appropriate response.

1. The definition of Primary Health Care (PHC) includes which of the following principles?
  - a) Accessibility, Affordability, Equity, Acceptability, Dependency
  - b) Only Equity and Availability
  - c) Accessibility, Affordability, Equity, Acceptability, Availability, and Effectiveness
  - d) Just collaboration, community dependence and involvement
  
2. Primary Health Care is best described as:
  - a) Primary medical care provided to individuals
  - b) The first contact for care that the individual receives in a hospital
  - c) The entry point into the health system which can continue until the problem is eradicated
  - d) Primary assessment of a client that includes history taking and physical assessment only.
  
3. Primary Health Care differs from primary nursing care. Which of the following statements spells out this difference?
  - a) Both Primary Health Care and Primary Nursing Care are involved with the well being of families and communities who are already sick.
  - b) Primary Health Care nursing is directed towards assisting individuals, families, groups and communities to attain better health
  - c) Both Primary Health Care and Primary Nursing Care tries to ensure the health services are available to the community

- d) Primary Health Care tries to ensure that the living standards of people are improved.
4. The following are objectives of Primary Health Care EXCEPT:
- a) To establish accessible health facilities within a reasonable distance for most members of the community
  - b) To establish a formula for the allocation of funds and other resources for Primary Health Care.
  - c) To establish programmes for training of appropriate Primary Health Care personnel
  - d) To focus on in-patient nursing and facilitate less community participation.
5. You are giving a lecture to a group of village headmen on community participation. One of them asks you what you mean by the term community; which of the following statements defines this term:
- a) A community is a geographical location that is demarcated for a particular ethnic group
  - b) A community is symbolized by the presence of structural facilities, like schools and shops
  - c) A community is when people live together in harmony
  - d) A community is made up of people who live together and share common interests, social values and locality.
6. One of the roles of the Primary Health Care nurse is to sensitize the community towards self-initiated health care activities. This requires the following EXCEPT:
- a) The community worker
  - b) Community involvement
  - c) Community dependency
  - d) Community participation

7. Which of the following factors would you use as a criteria for evaluating the success of your community projects:
- a) Appropriateness, Adequacy, Efficiency, Commonality
  - b) Appropriateness, Participation, Self-reliance, Adequacy
  - c) Universality, Commonality, Uniformity, Appropriateness
  - d) Appropriateness, Efficiency, Adequacy, Effectiveness
8. The purpose of the Nurse/Midwives Practice Act is to:
- a) Protect the health of the public at large, by setting minimum nursing standards
  - b) Protect the profession from committing undesired practices
  - c) Permit periodic evaluations of all practitioners
  - d) Ensure that all patients' rights are legally protected.
9. A registered nurse who fails to act in the reasonably prudent manner when performing acts of a professional nature, may be charged with:
- a) Tortuous action
  - b) Malpractice
  - c) Negligence
  - d) Cross negligence
10. Among other things, the following are some of the important functions of professional organizations EXCEPT:
- a) To establish standards of professional practice and conduct
  - b) To assist enforcement of the Code of Ethics and the maintenance of the standards of practice
  - c) To represent its members in all issues of the professional interest

- d) To assist professional nurses to only register with the council when it suits them.
11. The following are the characteristics of a profession;
- i) Autonomy
  - ii) Nursing process theory
  - iii) Knowledge base
  - iv) Code of Ethics
- a) i, ii
  - b) ii, iv
  - c) i, iii, iv
  - d) All of the above
12. ETHICS – deals with the important questions of human conduct that have great relevance to us as individuals and as health professional, while law deals with which of the following factors:
- a) Cultural means that help to assist and hold the character of individuals
  - b) Health care that governs the statutory bodies to practice illegally
  - c) The sum total of mandate rules and regulations by which society and the practice of nursing health care are governed in a formal and legally binding manner
  - d) Health care patterns that reinforce the partial participation role of nurses who are overworked in their work situation.
13. The torts of law covers which of the following:
- i) Intentional torts
  - ii) Criminal law
  - iii) Torts of negligence
  - iv) Law of Assault and Battery
- a) i and iii
  - b) ii and iii



- c) i and iv
  - d) iii and iv
14. Social stratification refers to:
- a) The divisions that occurs in a society due to political differences
  - b) The demarcation of society according to the geographical make up
  - c) The hierarchical division of society into rank, class and status levels
  - d) The division of a society according to the common health practices of the society.
15. All of the following approaches were positive contributions made by Florence Nightingale EXCEPT:
- a) To allow nurse to maintain a list of nurses instead of registration
  - b) She advocated for nurses to be supervised by a fellow nurse instead of a doctor
  - c) She tried to separate visiting health nursing from sick nursing
  - d) She advocated for documentation of nursing activities.
16. Two significant changes which occurred during the period of 1970-1980 in Nursing Education in Botswana were:
- a) Training by apprenticeship in European cottage hospitals and opening of native training schools
  - b) Provision of patient care by student nurses under the supervision of doctors, matrons and lecturers offered by tutors
  - c) Development of nursing curriculum and training of tutors
  - d) Emphasizing the relevance of nursing education to the health needs of the people and the health care system and independence in nursing educator.

PART 11 – TRUE AND FALSE. INSTRUCTIONS – Place a tick (✓) on the appropriate line to indicate whether the statement is true or false

17. Stress is a psychological problem that is characterized by inappropriate feelings of sadness, rejection and hopelessness.  
T \_\_\_\_\_ F \_\_\_\_\_
18. Poverty is considered a social pathology because of its effect on the social well being of the people.  
T \_\_\_\_\_ F \_\_\_\_\_
19. Health Education is concerned with assisting individuals and families to voluntarily change behavior that is conducive to health.  
T \_\_\_\_\_ F \_\_\_\_\_
20. Nursing is a science and art that applies cognitive, psychomotor and interpersonal skills to assist clients to achieve their optimum health potential.  
T \_\_\_\_\_ F \_\_\_\_\_
21. Research provides data to validate theory, it also provides data to generate and substantiate practice, and however, not all nurses' research is explicit to nursing practice.  
T \_\_\_\_\_ F \_\_\_\_\_
22. The International Council of Nurses (ICN) has been solely established for nurses working in the United States of America.  
T \_\_\_\_\_ F \_\_\_\_\_
23. The University of Botswana is the accrediting body for all of the institutes of health sciences in the country of Botswana.  
] T \_\_\_\_\_ F \_\_\_\_\_
24. An individual's position in the social strata not only affects the individual's conception of health and illness. It also influences the type of diseases the individual is likely to suffer.  
T \_\_\_\_\_ F \_\_\_\_\_
25. The medical model of health is mostly concerned with the absence of disease

whilst the social model of health is concerned with social causes of diseases and illness.

T\_\_\_\_\_

F\_\_\_\_\_

SECTION B. SHORT ESSAYS – ANSWER ALL QUESTION IN THIS SECTION

Question 1

You are carrying out a health assessment on an adult male patient who has been admitted to the male surgical ward. During this assessment, you have to decide to pay particular attention to the examination of his abdomen.

- a) State what you will detect or identify when you:
  - i. percuss the abdomen
  - ii. palpate the abdomen (4)
- b) Mention four (4) categories of the abdominal masses. Give an example of each type. (2)
- c) Briefly explain four points you will consider as signs of appendicitis during the assessment. (4)
- d) Briefly explain what you understand by the term referred pain. (2)

TOTAL: 12 MARKS

Question 2

You are a registered nurse who has returned from attending a seminar on Safe Motherhood. As a resource person, you have been asked to disseminate information on Safe Motherhood to other nurses in the hospital.

- a) What is Safe Motherhood? (3)
- b) Describe five main aims / objectives for safe motherhood. (10)

TOTAL: 13 MARKS

## SECTION C:

### LONG ESSAY QUESTIONS. ATTEMPT TO ANSWER ALL QUESTIONS

#### Question 1

You are a nurse who is addressing a meeting on the health problems affecting the community. In this Kgotla meeting, you realize that most of the people are not familiar with the concept of Primary Health Care. You have therefore decided to organize a one-day seminar to address this issue.

- a) Define the term Primary Health Care. (2)
- b) State two objectives for the Primary Health Care activities that you are carrying out in your area. (3)
- c) Briefly explain four (4) principles of Primary Health Care and how these are being fulfilled in Botswana. (12)
- d) Identify 2 constraints that you have encountered in the delivery of Primary Health Care activities and briefly explain how you have tried to resolve these problems. (3)

TOTAL: 25 MARKS

#### Question 2

There is a seminar organized for nurses entitled “Nurses Awareness of Patients’ Rights.” The main purpose of this seminar is to bring to the attention of nurses, the dilemmas and legal implications encountered by nurses due to the fact that patients are increasingly becoming aware of their right.

- a) Define Ethical Dilemma (2)
- b) Briefly explain how the following situations could contribute to ethical dilemmas.
  - i) Allocation of scarce resources
  - ii) Privacy and confidentiality
  - iii) Violation of legal and ethical standards by colleagues and other caregivers. (12)

- c) Differentiate between the following terms
- i) Negligence and malpractice
  - ii) Criminal and Private Law (8)
- d) State two rights of the patient as found in the Patients Bill of Rights. (3)

TOTAL: 25 MARKS

## APPENDIX VII

### PUBLIC SERVICE GRADES/SALARIES 1993/4

C3	P 19,800	converts to	P 21,780
	P 19,404		P 21,348
	P 19,008		P 20,916
	P 18,624		P 20,496
	P 18,228		P 20,052
	P 17,856		P 19,644
	P 17,496		P 19,248
	P 17,124		P 18,840
	P 16,776		P 18,456
	P 16,440		P 18,084
C4	P 16,092	converts to	P 17,712
	P 15,732		P 17,316
	P 15,360		P 16,896
	P 15,000		P 16,500
	P 14,640		P 16,104
	P 14,304		P 15,744
	P 13,968		P 15,372
	P 13,644		P 15,012
	P 13,320		P 14,652
	P 13,020		P 14,328
B1	P 12,708	converts to	P 13,980
	P 12,492		P 13,752
	P 12,264		P 13,500
	P 12,048		P 13,260
	P 11,844		P 13,032
	P 11,628		P 12,792
	P 11,424		P 12,576
	P 11,232		P 12,360
	P 11,028		P 12,132
	P 10,836		P 11,928
B2	P 10,632	converts to	P 11,700
	P 10,452		P 11,508
	P 10,260		P 11,292
	P 10,068		P 11,076
	P 9,888		P 10,884
	P 9,696		P 10,668
	P 9,516		P 10,476
	P 9,348		P 10,284
	P 9,168		P 10,092
	P 9,012		P 9,924
P 8,844		P 9,732	

Sources: *Directorate of Public Service Management: Public Service Grades/Salaries 1993/4.*

## APPENDIX VIII

Permanent Secretary  
Ministry of Health

E. T. MAGANU

352000

Principal  
National Health Institute

MH 9/84 II (125)

12th April, 91

### TASK FORCE TO REVIEW THE KELLOGG CONSULTANCY REPORT ON NURSING EDUCATION SYSTEMS IN BOTSWANA

The Ministry of Health, in its efforts to improve the quality of life of Batswana, requested the Kellogg Foundation in 1988 to assist in strengthening the delivery of Primary Health Care Services through human resource development. There has been series of consultations between the Ministry of Health/University of Botswana and the Kellogg Foundation to this effect. The last consultancy was in November, 1990 undertaken by Dr. J. Poindexter and Dr. E. Shaw-Nickerson whose main purpose was to design an alternative system of nursing education which:

- (1) Is more efficient and cost effective
- (2) Strengthens the knowledge and skills of nurses for the direct provision and management of Primary Health Care Services.
- (3) Increases the attractiveness of nursing as a career.
- (4) Supports career development for practicing nurses.

I propose that the following Ministry's/Organisation's representatives form a task force to further consult on the recommendations made by the Kellogg Consultancy of November, 1990:

Ministry of Finance	N.A.B.
Ministry of Local Govt. & Lands	Nursing Council
Director of Public Service Management	AMMB
University of Botswana	

By copy of this savingram you are requested to nominate a relevant officer in your institution to participate in the above task force.

Terms of reference of this task force are enclosed. The report of this consultancy has already been sent to your office.

Enc.