

**A MODEL TO MANAGE CONTINUOUS
PROFESSIONAL DEVELOPMENT FOR THE
ALUMNI OF A PRIVATE HIGHER
EDUCATION INSTITUTION**

by

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**Thesis submitted in fulfilment of the requirements for the
degree**

**Philosophiae Doctor in Health Professions Education
(Ph.D. HPE)**

in the

DIVISION OF HEALTH SCIENCES EDUCATION

FACULTY OF HEALTH SCIENCES

UNIVERSITY OF THE FREE STATE

BLOEMFONTEIN

MAY 2007

PROMOTER: Prof. Dr M.M. Nel

DECLARATION

I hereby declare that the work which is submitted here is the result of my own independent investigation. Where help was sought, it was acknowledged. I further declare that this work is submitted for the first time at this university/faculty towards a Ph.D. degree in Health Professions Education and that it has never been submitted to any other university/faculty for the purpose of obtaining a degree.

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DEDICATION

I would like to dedicate this thesis to Petronel, my godchild:

There are three kinds of people in life, those who participate, those who stand on the side and those who are indifferent. Enjoyment of life has much to do with your participation. The choice is yours. May you dare to dance the tides.

ACKNOWLEDGEMENTS

I wish to express my sincere appreciation to the following:

- My supervisor, Prof. Dr M.M. Nel, Head of the Division of Health Sciences Education, Faculty of Health Sciences, University of the Free State, for her support, advice and constructive criticism during the study.
- Mr C.H. Coetzee and Ms M.M. van der Merwe, Statisticians of UNISA for the quality assurance and the processing of the statistical data.
- The Foundation for Professional Development, headed by Dr G.G. Wolvaardt, for its guidance, financial and emotional support.
- Ms H. Swart for the technical lay out of the manuscript.
- The respondents to my study, who made valuable inputs and without whom this result would not have been possible.
- My partner, Belinda Smith, for her loyal support in completing this study.

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LIST OF ACRONYMS

ABMS:	American Board of Medical Specialties
ACCME:	Accreditation Council for Continuing Medical Accreditation
ADA:	American Dietetic Association
AHEC:	Area Health Education Centre
AMC:	Australian Medical Council
AN:	alumni network
ANZCA:	Australian and New Zealand College of Anaesthetists
ARV:	Antiretroviral
CADE:	Commission on Accreditation for Dietetics Education
CAI:	computer-assisted instruction
CAL:	computer-assisted learning
CEU:	Continuing education unit
CEUs:	Continuing education units
CPD:	Continuous Professional Development
DIO:	designated institutional official
DoH:	Department of Health
FBA:	Fellowship by Assessment
FPD:	The Foundation for Professional Development
GMC:	General Medical Council
GMCUK:	General Medical Council of the United Kingdom
GP:	general practitioner
GPs:	general practitioners
HEI:	higher education institution
HEIs:	higher education institutions
HEQC:	Higher Education Quality Committee
HIV/AIDS:	human immunodeficiency virus/acquired immune deficiency syndrome
HLSP:	Hospital Library Services Programme
HPCSA:	Health Professions Council of South Africa

MOC:	Maintenance of Certification
MOCOMP:	Maintenance of Competence Programme
NGO:	Non-governmental Organisation
OSCE:	observed structured clinical examinations
PDAs:	previously disadvantaged
PHEI:	private higher education institution
PHEIs:	private higher education institutions
PN:	professional nurse
PNs:	professional nurses
QA:	quality assurance
RACGP:	Royal Australian College of General Practitioners
RCGP:	Royal College of General Practitioners
SANC:	South African Nursing Council
SHINE:	Stanford Health Information Network for Education
SPRAT:	Sheffield Peer Review Assessment Tool
SPSS:	Statistical Package for the Social Sciences
STDs:	sexually transmitted diseases
TB:	tuberculosis
UK:	United Kingdom
US:	United States
WFME:	World Federation for Medical Education
WHO:	World Health Organization

LIST OF TERMINOLOGY

Alumni: For this study the researcher defined alumni as former students of an education institution.

Continuous Professional Development (CPD): "It is concerned with the acquisition, enhancement and maintenance of knowledge, skills and attitudes by professional practitioners, and its broad aims are to enhance professionals' performance and optimise the outcomes of their practice" (Grant & Stanton 1998:4).

Controlling: To measure if and how well goals have been attained (Smit, Cronje, Brevis & Vrba 2007:11).

Effectiveness: Doing the right things – meeting the objectives (Smit, Cronje, Brevis & Vrba 2007:29).

Efficiency: Doing things right – getting most output per input (Smit, Cronje, Brevis & Vrba 2007:29).

Formative assessment: "It is a process used to monitor learners' progress through the period of learning. It involves using assessment information to feed back into the teaching/learning process" (Dent & Harden 2001:294).

General practitioner (GP): Medical practitioner registered with the Health Professions Council of South Africa (HPCSA).

Grade 12 "means the highest grade in which education is provided by a school as defined in the South African Schools Act, 1996 (Act 84 of 1996)" (RSA 1997:5).

Higher education “means all learning programmes leading to qualifications higher than grade 12 or its equivalent in terms of the National Qualifications Framework as contemplated in the South African Qualifications Authority Act, 1995 (Act 58 of 1995)” (RSA 1997:5).

Higher education institution “means any institution that provides higher education on a full-time, part-time or distance basis” (RSA 1997:5).

Leading: It means to direct the resources in the framework or structure to do what was planned to do, to motivate them to take on the responsibilities allocated to them in order to ensure the executing of plans (Smit, Cronje, Brevis & Vrba 2007:10).

Learner: For this study the researcher defined learner as an adult learner within the context of Continuous Professional Development.

Learning methods: For this study the researcher integrated learning situations and educational strategies into learning methods. Learning situations are for example lectures, small group sessions, clinical skills centres, hospital wards, ambulatory care, primary care and distance education. Education strategies include for example independent learning, problem based learning, integrated learning and multi-professional education (Dent & Harden 2001:63-191).

Management functions: According to Smit, Cronje, Brevis & Vrba (2007:8) the four fundamental management functions composing the management process are planning, organising, leading and controlling. It will be used as such in this study.

Network: For this study the researcher defined a network as an organisational design based on interdependence across individuals and groups. In the core of the network is the PHEI that performs certain

fundamental managerial functions for the network and it is held together through contracts and agreements.

Organising: It is the process of allocating resources, tasks, responsibilities and roles in a framework or structure in the executing of the plans (Smit, Cronje, Brevis & Vrba 2007:10).

Outcomes: Something that follows as a result or consequence (Dent & Harden 2001:26).

Planning: It is the process of determining the goals and objectives and resources needed for attaining these. It entails therefore the compilation of a logical plan of achieving set outcomes (Smit, Cronje, Brevis & Vrba 2007:10).

Private higher education institution “means any institution registered or conditionally registered as a private higher education institution in terms of Chapter 7;” (RSA 1997:5); and “private higher education institutions higher education institution registered or conditionally registered as a private higher education institution in terms of Higher Education Act 101 of 1997 and registered or recognised as a juristic person in terms of the Companies Act, 1973 (Act 61 of 1973)” (RSA 1997:25).

Professional nurse (PN): Professional nurse registered with the South African Nursing Council (SANC).

Profile of an alumnus: For this study the researcher includes personal information, professional information, employment background, geographical information, communication preferences in an alumni network (AN), interaction preferences in an AN, accreditation preferences in an AN, educational product needs in an AN, areas of expertise and interests, alumni membership needs, and patient profile.

Public higher education institution “means any higher education institution that is established, deemed to be established or declared as a public higher education institution in terms of Higher Education Act 101 of 1997” (RSA 1997:6).

Purpose: An object to be attained (*The Concise Oxford Dictionary* 1995) or as a synonym for goal, the end towards which effort is directed (Dent & Harden 2001:25; Smit, Cronje, Brevis & Vrba 2007:132).

Stakeholder: A person or organisation with an interest or concern in something (*The Concise Oxford Dictionary* 1995) or any individual or group who can affect or is affected by the actions, decisions policies, practices, goals (Smit, Cronje, Brevis & Vrba 2007:424).

Summative assessment: “It is undertaken at the end of the period of learning and determines whether the instructional objectives have been successfully achieved” (Dent & Harden 2001:293).

SUMMARY

Key terms: alumni; communication media; continuous professional development (CPD); continuous professional development interventions; continuous professional development networks; general practitioners; health professions education; model; non-experimental study; private higher education institutions; professional nurses; questionnaire survey.

Health services in a country are affected by many factors, one of which is the human resources that render those services. One of the dimensions of human resources that will impact on the effectiveness of the health services is their competence. There are three phases of health education, namely basic health professions education; postgraduate health professions education; and continuous professional development. This study will focus on the third phase of continuous professional development of health professionals.

The purpose of continuous professional development is defined in this study as high quality patient care and the outcomes to improve, maintain and further develop competencies regarding skills, knowledge and attitude in order to meet the changing needs of both patients and the health care delivery system. Globally there is more emphasis on the role of higher education institutions in continuous professional development. It was evident from the literature that higher education institutions should have a strategy as continuous professional development providers in order to be effective and efficient in contributing to attaining the outcomes of continuous professional development.

The question that has arisen was, "How should the model to manage continuous professional development for alumni of a private higher education institution (PHEI) be composed in order to be conducive to the outcomes of

continuous professional development, which are improved competencies of health professionals?"

Given the situation the problem that was addressed was that there was no model to be implemented by the Foundation for Professional Development [a Provisionally Accredited Private Higher Education Institution in terms of section 54(3) of Act No. 101 of 1997 (RSA 1997)] focusing in the health sector to enable it to take accountability to plan, organise, lead and control continuous professional development for its alumni which will support attainment of the purpose of continuous professional development. The aim of this study was to develop a model to manage continuous professional development for alumni of private higher education institutions in an effective and efficient manner.

In the attempt to attain the aim the objectives pursued were a literature study to develop a framework of the model to manage continuous professional development inclusive of the most effective and efficient components of continuous professional development, while a questionnaire survey followed to identify the most preferred components of a model to manage continuous professional development for alumni of a PHEI to ensure effective implementation of the model. This was done by means of a custom designed questionnaire. The final objective in attainment of the aim was the triangulation of the information from the literature study, the results of the questionnaire survey, and conclusions to develop a model to manage continuous professional development.

An empirical, non-experimental research design was followed in this quantitative study. A cross-sectional survey was employed because the respondents were approached only once to complete questionnaires and it was possible to make comparisons between subgroups and look at relationships between variables. Descriptive and inferential statistics were calculated and used to answer the research questions.

The custom designed self-administered questionnaires collected information on respondents' personal profiles, professional profiles, employment backgrounds, geographical profiles, communication preferences in an alumni network, alumni network interaction preferences, accreditation preferences by an alumni network, educational product needs in an alumni network, areas of expertise and interest, alumni network membership needs, and the alumni patient profile.

The sample population for the current study was defined as:

"Learners at the Foundation for Professional Development during August 2006 to November 2006".

On completion of their training these learners would become alumni of the Foundation for Professional Development and would become eligible for inclusion in a continuous development alumni programme. This population were therefore best positioned to test certain assumptions about a continuous professional development alumni network and start the building of a model to manage continuous professional development.

A total number of 1968 learners attended workshops during this period and the entire population were presented with an opportunity to participate in the study. No sampling technique was therefore required.

The objective of the literature review was to gather information to develop a framework for the model to manage continuous professional development. Continuous professional development with specific attention to the origin and the purpose of continuous professional development was reviewed. Then the purpose was defined, the process was reviewed and subsequently the trend of regulation of continuous professional development globally. The concept of credentialling was reviewed in relation to continuous professional development and integrated to assessment in continuous professional

development. To gain a global perspective a review on international and South African trends in providers of continuous professional development and coordination of the function was provided. It was also necessary to review adults' learning preferences, needs assessment, and continuous professional development learning methods as part of identifying best practices in composing the framework for managing continuous professional development for alumni of a PHEI. For the same reason learning networks, mentoring and personal continuous professional development plans were reviewed.

The model to manage continuous professional development for the alumni of a PHEI is a triangulation of the literature study, the research results and conclusions. Application of the model will ensure fulfilment of the continuous professional development functions of a PHEI in their responsibility towards their alumni in a planned and coordinated manner. It is supportive of continuous professional development in a cyclic and continuous manner, applying the principles of adult learning and credentialling. Assessment is an integral part of the quality assurance on the various levels. It is based on a network principle in that it utilises existing infrastructure and expertise in a decentralised manner to make continuous professional development convenient and relevant to learners.

Integrated in the model is managed communication with alumni based on the research results. Information to plan, organise, implement and evaluate continuous professional development is another integral component of the model.

According to the level of assessment alumni will be accredited in the network on five levels with associated benefits to promote continuous professional development and nurture a culture of lifelong learning with an emphasis on planned learning and improvement of practice.

The researcher is of the opinion that PHEIs shall be capacitated by the model developed and through implementation of the model to manage continuous professional development for alumni of a PHEI, the overall goal, aim and objectives of the study to facilitate continuous professional development in South Africa will contribute to the optimisation of health care in South Africa.

The researcher did not imply that this model should be implemented in its original form, but that the intention is that each HEI should customise the model according to its own unique situation and alumni needs and expectations. However, the process followed and components of the model could be repeated without reinventing the wheel. The implementation plan could therefore be utilised as a useful guideline.

The researcher is of the opinion that components of this contribution could also facilitate the management of continuous professional development in public HEIs in South Africa. Furthermore the researcher is also of the opinion that components of the contribution could be implemented internationally by HEIs. Therefore the overall goal, aim and objectives of the study were reached.

OPSOMMING

SLEUTELTERME: alumni; kommunikasiemedia; voortgesette professionele ontwikkeling (VPO); voortgesette professionele ontwikkelingsintervensies; voortgesette professionele ontwikkelingsnetwerke; algemene praktisyns; gesondheidsberoeponderwys; model; nie-eksperimentele studie; private hoëronderwysinstellings; professionele verpleegkundiges; vraelysondersoek.

Die gesondheidsdienste in 'n land word beïnvloed deur baie faktore, waarvan die menslike hulpbronne een is wat daardie diens lewer. Bekwaamheid is een van die dimensies van menslike hulpbronne wat 'n impak op die doeltreffendheid van die gesondheidsdienste sal hê. Daar is drie fases van gesondheidsonderwys, naamlik basiese gesondheidsberoeponderwys; nagraadse gesondheidsberoeponderwys; en voortgesette professionele ontwikkeling. Hierdie studie fokus op die derde fase van voortgesette professionele ontwikkeling vir professionele gesondheidspersoneel.

Die doel van voortgesette professionele ontwikkeling is in hierdie studie gedefinieer as hoë kwaliteitspasiëntesorg en die uitkomste as die verbetering, instandhouding en verdere ontwikkeling van bekwaamhede aangaande vaardighede, kennis en houding ten einde die veranderende behoeftes van beide die pasiënte en die gesondheidsorgvoorsieningstelsel aan te spreek. Daar is wêreldwyd meer klem op die rol van hoëronderwysinstellings in voortgesette professionele ontwikkeling. Uit die literatuur was dit duidelik dat hoëronderwysinstellings 'n strategie as voortgesette professionele ontwikkelingsvoorsieners behoort te hê ten einde doeltreffend en effektief te wees in die bydrae tot die bereiking van die uitkomste van voortgesette professionele ontwikkeling.

Die vraag wat ontstaan het, was: "Hoe moet die model wat voortgesette professionele ontwikkeling vir alumni van private hoëronderwysinstellings

bestuur, saamgestel word ten einde by te dra tot die uitkomst van voortgesette professionele ontwikkeling, naamlik verbeterde bekwaamhede van gesondheidsberoepers?"

Na aanleiding van die voorafgaande inligting is die probleem wat aangespreek is die onbeskikbaarheid van so 'n model vir implementering deur die Foundation for Professional Development [‘n voorwaardelik geakkrediteerde private hoërondewysinstelling volgens afdeling 54(3) Wet No. 101 van 1997 (RSA 1997)] wie se fokus op die gesondheidssektor is. So ‘n model sal die FPD in staat stel om aanspreeklikheid te aanvaar vir die beplanning, organisering, leidinggewing en beheer van voortgesette professionele ontwikkeling vir sy alumni ter ondersteuning van die bereiking van die doel van voortgesette professionele ontwikkeling. Die doel van hierdie studie was om ‘n model te ontwikkel om voortgesette professionele ontwikkeling vir alumni van private hoërondewysinstellings op ‘n doeltreffende en effektiewe wyse te bestuur.

In die nastreef van die doel van die studie is die volgende doelwitte uitgevoer, naamlik ‘n literatuurstudie om ‘n raamwerk vir die model om voortgesette professionele ontwikkeling te bestuur, te ontwikkel wat die mees doeltreffende en effektiewe komponente van voortgesette professionele ontwikkeling insluit, terwyl ‘n vraelysondersoek gevolg het om die alumni van ‘n private hoërondewysinstelling se profiel te identifiseer sodat effektiewe implementering van die model verseker sou word. Dit is gedoen deur middel van ‘n spesiaal ontwerpte vraelys. Die finale doelwit in die bereiking van die doel was die triangulasie van die inligting van die literatuurstudie; die resultate van die vraelysondersoek; en die gevolgtrekkings sodat ‘n model om voortgesette professionele ontwikkeling te bestuur, ontwikkel kon word.

‘n Empiriese nie-eksperimentele navorsingsontwerp is in hierdie kwantitatiewe studie gevolg. ‘n Deursnee-opname is aangewend aangesien die respondente slegs eenmalig genader is om vraelyste te voltooi en dit moontlik was om

vergelykings te maak tussen subgroepe en ook verhoudinge tussen veranderlikes in ag te neem. Beskrywende en inferensiële statistieke is bereken en gebruik om die navorsingsvrae te beantwoord.

Inligting oor respondente se persoonlike profiele, professionele profiele, loopbaanagtergrond, geografiese profiele, kommunikasievoorkeure in 'n alumninetwerk, voorkeure van alumninetwerkinteraksie, voorkeure van akkreditasie deur 'n alumninetwerk, behoeftes aan onderwysprodukte in 'n alumninetwerk, vakkundigheid en belangstellings van alumni, behoeftes van alumninetwerklidmaatskap en die pasiëntprofile van alumni is ingewin deur middel van spesiaal ontwerpte selfgeadministreerde vraelyste.

Die steekproef vir die studie is gedefinieer as: "Leerders by die Foundation for Professional Development gedurende Augustus 2006 tot November 2006".

Na voltooiing van hul opleiding sal hierdie leerders alumni van die FPD word en sal dus in aanmerking kom vir insluiting in 'n voortgesette professionele ontwikkelingsalumniprogram. Daarom is hierdie populasie die beste geposisioneer om aannames te toets in verband met 'n voortgesette professionele ontwikkelingsalumninetwerk en om te begin om 'n model te ontwikkel om voortgesette professionele ontwikkeling te bestuur.

Die werkwinkels is bygewoon deur 1968 leerders tydens hierdie periode en die totale populasie het geleentheid gehad om deel te neem aan hierdie studie. Daarom was 'n steekproeftegniek onnodig.

Die doelwit van die literatuuroorsig was om inligting in te samel om 'n raamwerk te ontwikkel vir die die model om voortgesette professionele ontwikkeling te bestuur. Voortgesette professionele ontwikkeling met spesifieke aandag aan die oorsprong en doel van voortgesette professionele ontwikkeling is hersien. Gevolglik is die doel gedefinieer, terwyl die proses en

die neiging van die regulering van voortgesette professionele ontwikkeling wêreldwyd hersien is. Die konsep van geloofwaardigheid in verhouding tot voortgesette professionele ontwikkeling is hersien en geïntegreer met assessering in voortgesette professionele ontwikkeling. Ten einde 'n globale perspektief te verkry, is 'n oorsig oor internasionale en Suid-Afrikaanse neigings van verskaffers van voortgesette professionele ontwikkeling en hulle koördinering van die funksie van voortgesette professionele ontwikkeling gedoen. Dit was ook noodsaaklik om volwasse leervoorkeure, behoeftebepaling en voortgesette professionele ontwikkelingsleermetodes te hersien as deel van die identifisering van die beste praktyke in die samestelling van die raamwerk vir die bestuur van voortgesette professionele ontwikkeling vir alumni van private hoërondewysinstellings. Om dieselfde rede is leernetwerke, mentorskap en persoonlike voortgesette professionele ontwikkelingsplanne nagegaan.

Die model om voortgesette professionele ontwikkeling vir die alumni van 'n private hoërondewysinstelling te bestuur, is 'n triangulering van die literatuurstudie, navorsingsresultate en gevolgtrekkings. Toepassing van die model sal die nakoming van die voortgesette professionele ontwikkelingsfunksie van die private hoërondewysinstelling se verantwoordelikheid teenoor die alumni daarvan op 'n beplande en gekoördineerde wyse verseker. Die model ondersteun voortgesette professionele ontwikkeling in 'n sikliese en voortgesette wyse en onderhou die beginsels van volwasse leer en geloofwaardigheid. Assessering is 'n integrale deel van die kwaliteitsversekering op die verskillende vlakke. Dit is gebaseer op 'n netwerkbeginsel deurdat dit gebruik maak van bestaande infrastruktuur en kundigheid in 'n gedesentraliseerde wyse om voortgesette professionele ontwikkeling gerieflik en toepaslik te maak vir leerders.

Geïntegreer in die model is bestuurde kommunikasie met alumni gegrond op die navorsingsresultate. Inligting om voortgesette professionele ontwikkeling

te beplan, te organiseer, te implementeer en te evalueer is integrale komponente van die model.

Alumni in die netwerk sal geakkrediteer word volgens die vlak van assessering op een van vyf vlakke met geassosieerde voordele. Die doel hiervan is om voortgesette professionele ontwikkeling te bevorder en 'n kultuur van lewenslange leer te koester terwyl beplande leer beklemtoon word en praktyke verbeter word.

Die navorser is van mening dat private hoërondewysinstellings in staat gestel sal word deur hierdie model wat ontwikkel is en deur implementering van hierdie model om voortgesette professionele ontwikkeling vir alumni van 'n private hoërondewysinstelling te bestuur en dat dit sal bydra tot die optimalisering van gesondheidsorg in Suid-Afrika.

Die navorser het nie geïmpliseer dat hierdie model in sy oorspronklike vorm geïmplementeer moet word nie, maar die bedoeling is dat elke hoërondewysinstelling die model sal pasmaak volgens sy eie unieke situasie en alumnibehoeftes en -verwagtinge. Die proses soos gevolg, asook komponente van die model kan wel herhaal word sonder om die wiel te herontwerp. Daarom kan die implementeringsplan gebruik word as 'n nuttige riglyn.

Die navorser is van mening dat komponente van hierdie bydrae die bestuur van voortgesette professionele ontwikkeling in publieke hoërondewysinstellings in Suid-Afrika kan fasiliteer. Die navorser is verder van mening dat komponente van hierdie bydrae internasionaal geïmplementeer kan word deur hoërondewysinstellings. Derhalwe is die oorhoofse doel, doel en doelwitte van die studie bereik.

A MODEL TO MANAGE CONTINUOUS PROFESSIONAL DEVELOPMENT FOR THE ALUMNI OF A PRIVATE HIGHER EDUCATION INSTITUTION

CHAPTER 1

BACKGROUND AND ORIENTATION

1.1 INTRODUCTION

Health services in a country are affected by many factors, one of which is the human resources that render those services. In a press release on the *World Health Report* on World Health Day held on 7 April 2006, the World Health Organization (WHO) said that the health worker “[shortage], combined with a lack of training and knowledge, is also a major obstacle for health systems as they attempt to respond effectively to chronic diseases, avian influenza and other health challenges” (WHO 2006a:1).

As stated in the above-mentioned report, one of the dimensions of human resources that will impact on the effectiveness of the health services is their competence, while the main goal of health education is the improved health of all people. There are three phases of health education, namely basic health professions education; postgraduate health professions education; and continuous professional development (WFME 2002:III). This study will focus on the third phase, namely continuous professional development (CPD) of health professionals.

CPD is a continuing process outside formal undergraduate and postgraduate training that allows individual health professionals to maintain and improve standards of medical practice through the development of knowledge, skills, attitudes and behaviour (WFME 2002:8).

Castleman (2004:139) summarises the purpose of CPD as high quality patient care and the outcomes to improve, maintain and further develop competencies regarding skills, knowledge and attitude in order to meet the changing needs of both patients and the health care delivery system. She further emphasises that CPD should also equip medical practitioners to meet the new challenges as a result of the scientific development in medicine, the requirements of licensing bodies and society and meet their need for personal professional development (Castleman 2004:139).

With regard to CPD the *World Health Report* (WHO 2006b:1) outlines the need for more investment in the health workforce to improve working conditions, revitalise training institutions, and anticipate future challenges. This report also focuses on all stages of the health workers' career lifespan from preparing to enter the workforce through health training, to enhancing workers' performance and, finally, retirement. One of the strategies identified in the report to enhance work performance in the middle phase is "lifelong learning" (WHO 2006b:21).

In studying the Report to identify who is primarily responsible for lifelong learning, there is no explicit reference to an education institution, but just of the place where this learning should take place, namely the workplace. It is only in the first phase of preparing to enter the workplace where the responsibility of medical schools, nursing schools and schools of public health is clearly defined. The World Federation for Medical Education (WFME) is more explicit in its view of the role medical schools play in CPD. The Federation formulates it as a basic standard: "Medical schools **must** provide leadership in improving the quality of CPD. Medical schools **must** through the curriculum in basic medical education initiate motivation and ability to engage in CPD by preparing the students for life-long learning" (WFME 2002:22).

In this context the role is merely in the first place one of leadership in improving quality and, in the second place, of initiating and nurturing lifelong learning in students. This is not a role of primarily providing CPD.

The WFME, however, has as a quality development standard stating the following: "Medical schools **should**, when appropriate, provide CPD activities. Medical schools, in cooperation with other stakeholders, **should** undertake research on CPD activities" (WFME 2002:22).

In 2007 with the implementation of the new CPD system the Health Professions Council of South Africa (HPCSA) is in tandem with the WFME. The HPCSA reviewed the CPD system in South Africa and the current status is that CPD service providers should be accredited by it and only higher education training institutions, professional associations and special interest groups aligned with a training institution, a professional association or an international institution will be considered as CPD providers (HPCSA 2005:2).

With a clear direction from the WFME on international level and the HPCSA on national level, higher education institutions (HEIs) have a role to play in CPD. The question which arises is how to encompass CPD as one of the functions for these organisations.

To identify research done on models to manage CPD in HEIs four electronic databases (CINAHL, African Health Line, CAB and MEDLINE) were surveyed, which revealed that limited literature concerning the management of CPD from a provider's perspective was published. Existing literature on CPD can be broadly divided into the following categories:

- Content to be included in CPD interventions.
- The role of adult learning preferences in CPD.
- Effective CPD methods.
- Quality assurance in CPD.
- The regulation of CPD.

- The use of technology in CPD.

It is thus evident that most research focuses on the technical aspects of CPD. There is, however, a gap in the literature on CPD that focuses on the management of CPD as a strategy for HEIs responsible for CPD as one of its functions. Strategy is used meaning the determination and evaluation of alternatives available to an organisation for achieving its objectives and mission as well as the selection of the alternative to be pursued (Rosen 1995:3).

According to Rosen (1995:3), strategic management involves making those decisions that define the mission and objectives of the organisation; which determine the most effective utilisation of its resources; and seek to assure the effectiveness of the organisation in its environment.

If one considers these explanations of strategy and strategic management in the context of HEIs as providers of CPD, the questions to be answered are how an HEI should utilise its resources effectively and assure the effectiveness of the HEI in its environment as a provider of CPD. Strategy in this context will be to determine the best alternative to select in pursuit of its objective as a CPD service provider. In the implementing of the CPD strategy, Smit, Cronje, Brevis and Vrba (2007:8) highlighted planning, organising, leading, and control as fundamental managerial functions.

Planning involves all the activities that give direction (purpose, goals, objectives) and involves finding resources needed to support these endeavours (Smit *et al.* 2007:10). Organising encompasses allocating roles, responsibilities, people and resources in a framework or structure to achieve the goals as identified in planning (Smit *et al.* 2007:10). Leading refers to directing the human resources as allocated in the organising process to attain the goal as identified in the planning phase, while controlling is to make sure

that the organisation is in the right direction as is determined in planning (Smit *et al.* 2007:10).

From as early as 1987 authors like Frankie Todd (1987:6) criticised an unplanned approach to CPD with corresponding results. He assigned subsequent poor results to no assessment of what was needed; no record keeping of what the CPD programme entailed; and to no follow-up on the effects of CPD. Saidi and Weindling (2003:328) are in accord with this viewpoint and emphasise planning; the assessment of needs; and quality assurance of the CPD activities as some of the pertinent factors contributing to the success of CPD programmes. Ockene and Zapka (2000:38) concluded in their research that an educational programme should be planned with clear outcomes; conducted in a conducive learning environment; and have the support of organisational leadership.

Todd (1987:6) already then advocated for a CPD plan that would address gaps in competencies because of current demands, but also anticipated future practice demands. The policy on the practice professional development plans installed in England and Wales supports the viewpoint of Todd (1987:6) because of the conviction of the influence these would have on general practitioners' working behaviour. These plans should take into account the individual's learning needs; the developmental needs of the practice as a whole; and the priorities of larger organisations within the National Health System (Cornford 2001:43; Evans, Ali, Singleton, Nolan & Bahrami 2002:79).

The implication is that the criteria for success for CPD are to determine whether learning occurred and whether learning was transferred to the benefit of practice standards. There is no easy system model (input-output) where CPD (input) and practice standards (output) are concerned for the following reasons:

CPD does not necessarily have good effects on practice because of the complexity of transfer of learning. In Todd (1987:8) a distinction between competence, performance and professional achievement is made to explain barriers to transfer of learning. Competence is explained as what the professional knows; performance is described as what the professional does; and professional achievement is how effective the professional is.

Todd (1987:12) asserts that it is not possible to evaluate the success of CPD without an impression of the expected standard of practice, while different perceptions of expected standards will lead to different criteria for success.

The chapter by Bouhuijs (in Todd 1987:63) also acknowledges that a variety of learning is necessary to accommodate differences between participants to learning programmes such as pre-knowledge, learning preferences, and learning styles. Individual differences such as preferences for shorter courses or longer programmes because of certain practice-related issues or certain financial constraints should also be recognised (Todd 1987:63).

Todd (1987:29) asserts that a practice audit model would assist practitioners to maintain competency if learners' needs are identified through performance assessment and the learning programmes are customised to address those needs. He further emphasises that practice-oriented CPD will only be successful if higher education and the recipient of CPD work in tandem. Lings and Gray (2002:360) are in coherence with Todd (1987:29) in the results of their study on the Fellowship by Assessment (FBA). The Royal College of General Practitioners (RCGP) in the United Kingdom introduced an FBA with a dual objective of improved patient care and professional growth. Lings and Gray (2002:362) concluded that FBA facilitates improvement and they asserted in their study that there is a link between standards of patient care, job satisfaction and self-esteem. Todd (1987:29), Lings and Gray (2002:361), as well as Howe (2003:486) are in agreement that assessment of

performance is a useful practice in CPD for various purposes and needs to be taken cognisance of in the management of CPD.

The importance of creating a learning environment that offers a variety of learning opportunities is clear if CPD is to become a continuous support for professionals to keep themselves up to date in their fields with the aim of improved patient care (Howe 2003:485).

In summary then providers of CPD programmes should be inclusive of but not limited to the following:

- Do assessment of CPD needs as part of their planning role.
- Provide a variety of learning opportunities as providers of CPD.
- Provide a structure for learners in which independent learning can take place as part of their role to organise CPD.
- Keep record of what the CPD programme entails as part of their role to control, monitor and evaluate CPD.
- Follow-up on the effects of CPD as part of their role to control, monitor and evaluate CPD.
- Do quality assurance of the CPD activities as part of their role to control, monitor and evaluate CPD.
- Support educational programmes through organisational leadership as part of their role as leaders in CPD.

From the above literature it is evident that an HEI should have a strategy as a CPD provider in order to be effective and efficient in contributing to attaining the outcomes of CPD and to implement the strategy. The fundamental management functions - which are planning, organising, leading and controlling - need to be addressed in a model to manage CPD.

1.2 STATEMENT OF THE PROBLEM

There was no model to be implemented by the Foundation for Professional Development [a Provisionally Accredited Private Higher Education Institution in terms of section 54(3) of Act No. 101 of 1997 (RSA 1997)] focusing in the health sector to enable it to take accountability to plan, organise, lead and control CPD for its alumni, which would support attainment of the purpose of CPD, namely high quality patient care.

The research question which was addressed is:

How should the model to manage CPD for alumni of a PHEI be composed in order to be conducive to the outcomes of CPD, which are improved competencies of health professionals?

1.3 OVERALL GOAL, AIM AND OBJECTIVES OF THE STUDY

1.3.1 Overall goal of the study

The overall goal of the study was to facilitate CPD in South Africa as well as abroad through capacitating HEIs by developing a model to manage CPD for the effective and efficient implementation of CPD for alumni of PHEIs and, ultimately, to optimise health care in South Africa.

1.3.2 Aim of the study

The aim of this study was to develop a model to manage CPD inclusive of but not limited to planning, organising, leading and controlling of CPD for alumni in an effective and efficient manner for private higher education institutions (PHEIs).

1.3.3 Objectives of the study

To attain the aim the following objectives were pursued:

- To develop the framework of the model to management CPD. (This was done by means of a literature study.)
- To identify the most effective and efficient components of CPD. (This was done by means of a literature study.)
- To identify the most preferred components of a model to manage CPD for alumni of a PHEI to ensure effective implementation of the model. (This was done by means of a custom designed questionnaire.)
- To develop a model to manage CPD through the synthesis of the literature study and the outcomes of the research questionnaire.

1.4 SCOPE OF THE STUDY

The study lies within the domain of Health Professions Education with an emphasis on lifelong learning and the management of CPD considering the preferences of health professionals as alumni of PHEIs in South Africa.

1.5 SIGNIFICANCE AND VALUE OF THE STUDY

Currently there is no model to manage CPD for the alumni of PHEIs in the South African health sector. The results of the study will be beneficial to PHEIs in South Africa and components thereof may be useful to other HEIs in South Africa and similar institutions internationally. The study therefore sought to develop a model to manage CPD for the effective and efficient implementation of CPD for health practitioners by PHEIs. By doing so, the study may also be beneficial to other HEIs in that they may utilise the model to manage CPD in planning, organising, leading and controlling CPD more efficiently and effectively and, ultimately, contribute to improve patient care in South Africa and abroad. The outcome of this study will enable PHEIs to

implement a model to manage CPD for alumni. This study will therefore contribute to the purpose of CPD of high quality patient care and, additionally, will ultimately optimise health in a country.

1.6 DESIGN OF THE STUDY AND METHODS OF INVESTIGATION

An empirical, non-experimental research design was followed in this quantitative study. Although this is a common research design employed in health professions education, no similar study in the development of a model was found relating to CPD.

A cross-sectional survey was employed because the respondents were approached only once to complete questionnaires and it was possible to make comparisons between subgroups (like professional groups) and look at relationships between variables. This was also in line with current approaches in surveys done in health professions education.

Questionnaires were used to collect the data and were custom designed for this survey by the researcher. The questionnaire consisted of mostly close-ended with some semi-structured (open-ended) questions. These questions were formulated to specifically collect the information that would support the research objectives.

During the survey respondents were left on their own to complete questionnaires and therefore it was self-administered questionnaires (Cant 2003:87).

The self-completion questionnaires were distributed to respondents at the onset of clinical and management workshops which they attended as participants of CPD learning programmes with the Foundation for Professional Development.

The population of interest for the current study was defined as: "Learners at the Foundation for Professional Development during August 2006 to November 2006".

These learners were defined as the population for the study, as they were learners at a PHEI. The FPD exclusively provides training in the health domain and on completion of their training these learners would become alumni of the FPD. This population were therefore best positioned to survey their profile to start the building of a model to manage CPD for alumni of a PHEI.

A total number of 1968 learners attended workshops during this period and the entire population was presented with an opportunity to participate in the study. No sampling technique was therefore required.

Population members were informed that participation was voluntary and, as the completion of the questionnaire was not mandatory, the response rate was 52.49%.

A pilot study to determine the time to complete, understandability, validity and reliability of the questionnaire was conducted prior to the implementation of the research with 20 members of the population. These members were excluded from the study.

All responses in the study were confidential. The study was done within the parameters of the code of ethics in research.

The researcher kept track of the information of the population and the stage of the data collecting process through a custom-designed database. Statisticians of UNISA were contracted to review and provide quality assurance concerning the appropriateness and correctness and the processing of the data. An empirical analysis was done and results will be comprehensively presented in Chapter 4 of the report. All statistical analyses

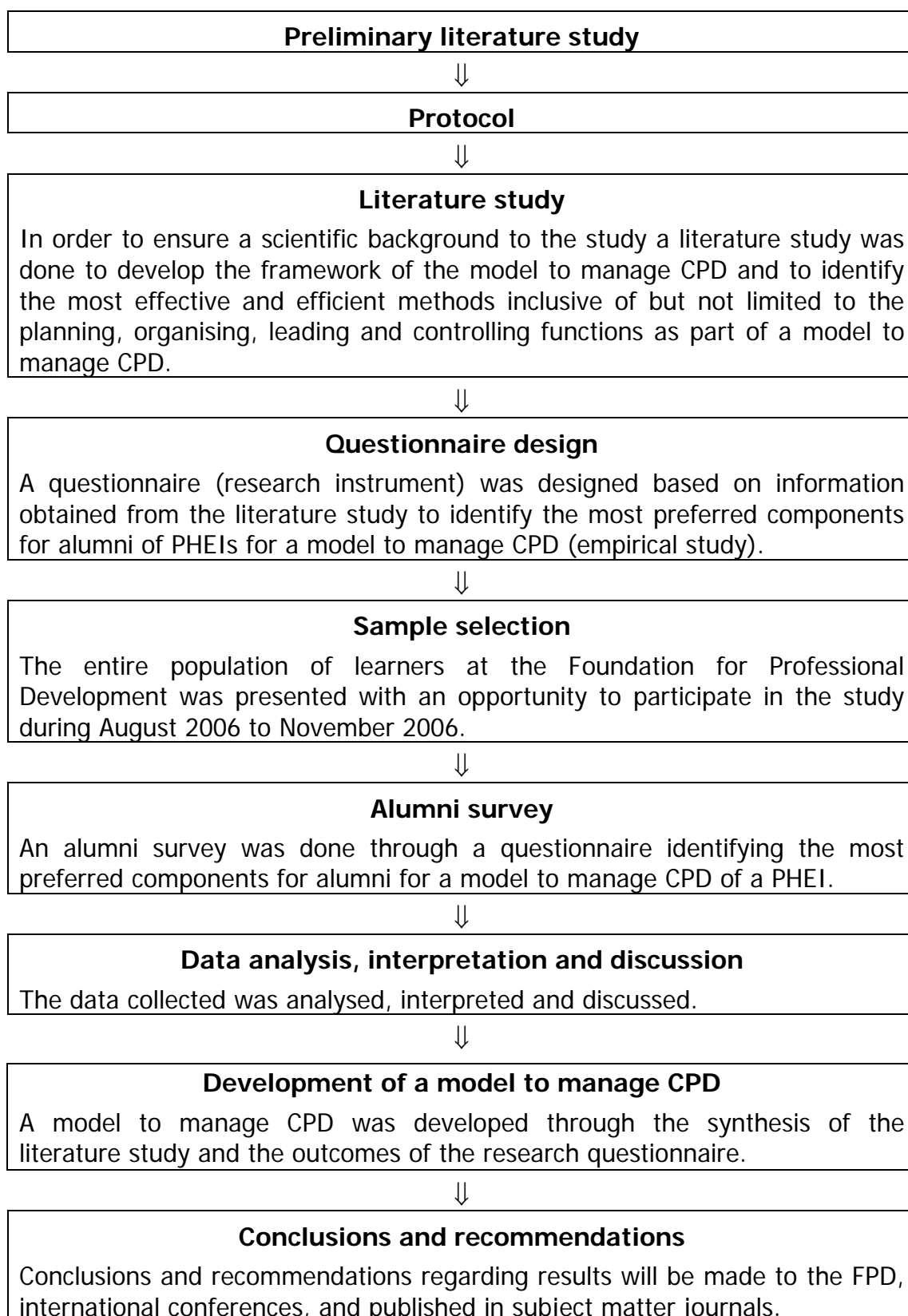
in the present study were computed by using the software, Statistical Package for the Social Sciences (SPSS), for Windows version 14.1. Both descriptive and inferential statistics were calculated and used to answer the research questions. Inferential statistics include the T-test and Chi-square.

The most frequently used level of statistical significance is 0.05 and according to Breakwell, Hammon and Fifer-Schaw (2000:360), this is not a magical figure but rather one of convention. It was therefore decided that a statistical significance level of 0.05 be considered adequate in this study.

The reliability of the questionnaire was increased by asking simple, direct and concrete questions. When asking direct questions, mostly categorical in nature, there is often little doubt as to what is being measured. Therefore no real reliability or validity calculations exist for these types of questions (mostly categorical).

In order to ensure that the instrument (questionnaire) would measure what it was supposed to measure or to ensure validity, an expert in health education evaluated the questionnaire. It is also referred to as "face validity". Although Goodwin (1995:99) asserts that this type of validity is often not enough and that it needs to be backed up by tests, it was considered sufficient for the current study considering the qualitative nature of the questions and the topic.

Figure 1.1 contains a schematic layout of the research process (cf. Figure 1.1).

FIGURE 1.1: A SCHEMATIC LAYOUT OF THE RESEARCH PROCESS

1.7 ARRANGEMENT OF THE THESIS

In Chapter 1, the **Background and orientation** to the study were provided. It served as a conceptual framework to the study in which the background, the impetus to, the overall goal, the aim and the objectives of the study were discussed. It further demarcated the field of the study and the significance of the study to Health Professions Education. It was also possible from the succinct outline of the design and the methods of the investigation to begin to conceptualise the research process.

In Chapter 2, the **Contextualising and conceptualising of the CPD management model is done** by means of a literature study. CPD with specific attention to the origin and the purpose of CPD will be reviewed. Once the purpose has been defined, the process will be reviewed and subsequently the trend of regulation of CPD globally. The concept credentialling will be scrutinised in relation to CPD and integrated to assessment in CPD. To gain a global perspective a review on international and South African trends in providers of CPD and coordination of the function will be provided. It was also necessary to review adults' learning preferences, needs assessment and CPD learning methods as part of identifying best practices in composing the framework for managing CPD for alumni of a PHEI. For the same reason learning networks, mentoring and personal CPD plans were reviewed.

Chapter 3, titled **Research design and methods**, will contain a description of the research design and the methodology applied in the study. The theory and explanation of the design and selected methods will be discussed. The questionnaire as data collecting method will be discussed comprehensively, as well as the manner in which the questionnaire was compiled by using information gathered from the literature study.

In Chapter 4, titled **Results, data analysis and discussion of findings**, the results of the questionnaire as data collecting method employed in the study will be reported and discussed.

In Chapter 5, **Development of the model to manage CPD**, the final outcome of the study on a management model for alumni from a PHEI will be provided through synthesising the literature review and the results of the questionnaire.

Chapter 6, **Conclusion, recommendations and limitations**, will contain a discussion of the process of the study; of the results; as well as recommendations for PHEI providers and future research. The limitations of this study will, in addition, be highlighted in this chapter.

1.8 CONCLUSION

It is evident that HEIs need to be more active in the management of CPD in order to contribute to the outcomes of CPD, namely improved competencies of health professionals. The development of a model to manage CPD will have to support the attainment of the purpose of CPD.

In the next chapter, Chapter 2, a literature review will be done to develop a conceptual framework from the literature to start to develop the model to manage CPD for alumni of a PHEI.

CHAPTER 2

CONTEXTUALISING AND CONCEPTUALISING OF THE CPD MANAGEMENT MODEL

2.1 INTRODUCTION

The following statement is taken from Rudyard Kipling's poem entitled *I Keep Six Honest Serving Men*: "I Keep six honest serving-men: (They taught me all I knew); Their names are What and Where and When And How and Why and Who. I send them over land and sea, I send them east and west; But after they have worked for me, I give them all a rest. I let them rest from nine till five, For I am busy then. As well as breakfast, lunch, and tea, For they are hungry men: But different folk have different views; I know a person small - She keeps ten million serving-men, Who get no rest at all! She sends 'em abroad on her own affairs, From the second she opens her eyes - One million Hows, two million Wheres, And seven million Whys!" (Kipling Society 2007:1 of 1).

In this chapter the six honest serving men of Rudyard Kipling were employed to search the literature on alumni networks; management models; lifelong learning networks; continuous professional development; networks; continuous education networks; professions education networks; peer reviewing in lifelong learning; accreditation of professionals in lifelong learning networks; quality assurance through networks; maintaining minimum standards through networks; containing costs through networks in professional services and adult education. The literature search did not yield much success, but related literature was used to answer the questions on what, where, when, how, why and who are involved in the management of CPD for the alumni of PHEIs.

2.2 THE ORIGIN OF CPD

Almost a century ago Abraham Flexner was a pioneer in influencing the change of direction of medical education from reactive or preventative to proactive with an emphasis on evidence-based decisions. Notwithstanding the fact that he was not a health professional and his recommendations were ahead of the current thinking, he emphasised the importance of educating health professionals in responding to the communities' changing health needs (Flexner 1910:6). He already then alluded to the benefits of accreditation of health practitioners to the community through licensing bodies.

Due to the WHO's strategy to reach the aim of "Health for all in the year 2000" (WHO 1996:1) which led to the Alma Ata Declaration in 1978 (Wilm s.a.:26), the WHO's member states were urged to reorient their health systems so as to provide for more equitable and appropriate services (Boelen 1994:4). To operationalise this strategy health professionals would have to serve the health needs of their communities. Through the World Federation for Medical Education the Edinburgh Declaration was proclaimed in 1988 in an attempt to change medical education in order to produce doctors who would promote health for all people. Thus a strong emphasis was placed on continuity of learning throughout life (WFME 1988:142). The 1994 Yaounde Declaration followed with a curriculum that would produce a physician who responded better to individual, family and community needs (WHO 1994:13).

In 1995, as a follow-up to the Yaounde Declaration, the Cape Town Declaration contained the theme on "The doctor in Africa must be trained to meet the health needs of communities in Africa" but *vis-à-vis* with internationally recognised standards (WFME 1995:15). Medical education should be responsive to community needs, but - at the same time - meet global standards. A quest was made that CPD should be encouraged by medical schools, the ministry of health and professional bodies. It was also

emphasised that there should be ready access to CPD, also for those working in peripheral health institutions. Woollard (2006:306) emphasises the challenge this places on the HEI to equip health professionals with the knowledge, skills and attitude to address the needs of the community they need to serve but also on the alumni of HEIs to consistently address these needs on an acceptable standard. Woollard (2006:306) asserts that the HEI has the responsibility to ensure that students attain the minimum accepted standard of knowledge, skills and attitude but also that the alumni maintain the minimum accepted standard. Woollard (2006:310) repeatedly warns against the notion of HEIs' showcase intentions in strategic planning by aligning strategies to serve communities in preparing students and continuously developing alumni.

As far back as 1910 the golden thread of the importance of meeting the needs of the community already wound through medical education while - at the same time - high standards had to be maintained. The concept of lifelong learning was a direct consequence thereof.

2.3 THE PURPOSE OF CPD

High quality patient care depends on health professionals making sure that they maintain and improve the standards of their practice of medicine. What health practitioners learn at HEIs needs to be updated throughout their careers to reflect changes in best evidence medicine and in the needs of the patients and the health care delivery systems. Mahmoud, Andrus, Matolo and Ward (2006:815) acknowledge the need for CPD because of the nature of medicine being an ever-evolving science. The purpose of CPD is therefore ultimately high quality patient care (ACCME 2003:7; Bennett, Davis, Easterling *et al.* 2000:1169; GMCUK 2003:3; RACGP 2001:13; Tomlinson 1997:17; WFME 2002:11, 12).

There is general agreement in literature about the broad purpose of CPD, namely that CPD is a continuing process that allows individual health professionals to maintain and improve standards of professional practice through the development of knowledge, skills, attitudes and behaviour (Grant & Stanton 1998:4; HPCSA 2002:1; Peck, McCall, McClaren & Rotem 2000:432; WFME 2002:8).

Cioffi, Lichtveld, Thielen and Miner (2003:453) assert that all competencies link learning content to level of performance. Therefore in the context of CPD all CPD events should lead to the translation of theory to increase the level of care. Jarvis (2004:111) defines learning as "a combination of processes whereby whole persons construct experiences of situations and transform them into knowledge, skills, attitudes, beliefs, values, emotions and the senses, and integrate the outcomes into their own biographies."

Clyne (1995:34) made an important differentiation among the categories of expertise all professionals require, which are the professional skills related to the specific profession, managerial skills such as business skills, interpersonal skills, and self-management skills. The third category of skills is cross-functional skills, which are closely related to professions such as counselling skills for medical doctors or dispensing skills for professional nurses. Clyne (1995:34) also asserts that the competencies in each category will vary pending the stage of development of the professional. Hughes in Clyne (1995:67) concludes that a good CPD system will encourage compliance, meaning a system that will improve competence in coherence with the development levels from novice to experts with resultant potential increase of fees for expert level of services.

Best, Eaton, Plasschaert, Toh, Grayden, Senakola and Rohlin (2005:66) assert in their review on the effectiveness of CPD in improvement of competence of the oral health team that there is no documented impact study to support the notion. They further claim that CPD may improve knowledge and skills but

attitudes or personality traits are not easily influenced. They further emphasise the notion that professionals participate in CPD events they like and it may not be the areas in which their competencies need to be developed because they dislike those disciplines or do not recognise their need for development (Best *et al.* 2005:71).

Crockett and Geale in Clyne (1995:126) distinguish among three approaches to CPD. The first approach is the familiar health professions CPD system which focuses on the attainment of points or credits and is individually driven with the focus on the process rather than the outcome. Skills or outcomes are rarely measured in this approach. This system is also unstructured and uncoordinated. The second approach is the business approach which refers to the development of human resources with the focus of attaining set business strategies through capacity development. Outcomes are measured through set targets in a structured and coordinated system. The third approach is the career development approach which focuses on the individual's own need. It differs from the first two approaches in that the motivation for participation is internal. It involves self-assessment, portfolio building, career development planning, learning logs or records, mentoring, networking and accreditation.

2.4 THE CPD PROCESS

To nurture a CPD culture professionals have to assimilate CPD as a continuous process, make time for it (Blandford 2000:9; Stinson, Pearson & Lucas 2006:310) and develop a self-awareness (Stinson *et al.* 2006:310). It is, however, for CPD providers to establish in health professionals the awareness and yearning of CPD (Stinson *et al.* 2006:309); provide professionals with access to a variety of learning experiences (Blandford 2000:9); provide expert support and guidance in CPD (Blandford 2000:9; Skovholt 1995:133); encourage reflection, critical analysis and assimilation (Blandford 2000:9; Skovholt 1995:132; Stinson *et al.* 2006:310); motivate, value and reward all professionals in the learning community (Blandford

2000:9; Stinson *et al.* 2006:310); and implement a learning contract as a structuring tool with clear goals and objectives of what is to be attained (Skovholt 1995:134; Stinson *et al.* 2006:311).

Lewkonia (2001:427) makes a clear distinction between under- and post-graduation which have clear exit points and continuous development which is revolving similar to the concepts of quality assurance. Jarvis (2004:48) is of the opinion that CPD is different from any other form of further education, whether it is full-time or part-time, in that CPD does not need to be directed towards any course assessment or certification. He further asserts that CPD is most realistically intermittent rather than continuous (Jarvis 2004:47). It should, however, be noted that Jarvis refers to adult development in general and not to CPD as is the notion of health professions' continuous professional development (Jarvis 2004:48).

Price (2005:260) uses a *quality improvement cycle* of identifying the need for improvement; planning a proposed change; implementing an intervention; analysing the effect of the intervention; and revising the process on grounds of the effect of the intervention to mimic steps in the CPD process. Price (2005:260) agrees with Lewkonia (2001:427) that CPD programmes will be more effective in *changing behaviour* if it is not a once off stand alone programme.

The CPD process as described in Cervero (1988:116) and Tomlinson (1997:22) is a linear process:

- Needs assessment through identifying weaknesses or areas to be developed.
- Learning outcomes.
- Developing a learning plan.
- Implementing the learning plan (CPD event).
- Assessment (formative and summative).
- Evaluating the CPD event.

- Measuring the outcome of the CPD event.
- Improved competencies.
- Higher quality patient care.

Ellis (2000:95) depicts the CPD cycle as an input, process and outcomes cycle in a table where input is the needs assessment, process the learning programme and the outcome the evaluation of whether the needs have been satisfied and dialogue with the stakeholders.

2.5 REGULATION OF CPD

A survey done by Peck *et al.* (2000:432) on CPD of 18 countries in Europe, Canada, the United States, Australia and New Zealand concluded that CPD is an international trend and, furthermore, there is a driving force to mandatory CPD. Globally the impetus for CPD to become mandatory is external scrutiny through clinical governance, revalidation and poor performance procedures.

There are also global endeavours to quality assurance in CPD to improve effectiveness and efficiency. In the literature study one international set of standards (WFME 2002:11-27) and three sets of national standards have been found. The three sets of national standards are from:

- The Accreditation Council for Continuing Medical Accreditation for providers of CPD in America (ACCME).
- The Royal Australian College of General Practitioners (RACGP).
- The General Medical Council of the United Kingdom (GMCUK).

All of the standards listed above are in congruence with one another.

CPD activities, such as workshops, are typical examples of interventions by which to attain the outcomes of CPD. These outcomes are to improve, maintain and further develop competencies regarding skills, knowledge and attitude to meet stakeholders' expectations.

Vandendael and Van Hemelryck (2003:2432) compare the European and the United States (US) CPD systems. In the European system each CPD event is accredited separately by the European Accreditation Council on CME with the national authority on CPD having the final say. CPD providers are accredited for a specific time period by the ACCME. The European system is therefore a decentralised system, whereas the US system is a centralised system. In South Africa the HPCSA adopted a centralised system similar to the US system of accrediting CPD providers for a specific time period instead of accrediting each CPD activity separately (HPCSA 2007:7). The professional nurses in South Africa are not regulated for CPD yet (SANC 2007).

CPD is compulsory for all health professionals in South Africa registered with the HPCSA; the various boards administrate the CPD system under the jurisdiction of the HPCSA according to the Health Professions Act, 1974 (RSA 1974). The new CPD system changed from annual reporting of individual practitioners to the Medical and Dental Board to prove compliance to a system based on trust where the HPCSA will conduct random compliance checks on sample individual practitioners annually. 30 Continuing Education Units (CEUs) must be accumulated each year to retain registration in terms of the Health Professions Act, 1974 (RSA 1974) as published in the Government Notice, Regulation 75 of 16 January 1998 (RSA 1974). The HPCSA introduced the new Continuing Education Unit (CEU) system for all health care professionals registered in South Africa on 1 January 2007 (HPCSA 2007:4).

Both providers and receivers of CPD should be monitored. Providers should be monitored by regulating or accrediting bodies and participants in these activities to ensure that the providers meet set educational criteria (RACGP 2001:13; WFME 2002:19). Receivers of CPD should be monitored through the assessment of progress (summative assessment) and the attainment of outcomes (formative assessment) (ACCME 2003:1; GMCUK 2003:3; WFME 2002:16, 17, 21).

Much has been written on assessing the outcomes of CPD activities, but not on benchmarks for CPD providers to be measured against (Leist, Gilman, Cullen & Sklar 2004:57). They further add that among the various perspectives to be utilised to assess providers are accreditation and excellence models. Where accreditation models focus on the minimum accepted standards to be at least attained, excellence models expect organisations to continually assess performance standards and improve on those irrespective of whether they maintain the minimum standard according to an accreditation model. The ACCME entertains both models in that it has minimum requirements, but also has a process that promotes exceeding the minimum requirements.

2.6 CREDENTIALLING

2.6.1 Credentialling and professionalism

A credential is evidence of a person's achievements or trustworthiness, usually in the form of certificates according to *The Concise Oxford Dictionary* (1995:272). In the editorial of the *Journal of the Royal Society of Medicine*, professionalism is defined and encompassed in this definition as the daily commitment doctors have to integrity, compassion, altruism, continuous improvement, excellence and working in partnership with members of the wider health care team (Smith 2006:48). Hilton and Slotnick (2005:59) agree with Smith (2006:48) that professionals will, in their interpersonal professional relations respect others, promote a multidisciplinary approach and be socially responsible. They further comment that the characteristics of a professional are self-regulation, honesty, self-awareness and accountability (Hilton & Slotnick 2005:60). The accountability relates to being accountable for actions and therefore the responsibility and commitment to CPD (Roberts & Konn 1991:53). Thus being a professional brings along, among other things, the commitment to continuous improvement to maintain high standards, because

qualifications do not declare professionals competent (Kimatian 2006:210). Sheldon, Horowitz, Miller and Miles (2004:11) assert that maintenance of competence as a formal process contributes to improved practitioners' performance and subsequent improved patient care. The amalgamation of professionalism and credentialling has brought along bodies and networks that assess professionals' competence through various means, for example, submitting proof of CPD, practice audits, board certification, maintenance of certification, the revalidation process, peer reviews and accreditation systems, all with the same purpose of assuring minimum standards in the profession and to provide evidence in this regard.

2.6.2 Assessment an integral part of credentialling

There are three dimensions of assessing professional competence. The first dimension is the assessment of the professional; the second dimension is the assessment of the educational programme equipping the professional; and the third dimension is the assessment of the provider of these programmes.

Lewkonia (2001:426) identifies reassessment of competencies of doctors as part of the nature of professionalism. He claims that there are primarily three reasons why there is increasing pressure on the profession to adhere to this component of professionalism. First is the necessity of the ever-increasing informed public to feel safe in the hands of competent doctors. Second is the fact that doctors need to update themselves with the latest in best evidence medicine. In the third place, doctors have to be in line with the responsibility of renewal and self-regulation.

Rose and Burkle (2006:212) give a different perspective to accreditation of programmes. For a programme to produce competent health professionals, it must enable the learners to achieve the learning outcomes of the programme. Second, it must provide evidence to support attainment of the learning outcomes. Finally, the programme must demonstrate continuous

improvement in its educational process. Providers should be monitored by regulating or accrediting bodies as a third dimension to ensure that the providers meet set educational criteria (RACGP 2001:13; WFME 2002:19). The focus of this study is on supporting the professional in CPD and therefore the literature study also focused on the dimension of assessing the professional.

2.6.3 Trends in credentialling

Change is a well-known phenomenon and professionalism did not escape it. St Clair (2003:72) effectively summarises the evolution of professionalism over the past three decades. First, experience was enough. Then it changed to licensing. Now the tendency is certification. Three decades ago professionals did apprenticeships. The focus then shifted to college exams. In the 21st century the emphasis is on lifelong learning. In the eighties professionals belonged to trade schools. Then professional associations obtained the eminence. Currently the focus is on networking. Characteristics of professionalism in the 21st century will therefore include certification, life-long learning and networking (St Clair 2003:72). Sharp, Bashook, Lipsky, Horowitz and Miller (2002:534) are in agreement with St Clair on the trend of certification in their conclusion on an extensive literature review that the American Board of Medical Specialties (ABMS) as the mother organisation for 24 medical specialty boards is a method to assess competency to provide good clinical care (Sharp *et al.* 2002:541).

In order to ensure minimum level of service delivery Gerster, Guerson, Moreau, Mulnet, Provot and Salabert (2003:22) describe four levels in the quality assurance procedure for the veterinary services in France which are the strategic, functional, operational and record-keeping levels. On the strategic level the system defines the broad direction with goals and objectives. On the functional level the procedures are described together with roles and responsibilities, methods and tools for the tasks to be performed.

On the operational level the instructions are explained, while on the record-keeping level information on what to record for monitoring and evaluation purposes is provided. A similar approach is followed globally in ensuring competence of professionals on a strategic level with councils and boards giving broad direction regarding the systems of credentialing or certification or maintenance of competence or CPD. On a functional level there are rules and regulations on the procedures and roles and responsibilities on how to operationalise the systems.

A typical example of a council or board giving strategic direction is the Australian Medical Council (AMC) who did an accreditation review of the Australian and New Zealand College of Anaesthetists (ANZCA) in 2002. One of the aims was "to assure the community that a doctor who has successfully completed accredited education and training is able to practice as a specialist, and is being assisted to maintain and enhance their knowledge, competence and performance" (Phillips 2003:374). An example of an attempt to strategise is the study conducted by the Postgraduate Medical Council of Victoria in the quest to a solution to the lack of a system to accredit foreigners who want to work in Australia in order to ensure an acceptable minimum standard of medical services amid the high influx of overseas-trained doctors (McGrath 2004:640).

The quality of health care was questioned in America in the early 2000s and the ABMS and associated boards introduced Maintenance of Certification (MOC) as a system to improve the competence of their doctors on a strategic level (Sheldon *et al.* 2004:10). On a functional level the MOC requires doctor specialists to evaluate their performance standard and address the development areas as identified. On an operational level the MOC requires a specialist to provide evidence of his/her improvement in those development areas as identified in the assessment of his/her practice performance (Sheldon *et al.* 2004:10).

Not all literature is supportive of all systems implemented to support the maintenance of competence (Lewkonia 2001:426; Sheldon *et al.* 2004:11). Roberts, Newble and O'Rourke (2002:900) conclude that a self-regulating system, for example the system implemented by the General Medical Council (GMC) in the United Kingdom (UK) in 2001 to revalidate medical practitioners through evidence of competence in the form of a portfolio, may not be effective because it does not state that - in identifying malpractice or poor performance - it will consider feelings, will identify educational needs, or will be a valid reflection of the clinical practice.

Another example of critic found in literature was on the same system (Van Zwanenberg 2004:685). From January 2005 every doctor in the UK would need a licence to practise from the GMC through demonstrating that they were fit to practise by means of the revalidation process. Van Zwanenberg (2004:685) summarises the purpose of the system as three-faceted, namely to build public confidence; to support CPD; and to identify malpractice, which is in congruence with Lewkonia's (2001:426) opinion of the nature of professionalism. The idea of combining the detection of poor performance with the objective of CPD of professionals in one system is recorded as uncomfortable by respondents to this study (Bruce, Phillips, Reid, Snadden & Harden 2004:687; Van Zwanenberg 2004:686), but it is in congruence with Lewkonia's view of self-regulation (2001:426).

If the operational guidelines are not clear, the implementation of systems is in jeopardy. Bruce *et al.* (2004:687) for example assert that there were no clear guidelines on what information to gather in the system to be implemented for revalidation of doctors in the UK in January 2005 or what the minimum accepted standards were. Therefore, in their study, they developed two models for revalidation with clear guidelines on, first, what information to gather to support the purpose of supporting CPD, namely identifying negative deviance or performance of the minimum accepted standard and, second, building public confidence that practitioners who successfully completed the

revalidation process were competent. The preferred model was the simpler model of the two. The outcome of this study is in line with the model developed by Gerster *et al.* (2003:22) to ensure implementation through providing specific guidelines and procedures on operational level.

There are also examples of literature supportive of systems to assess maintenance of competence through certification. Miller, Britt, Pan and Knox (2004:770) concluded in their study that there was a positive correlation between certification of general practitioners by the RACGP and indicators associated with quality care. They used 34 hypothesised quality indicators of care associated with 14 domains of care. The 14 domains are social disadvantage service; after hours arrangements; consultation length and complexity; provision of non-pharmacological treatment; pharmacological management; referral; tests and investigations; psychological problem management; appropriate preventative care; inappropriate preventative care; diabetes management; cardiovascular management; musculoskeletal management; and infection management (Miller *et al.* 2004:775).

Summatively it can be stated that there are many examples of certification by Councils and Boards in the 21st century (St Clair 2003:72) and that they do best if they give a broad strategic direction on the purpose. Very clear guidelines on the functional level of the roles and responsibilities and on the operational level of exactly what the expectations of the professional care with regard to the evidence that they need to provide are, however, needed. St Clair (2003:72) also identifies lifelong learning and networking as characteristics of professionalism in the 21st century. The next aspect to be explored was literature on sustainability of competence in terms of lifelong learning.

2.6.4 Life after certification

Goroll, Sirio, Duffy, LeBlond, Alguire, Blackwell, Rodak and Nasca (2004:902), as well as Johnston (2003:1220) and Joyner (2004:34) reviewed residency training programmes for Urology, Neurology and Internal Medicine, respectively utilising the ACGME accreditation criteria with the purpose of improved education and - as a result - improvement of trainee clinical competence. Joyner (2004:39) and Johnston (2003:1220) did not recommend any action towards sustainability of the competence once graduates left the programme. Goroll *et al.* (2004:908) recommended that CPD should change from passive events to events where improvement of competence was demonstrated. There is, however, no clear notion of accountability from the medical school to alumni of these residency training programmes. Price (2005:259) mentions that providers of CPD are in the process of exploring ways to support health professionals to meet the certification criteria as set by ABMS. However, the emphasis is on meeting certification criteria and not on the internalisation of the concept of CPD.

The Commission on Accreditation for Dietetics Education (CADE) is responsible for the American Dietetic Association (ADA) accrediting functions and it adopted five goals to guide its work namely, "a) to establish and apply market responsive, rigorous standards through accreditation; b) to validate the self-analysis process through the collaborative peer review; c) to encourage educational innovation and diversity; d) to operate an efficient, effective accreditation system; and e) to provide opportunities for professional development and educational leadership" (Bruening, Mitchell & Pfeiffer 2002:566). The purpose of accrediting programmes is to ensure that graduates will begin their careers with the minimum expected competence to protect the public. The emphasis is therefore on under-graduate training and not on goal five, which reads to provide opportunities for professional development and educational leadership.

It can therefore be concluded that no literature was found to support the ongoing responsibility on a functional or an operational level of institutions responsible for the certification of professionals to support sustainability of competence through lifelong learning. The focus is more on certification as part of the professionalism concept as per St Clair (2003:72). The last characteristic to be explored as part of professionalism (St Clair 2003:72) is networking towards credentialling.

Israel and McCabe (1999:584) describe credentialling as being a part of the network of preferred nutrition therapists in a managed care model. In this network, credentialling encompasses verification of the nutritionists' professional registration and indemnity insurance. It also includes qualifications through certifications in speciality areas. It further includes basic professional verifications such as criminal record and CPD. First aid and cardiopulmonary resuscitation are also verified.

Another example of networks for professionals found in literature is risk management programmes. Nesbitt, Hixon, Tanji, Scherger and Abbott (2003:476) conclude that participation in risk management programmes consisting of compliance with standardised clinical guidelines; attending CPD events; submitting for example obstetric medical records for review; and feedback to each participant on records submitted, yielded positive results in terms of risk exposure.

The examples found in literature on networks for professionals to assist in credentialling had different purposes. One had the purpose of managed care and the other of risk management which, in both cases, support the definition of professionalism as summarised by Smith (2006:48).

From the literature review on professionalism in the 21st century it can be concluded that it includes certification, lifelong learning and networks as St

Clair (2003:72) summarises this evolutionary occurrence. It can thus be concluded that credentialling of a professional's sustained maintenance of minimum standards will become the norm for those bodies and networks assessing professionals' competence.

2.7 PROVIDERS OF CPD

Roberts and Konn (1991:49) advocate for central organisation of CPD events in the UK and identify professional associations as the ideal locus but acknowledge that not all of these associations have the resources or the will to coordinate the total CPD effort in a country. Roberts and Konn (1991:50) assert that systematically integrated CPD will be dependent on the quality of CPD providers. These authors (1991:56) advocate for monitoring of providers for the effectiveness of CPD events.

Cervero (1988:77) makes a valuable contribution towards the overview of current providers of CPD and identifies four categories of CPD providers, namely education institutions, professional associations, employers and independent providers. In Jarvis (2004:313) reference to providers of lifelong learning is made but the gist of the type of education discussed is general adult education and not CPD and it will therefore not be cited here. Of importance to this study is the way HEIs approach CPD. CPD is seen as a secondary function at HEIs and undergraduate as well as formal post-graduate education is seen as the primary function of HEIs (Cervero 1988:91). In South Africa HEIs are also subsidised for these kinds of qualifications. Riesenber, Rosenbaum and Stick (2006:13) reported results on additional responsibilities as reported by respondents to their study on the role and responsibilities of the designated institutional official (DIO) as appointed according to the regulations of ACGME. In these results 101 of 215 (41.6%) respondents reported CPD as an additional responsibility. This may be because medical schools do not see CPD as an integral part of their

responsibilities and it may be seen as a low priority and as an ad hoc responsibility that can be done by the DIO who has a different job purpose.

The coordination and organisation of CPD by HEIs vary considerably. In some HEIs CPD is coordinated in a central function; in other HEIs it is decentralised to the various professional disciplines (Cervero 1988:78). In most HEIs it is a decentralised function because the income generated by these events supplements the departments' income and the various disciplines argue that the expertise to facilitate these CPD events lies within the department (Cervero 1988:79). The reality is that the operational support to these functions is also duplicated in each of these departments. Cervero (1988:88) further summarises the opportunities and constraints of these providers in terms of their target audiences, credibility, sources of finance and resources.

TABLE 2.1: OPPORTUNITIES AND CONSTRAINTS OF CPD PROVIDERS AS SUMMARISED BY CERVERO (1988:88)

Providers	Public education institutions Cervero (1988:88)	Professional associations Cervero (1988:88)	Employers Cervero (1988:88)	Independent providers Cervero (1988:88)
Opportunities	Target audience	Target audience	Target audience	Target audience
	Alumni are potential audience	Direct access to association members	Direct access to employees Opportunity for multi-disciplinary contact	Can choose own audience Can decide on educational strategies
	Credibility	Credibility	Credibility	Credibility
	Primary source of research and theory Able to certify the successful candidates	Official representative of profession	Close linkage of education with practice	Freedom to create own image
	Financing	Financing	Financing	Financing
	Non-profit status	Non-profit status	Indirect costs with minimum worktime loss for participants	Return on investment can be done over several programmes
	Resources	Resources	Resources	Resources
	Large pool of faculty Facilities such as libraries, catering facilities, equipment and meeting rooms Multidisciplinary contact and approach	Large pool of faculty	Logistic convenience Continuous evaluation of impact	Marketing expertise Innovative educational strategies Quick turn around and response time to learners' needs
Constraints	Target audience	Target audience	Target audience	Target audience
	Only alumni as audience	Limited exposure to other professions	Primary focus is not education	No natural audience
	Credibility	Credibility	Credibility	Credibility
	Lack of ability to link theory with practice	Organisational structure hinders long-term leadership in CPD	Limited insight into the role of education in the solving of problem	Low credibility Not a primary source of research and theory

	Financing	Financing	Financing	Financing
	CPD is not a primary function and therefore unreliable funding	CPD is not a primary function and therefore unreliable funding	CPD is not a primary function and therefore unreliable funding	Education is usually the first cost-saving consideration under economical pressure
	Resources	Resources	Resources	Resources
	Faculty do not receive incentives for additional workload because of CPD	Limited facilities Limited operational staff	Lack of educational leadership	Limited facilities

Given the review of the opportunities and constraints HEIs have in the provision of CPD to their alumni a closer look was taken at how these institutions operationalise this function. In the literature review one study was found where the focus was on the role of HEIs to support health professionals in meeting certification criteria. Price (2005:259) for example mentions that providers of CPD are in the process of exploring ways to support health professionals to meet the certification criteria as set by ABMS.

Another study concluded that HEIs have a responsibility towards alumni regarding CPD (Phillips 2003:374). In the literature study very little was found on the responsibility of HEIs towards alumni. In an article of Joffrion (1991:34) she asserts that the purpose of alumni associations can be extended to support the attainment of the goals of, in this case, the nursing schools. Joffrion (1991:34) is of the opinion that nursing schools can financially benefit from alumni associations and it can also support student recruitment. A further beneficial relationship for nursing schools as a result from alumni associations identified by Joffrion (1991:35) is the potential networking benefits for students with successful professional nurses from various careers and for them to subsequently act as role models and mentors. The support to students mentioned is time, money, motivation and emotional support. Alumni associations can further be utilised as an effective channel of communication as another benefit (Joffrion 1991:35). Regan-Smith, Eisold, Boulter and Stebbins (1989:574) are in agreement with Joffrion (1991:35) on the roles alumni can play in terms of role models, mentors and networking support, but for medical students.

Other research involving alumni entails evaluating training programmes with the prospect of improving education strategies or curricula (Clemmer & Bertrand 1980:67; Kahn & Tollman 1992:12; Kiel, O'Sullivan, Ellis & Wartman 1991:545; McGovern, Kochevar, Olson, Nelson & Findorff 2000:559; Michener 1989:124); assessing interests of alumni in certain health-related fields (Rattner, Robeson & Veloski 1997:103); assessing retention of alumni in

family medicine (Kohrs & Mainous 1999:23); or surveying areas of practice (Crahan, Ozbun & Strommen 1975:293; Kohrs, Mainous, Fernandez & Matheny 2001:124) and levels of achievement (Crahan *et al.* 1975:293).

High quality patient care depends on health practitioners making sure that they maintain and improve the standards of their practice of medicine. The content health professionals learned at HEIs needs to be updated throughout their careers to reflect changes in best evidence medicine and changes in the needs of the patients and the health care delivery systems.

Charap, Levin, Pearlman and Blaser (2005:1042) emphasise the information escalation and the vast evolvement of medical science over the past 25 years. They assert that, although the technology available has also developed to make practised medicine more efficient and effective, patients still need the same time spent with them and practitioners need even more time to study information available. Although they acknowledge the challenge of information overload in curricula, as well as the concept of a core curriculum, the way forward and the responsibility of HEIs in lifelong learning towards alumni to update their knowledge, skills and competencies to stay abreast of development in the field is not mentioned.

Blandford (2000:4) brought a valuable perspective to CPD with the four identified functions of CPD in HEIs, namely to develop individual performance; to correct ineffective practice; to promote the implementation of guidelines and policies; and to assist in the process of change. Lewkonia (2001:427) is in agreement with the role of HEIs in changing norms of practice and advocates for educational activities like peer support, inter-practice visits and mentoring networks.

It can thus be concluded that HEIs have a definite responsibility towards their alumni in supporting the purpose of CPD.

A review of the approach of international and national HEIs to CPD in the 21st century was made by the researcher to identify whether the majority of HEIs still decentralise CPD to the various professional disciplines as was identified by Cervero (1988:78) and, secondly, whether alumni associations have started to become involved in CPD. A summary of the findings are in Table 2.2.

TABLE 2.2: A REVIEW OF THE APPROACH OF INTERNATIONAL AND NATIONAL HEIs TO CPD (2007)

HEI	Country	Public/ Private	CPD function centralised or decentralised or mixed (Is the <u>function of CPD delegated</u> to various schools or programmes or units?)	Presentation of CPD activities: Centralised or decentralised or mixed (Are <u>CPD activities presented</u> or not in different geographical areas?)	Function of alumni association centralised or decentralised or mixed (Is the <u>function of alumni association delegated</u> to various schools/programmes/ units?)	Involvement of alumni association in CPD (Is the <u>alumni association involved</u> in CPD activities?)
The University of Manchester	United Kingdom	Public	Decentralised (The University of Manchester 2006c:1 of 3)	Decentralised (The University of Manchester 2006b:1 of 1)	Centralised (The University of Manchester 2006a:1 of 1)	No (The University of Manchester 2006d:1 of 2)
The Oxford University	United Kingdom	Public	Centralised Part-time courses at post-graduate level, short courses and workshops (The Oxford University 2006c:1 of 1)	Decentralised (The Oxford University 2006b:1 of 1)	Centralised (The Oxford University 2006a:1 of 2)	No (The Oxford University 2006a:1 of 1)
University of Leicester	United Kingdom	Public	Centralised (University of Leicester 2007a:1 of 2)	Centralised (University of Leicester 2007a:1 of 2)	Centralised (University of Leicester 2007b:1 of 2)	No (University of Leicester 2007b:1 of 2)
University of Dundee	Scotland	Public	Centralised (University of Dundee 2007a:1 of 1)	Centralised (University of Dundee 2007a:1 of 1)	Centralised (University of Dundee 2007b:1 of 1)	No (University of Dundee 2007b:1 of 1)

HEI	Country	Public/ Private	CPD function centralised or decentralised or mixed	Presentation of CPD activities: Centralised or decentralised or mixed	Function of alumni association centralised or decentralised or mixed	Involvement of alumni association in CPD
Harvard University	United States	Public	Decentralised (Harvard Medical School 2006:1 of 2)	Decentralised (Harvard Medical School 2006:1 of 2)	Centralised (Harvard University 2006:1 of 2)	Yes, a joint venture between alumni association and the medical school's CPD unit (Harvard Medical School 2006:1 of 2)
The Yale University	United States	Private	Centralised (The Yale University 2006b:1 of 1)	Decentralised (The Yale University 2006b:1 of 1)	Decentralised (The Yale University 2006a:1 of 1)	Yes (The Yale University 2006b:1 of 1)
University of the Witwatersrand	South Africa	Public	Decentralised within the various faculties (University of the Witwatersrand 2006:1 of 6)	Centralised (University of the Witwatersrand 2006:1 of 6)	Centralised (University of the Witwatersrand 2006:1 of 6)	No (University of the Witwatersrand 2006:1 of 6)
Walter Sisulu University	South Africa	Public	No information available on website (Walter Sisulu University 2006:1 of 1)	No information available on website (Walter Sisulu University 2006:1 of 1)	Decentralised (Walter Sisulu University 2006:1 of 2)	No (Walter Sisulu University 2006:1 of 2)
University of Limpopo	South Africa	Public	No information available on website (University of Limpopo 2006:1 of 1)	No information available on website (University of Limpopo 2006:1 of 1)	No information available on website (University of Limpopo 2006:1 of 1)	No information available on website (University of Limpopo 2006:1 of 1)

HEI	Country	Public/ Private	CPD function centralised or decentralised or mixed	Presentation of CPD activities: Centralised or decentralised or mixed	Function of alumni association centralised or decentralised or mixed	Involvement of alumni association in CPD
University of Stellenbosch	South Africa	Public	Decentralised (University of Stellenbosch 2006:1 of 1)	Centralised (University of Stellenbosch 2006:1 of 1)	Decentralised (University of Stellenbosch 2006:1 of 1)	No (University of Stellenbosch 2006:1 of 1)
University of Cape Town	South Africa	Public	Decentralised (University of Cape Town 2006b:1 of 1)	Centralised (University of Cape Town 2006b:1 of 1)	Decentralised (University of Cape Town 2006a:1 of 1)	Yes (University of Cape Town 2006a:1 of 1)
University of the Free State	South Africa	Public	Decentralised (University of the Free State 2006b:1 of 1)	Centralised. (University of the Free State 2006b:1 of 1)	Centralised (University of the Free State 2006a:1 of 1)	No (University of the Free State 2006a:1 of 1)
University of Kwazulu-Natal	South Africa	Public	Decentralised (University of Kwazulu-Natal 2006b:1 of 2)	Centralised. (University of Kwazulu-Natal 2006b:1 of 2)	Decentralised (University of Kwazulu-Natal 2006a:1 of 2)	No (University of Kwazulu-Natal 2006a:1 of 2)
University of Pretoria	South Africa	Public	Centralised (University of Pretoria 2006a:1 of 1)	Centralised (University of Pretoria 2006a:1 of 1)	Centralised (University of Pretoria 2006b:1 of 2)	No (University of Pretoria 2006b:1 of 2)
Foundation for Professional Development	South Africa	Private	Centralised (Foundation for Professional Development 2006:1 of 1)	Decentralised (Foundation for Professional Development 2006:1 of 1)	Centralised (Foundation for Professional Development 2006:1 of 1)	Yes (Foundation for Professional Development. 2006:1 of 1)

The models as used by the Universities of Leicester, Dundee, Yale, Oxford and Pretoria CE at UPE are very similar in that CPD is centralised for all professionals but not necessarily targeted at alumni and offered at random.

It seems that there are collaborations of different kinds between the alumni associations and the CPD units to render CPD events as a service to alumni at Harvard Medical School, the Universities of Yale and Cape Town and the FPD, but it may also be in a random manner. It does not seem that the above institutions approach CPD as a continuous planned process for their alumni.

The researcher is aware of the limitation of the review in that only certain (15, seven international and eight South African) medical schools as were ascertained on the internet were reviewed and it is by no means meant to be a complete or comprehensive survey. The objective of the review was to obtain a broad perspective of the general notion of the international and the national trends.

2.8 ADULTS' LEARNING PREFERENCES

2.8.1 Background to adult learning

In CPD the target audience is adults with the implications that adults' learning preferences should be understood.

In 1982 at the Association for Medical Education in Europe/Association for the Study of Medical Education meeting in Cambridge, the CRISIS criteria were first described and they have been applied widely in designing CPD programmes (Harden & Laidlaw 1992:2). CRISIS is an acronym for seven criteria which contribute to the effectiveness of CPD programmes. The CRISIS criteria use as premise the adult learning assumptions (Harden & Laidlaw

1992:2). According to Harden and Laidlaw (1992:2), the CRISIS criteria in the context of CPD can be briefly explained as follows:

- *Convenience for the student in terms of time, pace and place.*
- *Relevance to the needs of the practising doctor.*
- *Individualisation to the needs of the doctor.*
- *Self-assessment by the student of his or her own competence.*
- *Interest in the programme by the student.*
- *Speculation – recognition of the grey areas where there may be uncertainty.*
- *Systematic coverage of the topic or theme for the programme.*

Gravett (2005: vii) asserts that it is crucial in learner-centred teaching to have knowledge about learners and their needs, the learning process and strategies for guiding and facilitating learning. The concept of adult learning is by no means new and it has important implications in the design of the learning opportunities for the target group of this study as adults (Jarvis 2004:29).

Grant and Stanton (1998:11) and Stross (1999:304) conclude that adults will be more likely to engage in productive learning if their learning programmes support adult learning principles. Grol (2001:2580) reported, in a study done by him on improving the quality of medical care, CPD to be one of the possible approaches. According to him, the modern tendency to consider individual learning needs and experiences within the context of daily life is a more effective path to optimal care and these approaches are based on adult learning theory (ACCME 2003:1; GMCUK 2003:3; RACGP 2001:13; Vella 1994:181; WFME 2002:12, 15, 24). Both Grant (2002:156) and Norman, Shannon and Marrin (2004:999) assert that CPD programmes that are predicated on well-conducted needs assessments, are effective in changing doctors' behaviours as part of a basic adult learning principle. Sectish, Floriani, Badat, Perelman and Bernstein (2002:152) and Du Boulay (2000:393) assert that teacher-centred CPD events are less effective in

changing learners' behaviour and therefore do not contribute to CPD. In their review they link adult learning preferences and effectiveness of CPD events.

Adult education refers to "activities intentionally designed for the purpose of bringing about learning among those whose age, social roles or self-perception define them as adults" (Merriam & Brockett 1997:8). According to Gravett (2005:7), there is no such thing as a typical adult learner. Each adult learner is an individual with different experiences, pre-knowledge, life-worlds, life tasks and life roles, for example single parents, professional, breadwinner, manager, female, oppressed or oppressor. Therefore each learner has a unique set of needs, strengths, weaknesses and preferences.

Gravett (2005:5) concluded on adults' learning ability after an extensive literature research on whether their learning ability declined, or whether the cognitive abilities of adults remained stable or continued to develop, pending on their life tasks and life-worlds. She further shared the viewpoint of Merriam and Caffarella (1999:199) that, if adult learners experienced learning material as meaningful and significant, it could be recalled more easily (Gravett 2005:6). Gravett (2005:6) also emphasised the principle of linking new theory to existing knowledge structures to support integrated learning, it should be tied to the known and complement or enhance existing knowledge. Gravett (2005:6) acknowledges in her work that ageing in adults negatively influences the speed of learning where new knowledge does not relate to the learners' life-world or contradicts existing knowledge structure. However, in situations where the new knowledge complements the learners' life-world the ageing does not influence the speed of learning.

2.8.2 Attributes of the adult learner

Gravett (2005:9) summarises the different views on the attributes of adulthood as those adult learners who prefer autonomy, responsibility and self-determination, with a self-concept of being responsible for their own

learning and decisions together with a need to be respected and acknowledged as responsible human beings. Sectish *et al.* (2002:152) are in congruence with this opinion. On the other end of the continuum there are those who have been modelled into passive receivers of knowledge, taught by an authoritarian, "giver of knowledge" teacher. Gravett (2005:9) is in agreement with Vella (1994:188) that the ideal situation will accommodate the learners' attributes, preferences and needs and the adult educator's expertise and guidance. This will require learning events that will accommodate *independence, responsibility and self-direction* through two-way communication between the adult educator and the learner. Jarvis (2004:144) also agrees and asserts that learning is a basic human need and therefore teaching may merely facilitate it. Livingstone (1999:24) reports in the study done in Canada with 1562 adults that, although there is a decline in course participation of adults as they grow older, there is an incline in their own learning efforts, which is in line with this adult learning attribute of independence, responsibility and self-direction, which places a responsibility on providers to accommodate these learning preferences for all ages. It is significantly true for adults older than 55 years of age, where 22% and less indicated courses as a preferred form of learning, but 63% and more indicated independent own efforts of learning as a preferred form. It is even more significant if the question of most important source of job knowledge is considered. Respondents to this study older than 35 years of age indicated that independent efforts were the most important source of job knowledge for 47% and more of them.

Adults come into the learning event with a vast array of life experiences that need to be acknowledged for various reasons. These can be utilised as a resource for learning for themselves and for other learners. If life experiences are not acknowledged, they may feel rejected. Existing paradigms may be obstacles to new ways of thinking and doing if they are contradicting (Gravett 2005:9; Price 2005:260; Sectish *et al.* 2002:152; Vella 1994:181).

Performance is more difficult because of attitudes, pre-conceptions and prejudice that will come into play when knowledge has to be applied (Todd 1987:12). Gravett (2005:6) acknowledges in her work that, where new knowledge does not relate to the learners' life-world or contradicts existing knowledge structure, transfer of learning may be more difficult to influence performance. However, in situations where the new knowledge complements the learners' life-world it may have an adverse effect. Howe (2003:485) emphasises the importance of training in the development of positive attitudes in professionals through using, for example, networks in CPD.

Apart from content experiences learners also have expectations for the educational event founded on their life experiences. These encompass the role of the teacher, the learner, the look and feel of the study material, the assessment process and so on. It is thus pertinent to explore expectations and clarify roles, expectations, and assessment procedures and establish a cooperative learning climate (Gravett 2005:10). Learners must also know how they will be assessed (Grant & Stanton 1998:9; Stross 1999:304).

Livingstone (1999:24) reports in the study done in Canada with 1562 adults that co-workers are indicated as the most important source of knowledge in the workplace. The younger the workers are, the more important co-workers are as a source of knowledge. It is specifically important for the group of workers younger than 34 years of age where 32% and more indicated co-workers as the most important source of knowledge as opposed to 17% and less that indicated employer training as the most important source of knowledge in this study.

Wlodkowski (1999:33) asserts that adults learn because they pursue their "personally relevant goals" and therefore need to be able to apply what they learn in their life-worlds. Sectish *et al.* (2002:152) and Vella (1994:187) are in agreement with this view and they confirm that adults want to experience the immediate usefulness of new learning.

If new knowledge contradicts, questions or disputes existing paradigms it can obstruct transfer of learning (Gravett 2005:14; Jarvis 2004:144). Therefore, in an educational setting, learners' existing knowledge, beliefs and attitudes must be brought to the conscious level. This can be done through individual questions or small group discussions on their current paradigms or their suggested solutions to problems (Gravett 2005:15; Vella 1994:189).

Adult educators should tie new knowledge to the learners' previous knowledge and experiences, in other words to the learners' life-worlds or the known to complement or enhance existing knowledge (Gravett 2005:15). They should therefore invite learners to point out the connections and share the connections with fellow learners to facilitate these connections for those who may have trouble in doing so. CPD must include interaction with colleagues and other health professionals (WFME 2002:21).

Vella's (1994:183) advice is the following: Know your audience's level of knowledge and start at the level of knowledge, from the known to the unknown.

Negative previous experiences or perceptions and information that contradict existing knowledge of learners are all factors that may obstruct transfer of learning. Therefore learners will need more time to absorb the new information and opportunities should be afforded to reflect on existing paradigms and the benefits of change (Gravett 2005:15; Jarvis 2004:145; Price 2005:260).

Adult learners want to participate in the learning process, therefore learning should be facilitative rather than didactic with a synergistic result (Gravett 2005:15; Jarvis 2004:144; Vella 1994:182).

Adult learners bring to the learning process experiences, beliefs and needs. Therefore facilitators need to explore learners' experiences, beliefs and needs and utilise and complement those, and also ensure relevance and applicability of content (Jarvis 2004:144). Kim, Phillips, Pinsky, Brock, Phillips and Keary (2006:873) assert that, although it was difficult to prove through scientific evidence that case studies are a more effective teaching method than didactic lecturing, it is a widely accepted fact in adult learning. Learning opportunities such as case studies, simulation and role-plays are valuable experiences for learners to utilise in the construction of meaning through reflection on and discussion of the experiences (Gravett 2005:16; Vella 1994:185).

Learning through experiences will promote transfer of learning that leads to personal transformation because these experiences were discussed and analysed by learners. Learners would also have the opportunity to identify the implications of what was revealed and act on those implications (Gravett 2005:16; Jarvis 2004:145; Vella 1994:186).

Many adult learners participate in learning because of the need to solve problems or address challenges in their life-worlds (Gravett 2005:17). There should be allowance for participation in the learning through application of new knowledge in a practical situation (Vella 1994:184). Vella agrees with Gravett that adults' motivation for participation in education is frequently from the need to acquire knowledge, attitude and skills to apply in life problems or life tasks. They want to experience the immediate usefulness or relevance of new learning. Therefore learning outcomes must be clear to the learners to enable them to make informed choices (ACCME 2003:1; RACGP 2001:13; WFME 2002:24). According to Todd and others (1987:8), competence is easy to influence because it is retention of memory. Gravett (2005:6) and Merriam and Caffarella (1999:199) agree with this viewpoint with the proviso that, if adult learners experience learning material as meaningful and significant, it can be recalled more easily.

Performance is more difficult to influence because of attitudes, pre-conceptions and prejudice that will come into play when knowledge has to be applied (Todd 1987:12). Gravett (2005:6) acknowledges in her work that, where new knowledge does not relate to the learners' life-world or contradicts existing knowledge structure, transfer of learning may be more difficult to influence performance. However, in situations where the new knowledge complements the learners' life-world it may have an adverse effect. Howe (2003:485) emphasises the importance of training in the development of positive attitudes in professionals through using, for example, networks in CPD.

In the literature review the following study was found which portrayed effective application and integration of adult learning principles as best described here:

Arbour (2003:70) implemented a programme to improve clinical practice in the areas of sedation, analgesia, and neuromuscular blockade among nursing staff in a critical care unit and concluded in his study that it was successful because it encompassed, among a series of other adult learning principles, a thorough needs assessment with information from multiple sources. The learning outcomes of the programme were based on the needs identified through the needs assessment. The programme acknowledged the learners as adults. The programme was for example supportive of their needs; it respected their experience; and they were encouraged to contribute in the session as peers. Active involvement of all was encouraged, as opposed to passive learning, and participants were encouraged to give feedback on their preferred methodology. A component of outcome evaluation was also included in that the effect of the learning event was evaluated continuously in the practice to measure the impact of the programme on clinical practice in the areas of sedation, analgesia, and neuromuscular blockade among nursing staff in a critical care unit. Therefore, in this study, adult learning principles were applied successfully with positive effect.

2.8.3 Learning strategies in line with adult learning principles

Gambrill (1999:3) identifies evidence-based medicine and problem-based learning as potential learning strategies in line with adult learning principles. Gambrill (1999:3) summarises evidence-based medicine in five steps. The first step is to phrase questions that will lead to answers on information needs or, in other words, identify learning objectives. Then collect best evidence to answer those questions which will next be scrutinised for validity and usefulness. Next follow application of the evidence and appraisal of the effect. Finally, draw the parallel among evidence-based medicine, problem-based learning and the multiple opportunities offered for self-directed learning (Gambrill 1999:4).

Gambrill (1999:4) identifies seven steps in problem-based learning. These steps are:

- Clarify terms and concepts.
- Define the problem.
- Analyse the problem.
- Categorise information collected related to the problem.
- Identify learning objectives related to each question raised in the problem analysis. (It is important that resources, priorities and responsibilities are identified here.)
- Collect information to the answer to attain set objectives.
- Synthesise and apply information to the questions raised initially and evaluate outcome.

In a study done by Bernal-Delgado, Galeote-Mayor, Pradas-Arnal and Peiro-Moreno (2002:655) it was concluded that, if educational events were supported with printed material and were evidence-based, it was more effective than those sessions not supported with printed material and not evidence-based. There was, however, little evidence to which factor made the

key difference to success, the evidence-based approach or the accompanied printed material or the yielded effect of combining educational strategies (Bernal-Delgado *et al.* 2002:656). They followed an experimental research design in their study with three groups. One group was the control group with no intervention, another group had an evidence-based educational input with printed material, and the third group had just had an educational session (Bernal-Delgado *et al.* 2002:653).

According to Gravett (2005:16) and Jarvis (2004:145), adult education therefore needs to be inclusive of the following:

- Relevant to their life-world and they should know the rational or benefit for transformation or engagement.
- All examples and case studies should be from the learners' life-world.
- Learners need feedback on progress, strengths and weaknesses.
- Learners want to contribute to application potential of new learning.
- Assessment should be done on real-life tasks.
- Adults bring physiological ageing to the learning environment such as visual, audio, energy and health deterioration and therefore the learning environment should take this into consideration.
- Adults learn best if they feel safe and protected and the facilitator must ensure an environment of cooperation where they feel safe to explore.

2.9 NEEDS ASSESSMENT

In order to attain the outcome of CPD events, a needs assessment should be done to identify those competencies to be addressed in CPD events. Both Grant (2002:156) and Norman *et al.* (2004:999) assert that CPD programmes that are predicated on well-conducted needs assessments are effective in changing doctors' behaviours as part of a basic adult learning principle.

Needs should be assessed on three levels (Gravett 2005:13). The first level of consideration is the national level. It is also referred to as the macrolevel, and

it entails aspects such as the needs of the population and the national health strategies. The second level to consider is the organisational or mesolevel, in other words the needs of a specific organisation or employer. The third level is the individual or microlevel, for example the general practitioner or other receiver of CPD (ACCME 2003:1; GMCUK 2003:3; Gravett 2005:13; RACGP 2001:13; WFME 2002:12, 15, 24). Much energy is spent on debating the value of assessing the needs of adult learners (Apps 1991:29; Brookfield 1992:13; Todd 1987:20), but the distinction made by Gravett (2005:12) between need and want assessment is worth considering. A need is identified as the gap between an actual state and the desired standard (Grant 2002:156; Handfield-Jones, Mann, Challis *et al.* 2002:953; Norman *et al.* 2004:999), while wants are defined as interests, desires and wishes (Cornford 2001:46; Evans *et al.* 2002:79; Wun, Dickenson & Chan 2002:62).

Some sources refer to the first as educational needs and to the latter as self-perceived needs or learning needs, as they will also be referred to in this study.

In both educational and learning needs, assessment benchmarks are useful in identifying deviations from the desired situations. Evidence-based medicine, minimum performance standard - both clinical and ethical, for example protocols, guidelines and health service indicators - can be utilised by both providers and receivers of CPD as benchmarks to identify deviations from the desired practice (GMCUK 2003:3; RACGP 2001:13; WFME 2002:13, 14).

Four commonly used methods are discussed. The first is to ask health professionals what they would be interested in, what relates to their work, and what causes them problems (knowledge, skills and/or attitude). This method is referred to as perceived needs of practitioners. Peter Bouhuijs (in Todd 1987:21) asserts that free-choice professional education does not necessarily improve practice. In a study done by Saidi and Weindling (2003:332) respondents to the study reported that professional development

plans as implemented in the UK facilitated identification of educational needs and the subsequent CPD events had a positive effect on clinical practice.

The second method is the practice audit method. This entails identifying practice deficiencies and basing a curriculum to address the gaps. Peter Bouhuijs (in Todd 1987:54) refers to this method as quality assessment of health services. Waddell (2001:104) concludes that the practice or process audit is an effective method to identify the competence of the practitioner and therefore will also assist in identifying learning needs.

The third method is to ask experts what they see as commonly found practice deficiencies and what good practitioners should be able to do.

The fourth method is one that Bouhuijs (in Todd 1987:54) refers to as an assessment of perceived needs of consumers of health services.

Bouhuijs (in Todd 1987:54) concluded in his studies that self-perceived needs of health practitioners represented a part of their needs, but that a systematic approach to curriculum construction - using more objective data - was needed. He did, however, acknowledge that preferences played an important role in stimulating health practitioners to subscribe to CPD learning programmes but a systematic curriculum containing key topics would, according to him, ensure effective CPD.

Cornford (2001:46) concludes that CPD based on needs of individual learners as seen by the learners themselves will not only contribute to adult learning principles but may be more effective, provided that it is in line with the wider needs of the National Health System. Evans *et al.* (2002:79) are in agreement with Cornford (2001:46) and subsequently assert that general practitioners define their own learning needs in terms of perceived requirements of their practice as well as in terms of their own personal and professional

development. Wun *et al.* (2002:62) confirm this viewpoint and maintain that CPD relies on the self-awareness of areas requiring improvement.

The weakness of the needs assessment of needs by the individual learner is the subjectivity thereof and the lack of existing standards as benchmarks, whereas the worst of the educational needs assessment is the non-individualised nature and the logistical complexity thereof (Handfield-Jones *et al.* 2002:953; Norman *et al.* 2004:1000). The challenge to CPD providers is to invent innovative strategies for needs assessment to increase the objectivity of learning needs assessments while making the process simple enough for providers and participants to perform it regularly (Grant 2002:159; Grant & Stanton 1998:31).

Before the commencement of CPD events, providers of CPD activities should do needs assessments on what, how and why participants want to learn (Dent & Harden 2001:133; Stross 1999:304). They should design CPD opportunities that are convenient for participants in terms of time, place and pace of learning (Dent & Harden 2001:133). The content of the CPD events should match the outcomes and deficiencies in the participants' knowledge and skills and it is the responsibility of the providers to ensure that this happens (Harden & Laidlaw 1992:6; Stross 1999:304). Providers should know the work environment of participants (Wun *et al.* 2002:62) and they should ensure that CPD programmes should cover an area of medicine or a disease systematically (Dent & Harden 2001:150). Roberts and Konn (1991:47) assert that CPD providers tend to be driven by demand for CPD programmes and tend to overlook the individual motivating factor of need. Roberts and Konn (1991:48) acknowledge the controversy of need assessment and conclude that, although it is not practical to consider needs of individuals in CPD programmes, it is crucial; networks of experts in the field should be consulted to identify collective needs of the target audience in the planning phase. Roberts and Konn (1991:48) also are among the few authors like Cervero (1988:3) who write about the lack of organisation and coordination of CPD.

The ideal is that it should be planned and be cumulative throughout a professional's career, but because of the fragmented provisioning of CPD in a fiercely competitive market where business goals conflict with educational goals, CPD needs are addressed inappropriately and educational and training resources are utilised uneconomically.

2.10 CPD LEARNING METHODS

Much has been written on which learning method is the most effective and efficient method in CPD in terms of the purpose of CPD. It is, however, not a simplistic answer because there are a number of variables that will influence the choice of the learning method. These include the preference of learning because of the learning style of learners; the content; the geographical spread of the target audience; the computer literacy of the learners; and available technology, time and resources available.

Cervero (1988:67) summarises the reasons why professionals do not participate in CPD programmes in the following categories in order of priority as disengagement, cost, family constraints, lack of benefit, lack of quality and work constraints. CPD providers can, however, influence cost, lack of benefit, lack of quality and work constraints through the design of the educational event (Cervero 1988:67).

Cervero (1988:67) acknowledges that different professionals have different needs for CPD merely because of their personality, career stage (1988:70), and challenges from the nature of their practice (1988:71) which will all have an influence on the uptake and participation in CPD programmes.

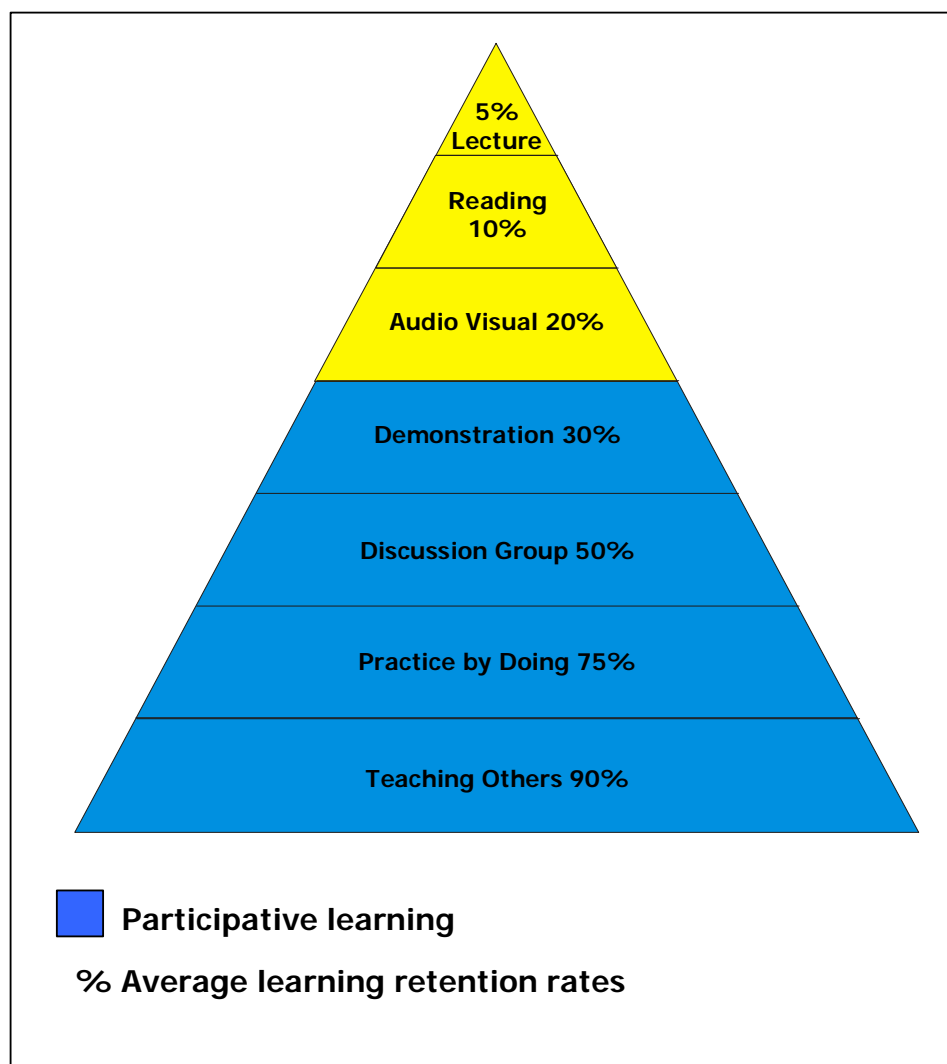
It is also to be acknowledged that not all kinds of learning methods will appeal to all learners because of the different learning styles of learners. There are many approaches to learning styles where some theories are based on personality traits, some on senses, and some on social learning. The

approach used in St Clair (2003:215) to acknowledge that learners have different preferences for learning is sufficient for the purpose of designing CPD activities, provided that an array of activities is designed to provide for all preferences. The categories identified are the physically-centred learner, the emotional or relational learner, and the mentally-centred learner (St Clair 2003:215). The physically-centred learner prefers to learn by watching and doing. The content must be applicable to the learner and must be practical. These learners can learn in cooperation with others. The emotional learner prefers to listen to others and by talking to others about the activity. The learner needs to verbalise to learn and enjoy a creative atmosphere. The mentally-centred learner prefers to focus on the theory and learns independently and focuses on one aspect at a time. It is also noteworthy that in the development of learners they need to be aware of their learning styles but also need to be aware that the preferred learning style may not always be the appropriate style for a specific situation and that they need to be flexible to other situations (St Clair 2003:216).

In Blandford (2000:22) four styles are described, namely the activists, who are similar to the emotional learner in St Clair (2003:16); second, the reflectors (these learners tend to be cautious and like to spend time listening and observing and prefer flexitime); third, the theorists (they like to test theories on observations; they are analytical; they prefer detail and structured events) who are consolidated as the mentally-centred learners in St Clair (2003:16); and the fourth style is the pragmatists who are similar to the physically-centred learner as per St Clair (2003:16). Therefore in a learning event the challenge is to satisfy all learners' preferences. Usually not more than one or two learning methods are employed in a single event to ensure transfer of learning. An example in this regard is a lecture with a PowerPoint presentation with a session with questions and answers which will typically satisfy only the mentally-centred. In this scenario the physically-centred learner did not have the opportunity of doing and the emotional learner did not have the opportunity to discuss the new concepts.

The learning pyramid with average retention rate percentages per teaching method as cited by St Clair (2003:222) and also by the National Training Laboratories (2006) is not substantiated by original research, although literature in adult learning principles does support the effectiveness of participative learning (blue blocks) irrespective of learning.

FIGURE 2.1: THE LEARNING PYRAMID



Source: National Training Laboratories (2006)

Pereles, Lockyer and Fidler (2002:206) investigated the role of permanent small groups as part of the provisioning of a social structure for learners in

which learning can take place (Todd 1987:64). This is also in line with the social constructivist learning theory that asserts construct of knowledge takes place through a process of discussion and sharing of experiences and problems (Merriam & Caffarella 1999:70). Bouhuijs (in Todd 1987:54) also supports the provisioning of a social structure for learners in which independent learning can take place and asserts that syndicate groups of learners significantly contribute to the successful completion of learning programmes (Todd 1987:64).

In a study done by participants who were all part of permanent small groups they reported diversity as a positive aspect because of the different perspective to problem-solving it brought to the group (Pereles *et al.* 2002:208). Participants reported that they listened, reflected and shared opinions and clinical experiences in the small group (Pereles *et al.* 2002:209) which is in congruence with the principles of experiential learning. They identified poor follow-up on unresolved issues by dedicated members as a weakness in the small groups (Pereles *et al.* 2002:209). The participants reported that they made changes to their practice specifically if there was evidence to support the change; if all members of the group were in agreement to the change; and if the change was consistent with their beliefs. The changes often occurred over time (Pereles *et al.* 2002:210). The group was sustained by a group member who acted as the facilitator who was responsible for the operational and logistic arrangements of time, place, topics and hand-outs. The facilitator also acted as the chairperson in some groups, the motivator, to keep the groups going. Some of the groups dissolved where the facilitators became tired of all the arrangements (Pereles *et al.* 2002:211). The researchers concluded that these small groups could have achieved higher levels of cohesion specifically in the manner they had not followed up on unresolved issues, incrementally changed behaviour, agreed to disagree in conflict situations and dissolved groups in case of the facilitator's burn-out (Pereles *et al.* 2002:213).

Another example of the “practise by doing” learning method is employed in clinical skills centres. Du Boulay and Medway (1999:185) report in their review on the effectiveness of clinical skills centres in the UK that it is congruent with self-directed, problem-based and lifelong learning methods. They identify the scope of a clinical skills centre which is beyond merely a place appropriate to attain clinical and practical skills and do assessment. They include the attainment of communication skills, management skills, decision-making skills, and leadership skills through structured experiential learning and also computer-assisted learning through interactive computer-based multimedia because these centres can be bases for linking information technology. These centres also support multidisciplinary team-working. Du Boulay and Medway (1999:185) furthermore support geographically decentralised centres customised to local needs which can, in addition, be utilised for health education for the local population.

Kleinsasser and Theisen (1999:183) affirm that computer-assisted instruction (CAI) through, for example, intranet supports the adult educational principles of convenience in terms of time and place. The needs of individuals are addressed as well because of the opportunity to select content. The majority of the participants to their study rated the CAI as good and very good. Litchfield, Oakland and Anderson (2000:1192) conclude in their literature review that the preferred learning style of the majority of the general population in America is based on experiential and cooperative learning - characteristics of learner-centred education. Therefore this approach is followed in the dietetic internship at Iowa State University in order to enable the transfer of knowledge to practice, to nurture critical thinking, to evoke problem-solving, and stimulate lifelong learning. They assert in their study that distance education should therefore be transformed to be learner-centred through the use of internet chat rooms, bulletin boards, video and audio, interactive simulations, group case study presentations, and site visits (Litchfield *et al.* 2000:1193).

There are also studies supportive of less interaction, for example the study done by Mahmoud *et al.* (2006:812). They reviewed the impact of study methods of learners on their performance in the board exam and the subsequent qualifying exam in general surgery residency programmes. They reached the conclusion that directed learning was most conducive to transfer of learning. This included didactic lectures, board type questions and answers, ward rounds, chapter reviews, presentations of topics chosen by learners and weekly "morbidity and mortality" rounds (Mahmoud *et al.* 2006:814). Their conclusion is therefore that directed study, which is a basic adult learning principle (Gravett 2005:9; Vella 1994:188), is of greater importance than interaction or recognition of preferred learning style.

Barnes (1998:278) questions the effectiveness of CPD in the traditional format of courses and grand rounds for medical practitioners because of the limited proof of impact on health care outcomes and she calls for integrated learning. She proposes a model where practitioners can identify learning opportunities that will directly have a positive impact on their practices. This is also in line with the adult learning principle of adults' need to be able to apply what they learn in their life-worlds (Vella 1994:187; Wlodkowski 1999:33). In integrated practice-learning the learner should therefore start at his/her practice and identify areas for development. The author proposes that information systems will be critical to facilitate this process (Barnes 1998:279). She identifies three learning systems (Barnes 1998:280) supportive of this approach, namely the Maintenance of Competence Programme (MOCOMP), The Stanford Health Information Network for Education (SHINE), and Indiana University of Medicine. The MOCOMP programme starts with practitioners listing issues that they want to learn more about with an incident from practice that caused this need and the impact a learning activity will have on the practice. In this manner practitioners develop their own structured plan for learning. In SHINE the system provides consolidated and validated results to a query and also facilitates videoconferencing and e-mail. The third system is a simulation

programme where practitioners can assess the cost implication and outcomes of various approaches to patient care. She concludes that the successes of these systems are the effective use of information technology (Barnes 1998:281).

2.10.1 Computer-assisted learning (CAL)

CAL as a preferred learning method was well researched and many articles were found reporting on the methods, considerations, the benefits and constraints and uptake in the various forms of computer-assisted learning.

The methods identified in the literature include, among others, telemedicine (Yamakawa, Hashiba, Koyama & Akazawa 2002:444); teleconferencing (Demartines, Mutter, Vix, Leroy, Glatz, Rosel, Harder & Marescaux 2000:290); internet distance learning (Peterson, Galvin, Dayton & D'Alessandro 1999:1435); interactive video (Demartines *et al.* 2000:290; Reiss, Cameon, Matthews & Shenkman 1996:350); videoconferenced grand rounds (Zollo, Kienzle, Henshaw, Crist & Wakefield 1999:108); electronic discussion groups (Roberts & Fox 1998:215); bulletin boards (Roberts & Fox 1998:215); electronic newsletters (Pastuszak & Rodowicz 2002:164); and electronic learning portfolios (Dornan, Carroll & Parboosingh 2002:767).

The considerations for CAL identified in the literature are very similar for the various methods such as correct technology, for example correct bandwidth for telemedicine (Yamakawa *et al.* 2002:444). With the right technology and the right target audience, teleconferencing and telemedicine could be positive and accurate (Demartines *et al.* 2000:290). Internet CPD opportunities should also be technically user-friendly, considering the time it takes to download and answer assessment (Peterson *et al.* 1999:1435) and the necessary technology support for example bulletin boards (Roberts & Fox 1998:215).

The educational challenges of interactive video through tele-education identified by Zollo *et al.* (1999:114) are the coordination of availability of both the health professionals at the receiving site and the transmitting site to ensure virtual interaction. The ACCME also has certain criteria for providers of CPD events, for example the registration criteria; responding to questions; dispensing of hand-outs; ensuring trouble free technology; evaluation of the programme; certifying attendance; and monitoring the event. These necessitate an on-site facilitator. A further challenge is the lack of informal interaction between the participants and the facilitator, which is an important characteristic of adult learners (Gravett 2005:15; Jarvis 2004:144; Vella 1994:182).

Roberts and Fox (1998:215) concluded in their study that - for electronic discussion groups as an effective information-sharing platform - the prerequisites are clear aim and objectives; access to resources; facilitation to independence; sufficient membership to counter non-participation; and the necessary technological support, for example bulletin boards.

2.10.1.1 *The benefits of computer-assisted learning*

The organisational benefits of interactive video through tele-education include enhanced patient care; reduced costs due to travelling to training venues; minimised staff absence and loss of productivity due to travel time; increased staff training and updates on changes in health environment and legislation; exposure to academic grand rounds and case presentations on best evidence therapeutic interventions; increased recruitment opportunities to rural areas; and increased opportunities to virtual interaction with peers, academics and experts (Zollo *et al.* 1999:112). Reiss *et al.* (1996:350) are in congruence with Zollo *et al.* (1999:112) that videoconferencing is cost-effective and concluded that a physical workshop per capita would have cost six times more than the cost related to method. They also considered hidden cost in both situations.

Pastuszak and Rodowicz (2002:164) agree to the cost-effectiveness of computer-assisted learning. The use of electronic newsletters, for example, is economical, but it is also cognisant of the adult learning principles of convenience in terms of time and place and the needs of the learners because the respondents had a choice of topics. It is concluded in St Clair (2003:218) that the benefits of e-learning include cost-effectiveness; accessibility to large numbers; flexibility in terms of time; the message is consistent and customised; it suits certain learning styles; and it is available "just in time".

2.10.1.2 *The constraints of computer-assisted learning*

Peterson, Galvin, Dayton and D'Alessandro (1999:1435) identified lack of internet and computer skills as a major barrier to the uptake of internet CPD activities. Another barrier identified by them is the potential security hazard to pay for internet CPD activities perceived by users (Peterson *et al.* 1999:1435).

2.10.1.3 *The uptake of computer-assisted learning*

Sargeant, Allen, O'Brien and MacDougall (2003:117) performed a need assessment among community specialists on their perceived need for videoconferenced grand rounds as a CPD activity towards the MOC programme required by the Royal College of Physicians and Surgeons of Canada. The majority of the respondents (84%) to this study indicated that they would be interested in attending videoconferenced grand rounds.

Pastuszak and Rodowicz (2002:164) reported in their study on an internal electronic newsletter containing all the latest research with a post-test that employees could do to earn CPD points with. The response rates were relatively low, but the authors reported that the younger employees were consistently participating. The response rates were as follows: For

professional nurses 20%, for caregivers and support staff 15% and for all employees 29%.

Dornan *et al.* (2002:767) measured the uptake and use of an electronic learning portfolio as part of CPD. The uptake was low with 24% using it infrequently and 3% using it once a week. The reasons given for not using it were personal preference, time constraints, and computer constraints. The main reasons given for using the electronic portfolio was personal preference because of preferred learning style.

The New York State Area Health Education Centre (AHEC) Programme was established with a broad purpose to improve quality of health care, specifically in health professional shortage areas which include the placement of health professionals in these areas; to ensure CPD; and professional support of these professionals (New York State AHEC 2006:1). A synergistic arrangement between the AHEC and a Hospital Library Services Programme (HLSP) developed with the goal of accessible, cost-effective and best evidence information in support of the CPD of health professionals as part of the purpose of AHEC (Byrnes, Kulick & Schwartz 2004:335). The HLSP operationalised its goal through enhancing AHEC sites with computers and internet access and all clinical staff participated in the project. The teams consisted of medical doctors, registered nurses and physician assistants. All participating sites first received training in how to search for information using Pubmed and the Internet (Byrnes *et al.* 2004:336). The authors concluded that the nursing staff assimilated the information-seeking behaviour with a great deal of enthusiasm and overall it had a positive effect on all participating health professionals' realisation of incorporating evidence-based medicine into clinical practice (Byrnes *et al.* 2004:338). It seemed that the more remote areas benefited more from the project (Byrnes *et al.* 2004:338).

2.10.2 Reading as a CPD method

Armstrong, Johnston, Bridges and Gessner (2003: 25) performed a study and reached the conclusion that reading is a preferred CPD method of alumni professional nurses. Corry (2001:81) performed a similar study with alumni dentists and concluded that dentists used various sources of information as part of CPD such as courses, internet and journal articles. Tolnai (1991:414) performed a study on the effect of the under-graduate learning strategy on preferred learning methodology for CPD and no direct effect could be identified. Moon (1999:34) asserts that journals encourage learning because reflective thinking is demanded from the reader, which is associated with - for example - linking theory and practice; experimenting; relating new theory with old concepts; critical thinking; and exploring new concepts. Moon (1999:39) identified a comprehensive list of the purposes for journal writing of which all are conducive to CPD. These include the recording of experiences and to facilitate learning from experiences; to develop critical thinking; metacognition and ownership of learning; to increase the ability in reflection and reflective practice; to enhance problem-solving, creativity and writing skills; to use journals as a form of assessment in formal education; for personal development and behaviour change; to create a platform to develop the ability to express themselves and to promote communication and research.

Armstrong *et al.* (2003:25) reached the conclusion that almost half of the registered nurses as participants of their study selected reading as their preferred method for CPD. Other independent learning methods selected by them were membership and subscription to professional journals. This is similar to the outcome of the study done by Tolnai (1991:416) who asserted that participants to their study, who were medical doctors, indicated that reading was their most frequent CPD activity (Corry 2001:76).

Gluck and Hassig (2001:273) reported that access to information, for instance a library, was pertinent in a CPD programme that supported self-directed learning to satisfy learners' needs as they arose. This is in line with adult learning principles (Roberts & Konn 1991:162) as well as with the quality assurance criteria set by the ACCME who suggests that one of the criteria for accrediting providers for CPD activities should be the inclusion of minimum standards for library facilities as part of the resources needed to support its mission (ACCME 2003:3). Gluck (2004:119) drew a very important distinction between the role of CPD programmes which generally addressed the collective CPD needs of health care providers, whereas the library addresses the individual CPD need of the health care practitioner. Gluck (2004:120) also reiterates the eminent role libraries play in the pursuit of self-directed lifelong learning and the link with evidence-based medicine in the search for answers to questions to improve quality care. Gluck (2004:121) and Roberts and Konn (1991:162) are in agreement with the role of the library as the source of latest research and best evidence medicine and the importance therefore of libraries as a resource for CPD.

2.10.3 Self-directed learning

Self-directed learning and self-assessment should be encouraged (WFME 2002:11, 21, 22) at CPD events and therefore facilitation instead of lecturing at the events should be promoted (Vaughn & Baker 2001:610). Majumdar (1999:38) describes self-directed learning as a process where the learner and the facilitator are equal partners in the development of a learning contract consisting of minimum expected standards of behaviour, specific learning outcomes for the learner, resources for the attainment of set outcomes, evidence of accomplishment of the outcomes and assessment process. CPD providers should support participants through providing learning resources, mentoring and study guides (Dent & Harden 2001:147; Epstein & Hundert 2002:232). Roberts and Konn (1991:56) are in congruence that there should be greater flexibility in CPD through utilising the principles of adult learning

such as self-directed learning, including for example distance learning. Bouhuijs (in Todd 1987:54) also appreciates the health practitioners' time constraints and suggests distance learning as a component of CPD, thereby subscribing to the CRISIS criteria supportive of adult learning principles as identified by Dunn and Hamilton (in Harden & Laidlaw 1992:2).

2.10.4 Portfolios

According to Bond (in Clyne 1995:147) portfolios are valuable in CPD because they facilitate learning through critical self-analysis in the process of collating evidence in the demonstration of the attainment of measurable learning outcomes. These learning outcomes are usually set by the individual in collaboration with the mentor or peer group. Portfolios are supportive of self-directed, learner-centred learning.

2.10.5 Conclusion on CPD methods

Ockene and Zapka (2000:33s) concluded in their study that, for CPD to be effective and efficient, it needs the support of management; must be based on best evidence medicine; must have a variety of learning strategies; and must be student-orientated, participative and problem-orientated. They are also supportive of comprehensive study material and emphasise interactive learning strategy as opposed to mere information dissemination for building skills. In this regard they are supportive of using technology for application of knowledge in case studies and receiving feedback from experts. They warn in their article against the approach to CPD events that are merely increasing awareness but have limited effect on changing practice behaviour. They assert in their review that there is enough proof that short review of theory with follow-up of interactive sessions such as role-play, case studies and discussions for application of theory has positive effects on skills acquiring. They further assert that, for CPD to be effective, it must be designed taking cognisance of the needs of all stakeholders (learners, regulators, patients and

experts) with respect to knowledge, attitudes and skills as well as the environment of the place of delivery. Another important contribution made by them was the emphasis they placed on the dimensions to be considered for transfer of skills to the practice to be effective. Apart from the skills health professionals have to have the organisation needs to be supportive of the newly acquired skills; there should be systems and procedures in place to support application of the new skills and providers need to be informed of what changes to expect.

Vaughn and Baker (2001:610) are in agreement with Ockene and Zapka (2000:33s) in many aspects including the assertion they made that to accommodate all learning preferences, a variety of learning methods should be promoted. They are also in concurrence with them and others that CPD events should be learner-centred in that providers should be aware of the expectations of the participants (Stross 1999:304; Vaughn & Baker 2001:610) and take cognisance of the needs of the learners (Grant & Stanton 1998:9; Stross 1999:304). Roberts and Konn (1991:50) support this notion and are also of the opinion that CPD events will be more successful if they are in line with adult principles. Examples provided are participative learning, peer discussion, and peer audits and reviews.

2.11 LEARNING NETWORKS AND COMMUNITIES

McDonnell, O'Morain, Boland, Culhane, Johnson, Johnson, Murray and Doyle (2003:16) concluded in their study that the utilisation of special interest networks to implement clinical guidelines through educational interventions impacted on practice behaviour of participants of their study and therefore yielded positive results. There are examples in other professions of similar networks such as the RICS network for chartered surveyors which provides a broad range of services to its members of which lifelong learning and the management thereof are important components (RICS 2006). The concept of networks to support effective induction as the entry point to effective CPD in

other professions such as teaching is also well acknowledged (Tomlinson 1997:84).

Murphy, De-Back, Bunkers, Koerner, McBeth, Papenhausen, Burgess, Michaels and Ethridge (2004:10) of the Global Nursing Exchange assert that the success of the specific network is its support of the creation of a learning community with a shared vision. The core values of this network that support the success of the network are the personal approach of inviting individuals not representatives of organisations; the promotion of free expression of ideas; and an unstructured approach to allow for creativity, uniqueness and diversity. Inventive and imaginative thought is encouraged, while play was part of the gatherings. Blandford (2000:8) asserts that a learning community consists of individuals who have opportunities for learning and that it is within a learning community that CPD will become effective.

Malloch, Sluyter and Moore (2000:380) describe a network built around an interest and subsequent purpose as an effective mechanism to support connections among professionals isolated in their own work. They describe a process of frequent small group meetings and two annual network meetings. They also describe five stages of involvement of members in the relationship-centred care network starting with detached observer (novice), progressing to active participant (advanced beginner), to integration with the process (competent), to therapeutic engagement (proficient) and, ultimately, to dialogic engagement (expert). These five stages are in congruence with the work of Benner (1984:20) which relates to the five stages she defines in the development of professionals. Benner's five stages are: Novice Practitioners (Benner 1984:20); Advanced or Beginner Professionals (Benner 1984:22); Competent Professionals (Benner 1984:25); Proficient Professionals (Benner 1984:27); and Expert Professionals (Benner 1984:31).

Cioffi *et al.* (2003:455) designed a framework for accreditation of personnel in public health also as a continuum of competencies. The foundation of this

framework is based on specific assumptions, namely that it is voluntary; that there are various ways of being accredited and to demonstrate competencies; it is competency-based; and implementation is incremental.

It differs from Benner's model (1984:20) because it consists of only three levels, namely a basic, professional specific and leadership level. The basic level is available to all staff and includes generic competencies. The professional specific level is targeted at specific professions and includes those specific competencies, while the third level targets managers with those specific competencies.

Irvine (2006:209) reports in his review on the General Medical Council that regulates doctors in Britain that there was a change in the late 20th century towards evaluating doctors' practices regularly and doctors needed to adopt new ways of interacting with patients and other health care professionals. There should be involvement from all regulatory, national and public stakeholders facilitated by medical education.

2.12 MENTORING IN CPD

2.12.1 Definitions on mentoring

Over time, various definitions have been suggested by different entities on mentoring. Ultimately they have all reached the same conclusion.

Berk, Berg, Mortimer, Walton-Moss and Yeo (2005:66, 67) define the mentoring relationship as a voluntary relationship initiated by the mentee as follows: "A mentoring relationship is one that may vary along a continuum from informal/short-term to formal/long-term in which faculty with useful experience, knowledge, skills, and/or wisdom offers advice, information, guidance, support, or opportunity to another faculty member or student for that individual's professional development".

The definition as per Berk *et al.* (2005:66) is broad and encompasses most of the other definitions of supervisor, preceptor, role model and mentor found in literature.

Of the various other definitions, Levy, Katz, Wolf, Sillman *et al.* (2004:846) distinguish between the supervisor, the preceptor, the role model and the mentor through defining these roles. They define the role of the supervisor as a vertical relationship; the preceptor is the teacher; and the role model is at a distance with short interactions with the trainee. The mentoring relationship is an ongoing planned relationship (Levy *et al.* 2004:846; Lewellen-Williams, Johnson, Deloney, Thomas *et al.* (2006:276).

Lister (2004:580) has a more informal view of a mentor and regards seniors, family members, peers, and juniors alike as potential members because of the potential source of skills that they have that can be learned from them.

Dilenschneider (2000:167-171) is in agreement with this in his assertion that the classical idea of the older expert as mentor and the younger mentee is not the only form of mentorship and that mentors come from a broad array of people such as peers, expert younger people, family members, ourselves through previous life experiences and, similarly, through deceased people's experiences and examples.

Howatson-Jones (2003:37) concludes that clinical supervision is a vertical professional relationship with the goal of lifelong professional development through reflection on practice to ultimately improve patient care.

Kalinauckas in Clyne (1995:133) emphasises the role of coaching in a successful CPD process. He describes coaching as the process of identifying a person's needs, values, beliefs and vision on the one hand and integrated them with those of the organisation on the other hand through listening and

questioning, which is in congruence with the definition of a mentor of Berk *et al.* (2005:66).

Finally, Duda (2004:325) defines the role of the mentor as a teacher, a role model, a coach, a sponsor, an exemplar and a confidant to the protégé or mentee, which is in coherence with the seven roles identified by Tobin (2004:114). Tobin (2004:114) identified seven roles of the mentor which are a teacher of skills, a sponsor or link to a network, an advisor or councillor, a confidante or sound board, a role model, a coach or motivator, and an agent to liaise on the mentee's behalf when necessary without making the mentee dependent.

For the purpose of this study the definition of Berk *et al.* (2005:66) and the seven roles of a mentor as identified by Tobin (2004:114) will be accepted as the parameters.

2.12.2 Mentoring models

Having defined mentoring, Lewellen-Williams *et al.* (2006:278) developed an encompassing mentoring model that was based on a well-functioning network with four role-players. The role-players as identified in their model are the mentees, peer mentors, onsite mentors and distance mentors. In their research the peer mentors were junior faculty, the onsite mentors were senior faculty, while the distance mentors were private-practice physicians, state and national legislators and other health care professionals.

In a multiple approach to mentoring, Singletary (2005:857) identifies four different mentoring models to satisfy the needs of the 21st century medical training, namely mosaic, collaborative, special interest group and mid-career mentoring.

Mosaic mentoring is described as a model where the mentee has several mentors to satisfy a diversity of needs. Collaborative mentoring is a combination of peer support with directed learning in a planned programme. Mentoring through special interest groups is specifically applicable for professional development in specific interest areas and in mid-career mentoring a broad array of needs is addressed as CPD (Singletary 2005:858).

Dr James O'Rourke, leading expert in business communication from Notre Dame's graduate business school, was in agreement with Singletary's multiple approach to mentoring, as acknowledged by him in an interview with Dilenschneider (2000:175, 176).

Uniting the multiple approach within the encompassing model, Rose, Rukstalis and Schuckit (2005:345) also acknowledge different career stages with the concurrent experience in mentoring where the junior faculty may be able to identify more easily with the mentee's needs and perspectives because they have just emerged from the role of a mentee but may feel not confident yet in their mentoring abilities. Mid-career mentors with more experience have more confidence in their mentoring abilities and can mentor a number of students on a broad range of goals. Late-career mentors have a wealth of experience and knowledge accompanied by power, influence and professional reputation. These career stages as described by Rose *et al.* (2005:346) are chronologically somewhat similar to the role-players of peer mentors, onsite mentors and distance mentors as identified by Lewellen-Williams *et al.* (2006:278).

As further support to the model, Rockman, Salach, Gotlib, Cord and Turner (2004:398) described in their study a typical example of mentoring through special interest groups to satisfy the overwhelming need among family physicians (members of the Ontario College of Family Physicians) who had participated in their study for access to mental health specialist support and education in various topics in the area of mental health. The respondents to

the study indicated they preferred telephone and face-to-face conversations as methods for communication with their mentors rather than e-mail communication (Rockman *et al.* 2004:399). In this programme volunteers enrolled in the mentorship programme consisting of 10 psychiatrists, 10 psychotherapists and 100 physicians. The mentors received a stipend for the year and the expectation was to be available for one hour per week. Mentors were divided among the mentees per clinical interest and geographical location. Distance was not considered a barrier because of existing technology. The programme was launched through a conference with topical issues as well as issues integral to mentor relationships. The programme was most beneficial in the areas of family practitioners confidence, knowledge and referral patterns, but family practitioners reported that they would prefer a better geographical match between mentor and mentee with subsequent face-to-face contact; more reach out from mentors; quicker responses from mentors and better match in communication method between mentor and mentee; formalised expectations between mentor and mentee; and better utilisation of the network (Rockman *et al.* 2004:401).

In addition, in a survey done by Levy *et al.* (2004:849) in 2002 to 2003 with medical housestaff (response rate 74%, sample size 127) at Brigham and Women's/Faulkner Hospital more than 90% of the respondents indicated that formal mentoring programmes were valuable to them. In this formal mentoring programme mentors had been assigned to mentees. In this survey physical interaction was limited, but it was supported through e-mail. In this programme mentors were asked to physically meet with mentees at least twice a year, but to be available for urgent meetings. In the survey 58% of the pairs kept to the minimum standard and 28% met more than four times that year. Scheduling difficulties were reported as the most common reason for no meetings. Half of the respondents indicated a need for more contact with their mentors. Only 17% of the respondents requested a change of mentors despite the fact that in the formal mentoring programme mentors were assigned. It is also noteworthy that spontaneous mentoring is also

stimulated through this formal programme but it does not replace the formal programme in this institution (Levy *et al.* 2004:850). In the study done by Rose *et al.* (2005:346) respondents also reported that physical contact sessions were preferred best, but telephone contact and e-mail might supplement contact.

Sowan, Moffatt and Canales (2004:332) developed a mentoring partnership model from an educational perspective. According to this, students are placed in the workplace and a triangular approach with explicit roles for the preceptor, the faculty and the student is followed. The preceptor should be willing, able and available to accept a student. The word "preceptor" is used here as a synonym for "mentoring" (Sowan *et al.* 2004:333). The student should be actively involved in the day-to-day activities of the work place; reflection must be done on prior experience; and periodical progress reports must be done. The faculty must facilitate the relationship between the mentor and the student, monitor progress, and evaluate attainment of outcomes. The role of each member is written out and clarified and written agreements are made with the student before placement. Formative and summative assessments are integrated in the mentorship and both the mentor and the faculty are parts of the process. It is a transparent process. The pilot project was perceived as positive by all role-players, namely the faculty, the students and the workplace, reflecting the sentiment as predicted by the encompassing model.

Duda (2004:325) also acknowledges that it may be necessary that a mentee should have more than one mentor to satisfy all his/her development, academic, and career needs.

2.12.3 Benefits and constraints

Berk *et al.* (2005:66); Levy *et al.* (2004:847); Lewellen-Williams *et al.* (2006:275); Lewkonia (2001:427); Steiner, Curtis, Lanphear, Vu and Main (2004:865); and Sword, Byrne, Drummond-Young, Harmer and Rush (2002:427) all agree that mentorship programmes and networks of peers support professional development. There is a subsequent positive correlation between mentoring and professional development and productivity. Duda (2004:325) and Tobin (2004:117) conclude that mentoring is a mutually beneficial relationship.

Lewellen-Williams *et al.* (2006:275) further assert that if people from previously disadvantaged communities are to achieve and maintain positions of leadership, mentor relationships are essential (Lewellen-Williams *et al.* 2006:276). Sword *et al.* (2002:427) also list as advantages of mentorship programmes career development, professional socialisation, increased confidence and competence, and job satisfaction.

Tracy, Jagsi, Starr and Tarbell (2004:1848) reported in their study that most mentees indicated that having a role model, increased visibility, feeling more supported in general, having someone to turn to, and having access to departmental information or resources were benefits of the mentoring programme.

Both time constraints and lack of insight into the value of building mentor-protégé relationships threaten the establishment of these relationships (Levy *et al.* 2004:845; Lewellen-Williams *et al.* 2006:275).

Duda (2004:326) further claims that lending institutional support to mentorship programmes and giving recognition to mentors are vital in the success for mentorship programmes.

2.12.4 Skills, attributes, characteristics and responsibilities of mentors

In both Levy *et al.* (2004:847) and Rose *et al.* (2005:344) it is asserted that a natural affinity is a prerequisite for a positive mentoring relationship. Levy also emphasises that external enforcement will not foster effective mentor-mentee relationships (Levy *et al.* 2004:848). Lister (2004:579) states that effective mentorship is as dependent on the attributes of the mentor as it is on the mentee's.

Much has been written on the favourable skills of mentors and Lewellen-Williams *et al.* (2006:278) identify two sets of skills, which are content-related skills and interaction-related skills. Berk *et al.* (2005:66) followed a similar approach in their research in the design of a mentorship profile questionnaire which consists of two sections. The first section asks questions related to relationship skills and the second section investigates job-related skills.

Through their research Steiner *et al.* (2004:865) categorised desirable attributes in three domains, namely personality traits, interpersonal skills and professional skills. The respondents to their study indicated most frequently that the relationship with their mentor had a significant influence on them (69%), followed with the mentor's professional skills (61%) and last the personality of the mentor (17%).

Given the results of the study of Steiner *et al.* (2004:865), it therefore seems sufficient to categorise the favourable skills of a mentor in the two categories as collectively identified by Berk *et al.* (2005:66); Lewellen-Williams *et al.* (2006:278); and Steiner *et al.* (2004:865). These two sets are content- or professional-related skills and interaction- or relationship-related skills. Although an attempt is made to list attributes and skills within the two

identified categories, it needs to be acknowledged that these categories are interrelated.

The following attributes of an effective mentor, relating to the interaction or relationship skills, were identified in the literature study:

- Trustworthiness, honesty, professional integrity and confidentiality (Berk *et al.* 2005:66; Kalinauckas in Clyne 1995:135; Levy *et al.* 2004:848; Rose *et al.* 2005:347; Steiner *et al.* 2004:870).
- Communication skills (Howatson-Jones 2003:40; Kalinauckas in Clyne 1995:135; Price & Balogh 2001:209).
- Sensitivity (Price & Balogh 2001:209).
- Willingness to share (Price & Balogh 2001:209).
- Approachability (Price & Balogh 2001:209).
- Commitment (Berk *et al.* 2005:66; Price & Balogh 2001:209).
- Active listening skills (Dracup & Bryan-Brown 2004:449; Howatson-Jones 2003:40; Kalinauckas in Clyne 1995:135; Levy *et al.* 2004:848; Rose *et al.* 2005:347; Singletary 2005:849, 859; Steiner *et al.* 2004:870).
- Being a role model (Dracup & Bryan-Brown 2004:449; Harris & Hung 2004:390; Rose *et al.* 2005:345; Singletary 2005:849).
- Time management skills (Singletary 2005:849, 859).
- Approachability (Berk *et al.* 2005:66; Howatson-Jones 2003:40; Levy *et al.* 2004:848; Steiner *et al.* 2004:870).
- Being able to acknowledge the importance of the mentee (Levy *et al.* 2004:848).
- Being able to accommodate the mentee (Berk *et al.* 2005:66; Levy *et al.* 2004:848; Rose *et al.* 2005:347; Steiner *et al.* 2004:870).
- Being able to inspire mentees and encourage them to share career and development plans (Howatson-Jones 2003:40; Levy *et al.* 2004:848; Singletary 2005:849; Steiner *et al.* 2004:870).
- Supportiveness (Berk *et al.* 2005:66; Levy *et al.* 2004:848; Rose *et al.* 2005:347; Singletary 2005:849; Steiner *et al.* 2004:870).
- Promoting independence (Howatson-Jones 2003:40; Singletary 2005:849).

- Being able to acknowledge when he/she does not know and ask someone else (Levy *et al.* 2004:848).
- Enthusiasm, motivation, encouragement (Dracup & Bryan-Brown 2004:449; Levy *et al.* 2004:848; Singletary 2005:849; Steiner *et al.* 2004:870).
- Non-judgemental (Kalinauckas in Clyne 1995:135; Levy *et al.* 2004:848; Steiner *et al.* 2004:870).
- To allow the mentee to change to another mentor (Levy *et al.* 2004:848).
- Not to compete with a mentee (Levy *et al.* 2004:848; Steiner *et al.* 2004:870).
- Being able to give praise and recognition (Kalinauckas in Clyne 1995:135).
- Self-knowledge (Dracup & Bryan-Brown 2004:449).
- Having strategic vision (Dracup & Bryan-Brown 2004:449).
- Being able to take risks (Dracup & Bryan-Brown (2004:449).
- Creativity (Dracup & Bryan-Brown (2004:449).
- Interpersonal effectiveness (Dracup & Bryan-Brown (2004:449).
- Being able to build rapport (Kalinauckas in Clyne 1995:135).

The following attributes of an effective mentor, relating to the content or professional skills, were identified in the literature study:

- Being able to reassess needs (Rose *et al.* 2005:347).
- Expertise (Berk *et al.* 2005:66).
- Respect by peers in the field (Berk *et al.* 2005:66).
- Negotiation and teambuilding skills (Singletary 2005:859).
- Presentation skills (Singletary 2005:859).
- Teaching skills (Dracup & Bryan-Brown 2004:449; Rose *et al.* 2005:345; Singletary 2005:857).
- Demonstration techniques (Rose *et al.* 2005:345).
- Assessment skills (Rose *et al.* 2005:345).
- Being able to identify learning styles and adapt their teaching style accordingly (Rose *et al.* 2005:345).
- Professionalism, ethics and values (Rose *et al.* 2005:345).

- Being professionally successful (Rose *et al.* 2005:345; Steiner *et al.* 2004:872).

These interpersonal and professional attributes and skills will enable the mentor to fulfil the responsibilities identified as follows in the literature study:

- Support the mentee in the access to resources, experts and source materials in the attainment of set goals (Berk *et al.* 2005:66; Dracup & Bryan-Brown 2004:449).
- Act as a guide and give direction regarding professional development plans (Berk *et al.* 2005:66).
- Give continuous constructive feedback and critique on progress (Berk *et al.* 2005:66; Rose *et al.* 2005:347; Steiner *et al.* 2004:870).
- Facilitate the mentee's development plans, not the mentor's development plans - focus on the mentee (Berk *et al.* 2005:66; Kalinauckas in Clyne 1995:135; Levy *et al.* 2004:848; Rose *et al.* 2005:347; Steiner *et al.* 2004:870).
- Present the mentee with challenges to promote the development of his/her capabilities (Berk *et al.* 2005:66).
- Be accessible to mentee and reply timely, direct and comprehensively to questions (Berk *et al.* 2005:66).
- Respect each mentee as an individual with unique needs and strengths (Berk *et al.* 2005:66).
- Analyse the strengths of the mentee (Rose *et al.* 2005:347).
- Acknowledge progress and attainment of goals of the mentee timely and specifically (Berk *et al.* 2005:66).
- Celebrate success with the mentee (Berk *et al.* 2005:66; Singletary 2005:849).
- Focus on future opportunities (Kalinauckas in Clyne 1995:135).
- Be objective (Kalinauckas in Clyne 1995:135).
- Facilitate career decisions (Dracup & Bryan-Brown 2004:449).
- Willing to build meaningful relationships (Rose *et al.* 2005:345; Steiner *et al.* 2004:872).

- Making mentoring a priority (Rose *et al.* 2005:345; Steiner *et al.* 2004:872).
- Willing to put in effort to spend time with mentee amidst a demanding schedule (Rose *et al.* 2005:345; Steiner *et al.* 2004:872).

Apart from what the responsibilities of the mentor are it is also noteworthy to list those things identified in the literature as destructive for the mentor/mentee relationship:

- Promoting your own agenda (Kalinauckas in Clyne 1995:135; Rose *et al.* 2005:347).
- Using the mentee as "free labour" (Rose *et al.* 2005:347).
- Being cynic (Kalinauckas in Clyne 1995:135).
- Being distrustful (Kalinauckas in Clyne 1995:135).
- Creating fear (Kalinauckas in Clyne 1995:135).
- Being sceptic (Kalinauckas in Clyne 1995:135).
- Taking credit (Rose *et al.* 2005:347; Singletary 2005:849).
- Taking over (Singletary 2005:849).
- Forcing the mentee in a direction (Singletary 2005:849).
- Making a "clone" or mould out of the mentee (Rose *et al.* 2005:347; Singletary 2005:849).
- Being a problem-solver (Singletary 2005:849).

Not only Rose *et al.* (2005:347), but also Singletary (2005:850) identify what the mentee should do and should not do. The principles are the same and have to do with internal locus of control, positive attitude, perseverance, purposefulness and decisiveness.

2.12.5 Stages in the mentoring process

Wilkins (1997:82) identifies four developmental stages in supervising the counsellor which are worthwhile considering. The first stage is the beginner stage where the practitioner is dependent on the supervisor. In this stage the

practitioner is the teacher and the practitioner the receiver of answers, support, knowledge, guidance and direct boundaries. The second stage identifies the probation stage. Characteristic of this stage is the practitioner's display of various degrees of dependency on the supervisor. In some areas the practitioner is independent and in some areas more dependent. In this stage an integration of knowledge in practice is notable. The supervisor is still a teacher and manager of knowledge and skills to be attained, a giver of information. The third stage is the journeyman stage in which the practitioner is well aware of his/her strengths and development needs and professional confidence is apparent. The role of the supervisor starts to transform to one of collaborator. In this stage the practitioner also starts to explore other ideas and approaches to practices. The last stage identified in the development stages is the master practitioner characterised by high levels of autonomy. The direction in the supervision sessions is shared and the supervisor is now a peer to the practitioner.

Amorosa (2004:94-95) proposed a five-step mentoring process that concurs with other literature on the proposed responsibilities of an effective mentor. The process includes a holistic assessment of the mentee's professional background, academic background and personal circumstances. An assessment of strengths and development needs will also be included. Levy *et al.* (2004:846) are in concurrence with this first step because they identified needs identification, an important starting point for the mentor-mentee relationship. The second step of Amorosa's (2004:94-95) five-step process is to identify the mentee's future development plans and career development plans. Next is the assessment of accomplishments and giving feedback. Although constant flow of information is listed as the next step, it is actually an ongoing two-way process between the mentor and the mentee to ensure the attainment of goals. The last step is the mentor's guidance given in all the dimensions whether it is work-, development- or personal-related. Dilenschneider (180:2000) asserts that mentoring should be approached strategically, while objectives and progress should be constantly monitored.

2.12.6 Interest to subscribe

Sword *et al.* (2002:429) did a study at McMaster University School of Nursing in Canada to determine interest of professional nurse alumni to be mentors to student nurses and also to determine work experience, educational background, questions and concerns about being a mentor, specific skill and interests of importance in a mentoring relationship. They sent out 600 questionnaires to alumni and had a 20% (121) success rate. Only 8% (10) of these indicated that they would not be interested in being a mentor. They also sent out 584 questionnaires to students to determine expectations of the mentorship programme and had a 65.8% (384) success rate. Junior students expressed the greatest need for a mentor (96%) and post-graduate students the least desire (58%). They implemented a mentorship project based on the outcome of the study and reported that the highlights of the project were the guide given to mentors and mentees with the role descriptors and other resource information the meetings with other mentors and mentees to discuss roles and experiences.

2.12.7 Best evidence of implementation of mentoring

Rose *et al.* (2005:344) state that, although mentoring is emphasised in CPD, there are no clear guidelines on the roles of both the mentor and the mentee in informal, or as they refer to it, spontaneous mentor programmes.

Howatson-Jones (2003:41) concludes that the successful implementation of clinical supervision in an organisation will be dependent on a number of elements, such as a policy document and management support of the implementation thereof. A collaborative working group should be established to be the core support and feedback forum. Training and education workshops on clinical supervision should be provided. Both the supervisor and the supervisee should be orientated to their roles and expectations. A network

should be established with other disciplines and forums to support these relationships. Technology such as interactive CD-ROM or websites and e-mail that allows for distance learning, information and communication should be used. The relationships should be monitored and evaluated through the implementation of evaluation tools.

Price and Balogh (2001:209) followed a similar approach in terms of the guide in their mentorship programme and also included information on the process to pair mentors and mentees according to age, gender, ethnic origin, life experiences and career interests. In their programme the dyad model was followed where one mentee had one mentor.

Duda's (2004:326) conclusion is that a strong network of effective mentors is a common characteristic of successful minorities.

2.13 PERSONAL CPD PLAN

It is a widely accepted fact that the ultimate responsibility for the CPD of the professional lies within the individual and that each professional is to ensure that CPD needs are suitably fulfilled (Hilton & Slotnick 2005:59; Lewkonia 2001:426; Roberts & Konn 1991:53; Smith 2006:48; Wilkens 1997:16). However, it is also acknowledged that expert support and guidance in CPD, encouragement of reflection, critical analysis, implementing of a learning contract as a structuring tool with clear goals and objectives are conducive to a CPD culture (Blandford 2000:9; Skovholt 1995:134; Stinson *et al.* 2006:311).

Hansten (2000:26) asserts that, to facilitate critical thinking as an essential element of professional development, the environment must support critical thinking. He describes this environment as one that promotes questioning, thinking aloud and taking risks. He further is of the opinion that continued mentoring will be employed as an educational strategy to promote critical

thinking. He also concludes that critical thinking with the support of planned mentoring will facilitate development of professionals from novices to experts.

Wilkens (1997:17) is in agreement with Hansten in that he asserts that the identification of gaps for CPD is most effectively done by the individual through personal reflection or in discourse with a mentor. He also places the monitoring and evaluation of the satisfaction of those needs through CPD interventions on the individual professional. Wilkens (1997:14) in addition acknowledges the development of professionals through different stages in their careers and warns against stagnation in the absence of continuous reflection.

Wilkens (1997:36) suggests a systematical process of reflection through questioning by individuals with peers or mentors to identify their needs in CPD. These questions lead the counsellors to critically reflect on their original training and experience, their current practice, and current best practices.

2.14 ASSESSMENT

The evaluation of CPD events was dissected by Cervero (1988:134) in seven dimensions and these are subsequently described. These seven dimensions are the evaluation of the design of the educational methodology, comprehensiveness and relevance, congruence between outcomes and the actual content (Cervero 1988:136); the number of participants (Cervero 1988:137); participants' satisfaction in terms of content, educational strategy, cost and facilities (Cervero 1988:139); evaluation of changes in knowledge, skills and attitude frequently done through pre- and post-tests, but role-plays and interviews are also described as successful tools in CPD (Cervero 1988:141); application of learning in practice after some time has lapsed through a self-administered questionnaire or practice audit or observation (Cervero 1988:142); impact of the application of learning on improved patient care, which is the most difficult to measure, but if the learners all come from

the same hospital impact can be evaluated, for example, by an audit of the patient charts of nurses who did and did not attend the CPD event. Evaluation of impact when participants come from multiple sites is not possible through audits and Cervero recommends self-report surveys (1988:144) which will be subjective. The last dimension of evaluation described is related to behaviour change of professionals and it is directly linked with the set outcomes of the programmes. Cervero (1988:145) acknowledges that the variables in this dimension make it very difficult to evaluate it accurately because behaviour change as a result of a CPD event will be dependent on the actual CPD event, the learner, the nature of the expected change, and the system in which the learner must apply the change.

St Clair (2003:266) has a similar approach to evaluation of CPD events but consolidated the levels to five. The first dimension is reaction inclusive of satisfaction and the participants' intention of implementation. Second comes evaluation of actual learning through measuring change in skills, knowledge and attitude. The third dimension is the evaluation of behaviour change through a self-perceived evaluation by participants, while the fourth dimension is the evaluating of results through measuring the impact on the organisations' tangible results, for example increased profit or quality. The last dimension is the return on investment and here the investment of the training event in terms of resources is measured against the return in terms of financial gain, organisational culture gain, as well as increased service levels.

Both Cervero (1988:145) and St Clair (2003:267) identify the following tools and methods to be employed in the evaluation process, namely end-of-activity questionnaires by participants; direct observation during the learning activity and at the workplace by the faculty and the employer and the mentor; pre-and post tests; employer and college and learner presentations; follow-up questionnaires, focus groups and interviews.

Brasel, Bragg, Simpson and Weigelt (2004:9) assert that ACGME facilitates process-oriented education to outcome-based education and the subsequent assessment of competence instead of the former approach of assessing the ability to learn. In their study they concluded that traditional rating forms which assess knowledge, skills and attitudes of students completed by the facilitator should be used in combination with other methods. Examples of these assessment methods are clinical evaluation assessments, 360 degree evaluation instruments, portfolios, written examinations, patient surveys, electronic simulation, peer evaluations, observed structured clinical examinations (OSCE), record review and quarterly resident evaluations (Rose & Burkle 2006:212).

Epstein and Hundert (2002:228) and Leach (2002:243) are in agreement that competence is a habit and outcome-based will nurture habits. According to Leach (2004a:859), the four assessment tools that will assess knowledge, skills and habits are cognitive tests; portfolios of clinical experience; direct observation of performance; and 360 degree evaluations by patients, peers and professional associates. A multi-source feedback tool is valuable (Adriaansen, Van Achterberg & Borm 2005:97) because of the potential discrepancy between self-reported improvements of health professionals and patient satisfaction.

These tools are also identified by Tomlinson (1997:51) as useful in facilitating effective CPD, especially if it is within a mentoring relationship. He further says that one of the lessons learned to date (Leach 2004b:13) is that habitual competence requires proof of competencies in day-to-day practice, which is a different approach from residency programme and certification by a board or council to qualify to practise as a professional because it is an ongoing process and therefore the assessment methods should also be ongoing.

Silber, Nasca, Paskin, Eiger, Robeson and Veloski (2004:555) concluded in their research that further research was necessary in order to determine the validity, reliability and feasibility of these proposed assessment methods.

Goroll *et al.* (2004:902) suggest that assessors should have at least clinical expertise and knowledge of clinical performance measurement. Silber *et al.* (2004:555) are in agreement that assessors must be trained.

Beard, Strachan, Davies, Patterson, Stark, Ball, Taylor and Thomas (2005:841) developed an educational and assessment framework for the Foundation Programme in the UK. The aim of the Foundation Programme was that these programmes would be student-centred, competency-based, quality assured and efficient. Each student received an educational supervisor and together they compiled a development plan inclusive of learning objectives, career aspirations and deadlines. The development plan was subsequently used as a tool to record appraisal meetings and formative assessments. At the end of the time period the educational supervisor would record the student's progress, strengths and development needs (Beard *et al.* 2005:843). The Sheffield Peer Review Assessment Tool (SPRAT) consisting of 24 questions covering the five main domains of Good Medical Practice (good clinical care; maintain good medical practice, teaching and training; appraising/assessing; good clinical practice; relationships with patients, working with colleagues) was used because of its utter reliability and validity (Beard *et al.* 2005:843). The SPRAT was also implemented as a multi-source feedback tool from educational supervisor, self-assessment and assessment by peers. They concluded that SPRAT should not be used in isolation and suggested that additional assessment methods should be implemented in conjunction with this tool, for example observation of clinical and practical skills and case-based discussions (Beard *et al.* 2005:850). Harris and Hung (2004:391) are in agreement that assessing of professionalism could not be done on a form with a standardised scale such as is the case with the SPRAT.

2.15 CONCLUSION

It can thus be concluded that the literature is in coherence concerning what CPD is, why CPD is important and how CPD should take place. It is, however, noted that little is written on the role of HEIs and sustained responsibility towards alumni's CPD, although HEIs currently do have alumni associations as well as CPD functions. The weakness identified in the literature is that these functions are fragmented, duplicated and haphazard and, although alumni are a natural audience, CPD is not necessarily targeted towards them and furthermore not in a continuous manner to develop professionals to maintain, change or improve levels of performance. The challenge remained for this study to develop a model to support this.

The next chapter will endeavour to identify the best preferred components of a model to manage CPD for alumni of a PHEI in the planning, organising, implementing and monitoring phases for the effective implementation of the model.

CHAPTER 3

RESEARCH DESIGN AND METHODS

3.1 INTRODUCTION

This chapter contains a description of the research design and the methodology applied in the study. The theory and explanation of the design and selected methods will be discussed. The questionnaire as data collecting method will be discussed comprehensively, as well as the manner in which the questionnaire was compiled by using information gathered from the literature study. In the last place, the statistical techniques used to analyse the data will be presented in detail.

3.2 BASIC DESIGN

A research design should provide a plan that specifies how the research is going to be executed in such a way that it answers the research question (Terre Blanche & Durrheim 1999:29).

A starting point in formulating this plan that Terre Blanche and Durrheim (1999:29) refer to is to decide on the classification of the basic design. First one needs to understand the distinction between experimental and non-experimental research.

Kerlinger (1986:348) defines non-experimental research as the systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestation has already occurred or because they are inherently not manipulable. Whitley (2002:184) explains

that experimental research seeks to obtain answers by manipulating a condition, in other words by introducing some change into a situation.

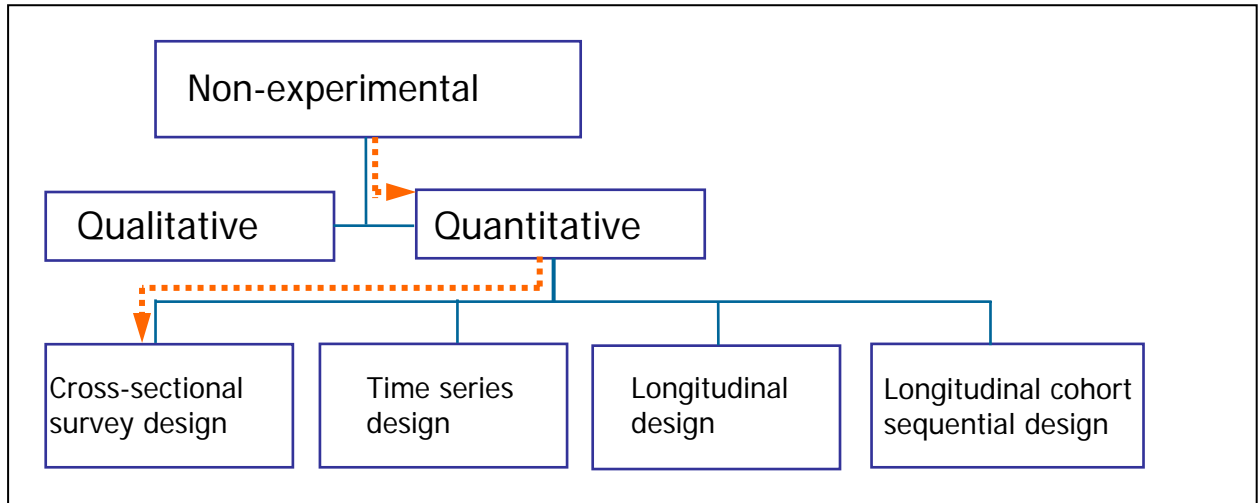
The current research design is non-experimental, as there will be no attempt to manipulate any variables.

All non-experimental research designs can be classified as qualitative or quantitative research. Quantitative studies are defined by McDaniel and Gates (2001:98) as studies that use mathematical analyses that can reveal statistically significant differences. Qualitative studies refer to studies where open-ended questions are asked and they do not normally produce numeric data (Punch 2003:3).

According to Breakwell *et al.* (2000:89), various different quantitative research designs exist. These include time-series, longitudinal, longitudinal cohort sequential and cross-sectional designs. He explains a cross-sectional survey as being one of the simplest types of survey designs, as it involves approaching a sample of respondents only once. The sample is regarded as a cross-section of the population under study. It is possible to make comparisons between subgroups (like males and females) and look at relationships between variables.

Figure 3.1 presents a summary of the thought process followed to arrive at the classification of the research design as a non-experimental, quantitative, cross-sectional survey.

FIGURE 3.1: THE BASIC RESEARCH DESIGN FOR THE CURRENT STUDY



According to Punch (2003:23-24), there are seven major components to consider when conducting surveys. These include:

- The objectives of the survey.
- The research questions to be answered through the survey.
- The questionnaire to collect information.
- The sample of the target population.
- The data collection strategy.
- The data analysis strategy.
- The report on the survey.

The research objectives and research questions components were presented in Chapter 1 and the report will be presented in Chapters 4, 5 and 6.

The main focus of the current chapter is therefore on the questionnaire, the sample, the data collection strategy, and the data analysis strategy. The chapter will follow this structure and each of these components will subsequently be discussed.

3.3 THE QUESTIONNAIRE

Questionnaires are widely used in survey research, yet structured and in-depth interviews, observations, content analyses and so forth can also be used to collect information (De Vaus 2002:3). The current study will make use of questionnaires to collect the information. (See Appendix A for the questionnaire and the information letter.)

A combination of structured and semi-structured (open-ended) questions was formulated to specifically collect the information to support the research objectives.

During the formulation of the questions, the different types of measurement scales were considered. Graziano and Raulin (1989:68-71) explain that there are basically four types of measurement options. The different levels of measurement include:

Nominal scales: This is the lowest level of measurement, where variables are classified into unordered qualitative categories. An example of such variables from the current study is the question on gender:

Please circle your gender	
Male	1
Female	2

Ordinal scales: These types of scales classify data into ordered qualitative categories, for example social class (I, II, III, etc.) where the values have a distinct order, but their categories are qualitative in that there is no natural (numerical) distance between their positive values.

Interval: When the measurement conveys information about the ordering of magnitude of the measurement and about the distance between the values. Likert scale questions such as the agreement scales used in the current study classify as interval scales. While these are strictly speaking ordinal in nature, they are often considered as interval scales by researchers to enable the calculation of means and parametric significance testing. An example of scales that will be treated as interval scales for the above-mentioned reasons is the question on the importance on interaction in the network:

Alumni network interaction

How important is each of the following to you? (Please circle your option)					
Interaction situation	Definitely not important	Not important	Neutral	Important	Very important
Knowing who in your geographical area are members of this alumni network	1	2	3	4	5

Ratio: These are measurements where there is equal distance between the numbers, as with interval scales, yet it also has an absolute zero. An example of a ratio measurement in the current is the question on age:

Please complete	
Age	Years

The questionnaire collected data on the following aspects:

- Personal profile

In the personal profile category information on age, gender, race and access to technology was collected. The biographical data was collected to compare it with the population, which consisted of learners enrolled for courses at the FPD in 2006. It was also collected to identify possible differences between the various groups to provide for in developing the

model. The information on access to technology was used in the design of the model.

- Professional profile

The professional profile category collected information on qualifications, professional categories and fields of study. The information was used to compare the sample with the population and it was also used to identify possible differences and deviations in needs and preferences among the different groups. The different needs and preferences were accommodated in the development of the model.

- Employment background

Information on industry type and management level was collected in this category and considered in the design of the model.

- Geographical profile

Respondents' geographical positions were determined in this category in relation to an Accredited ARV Clinic (National Aids Helpline 2007:1 of 1) in order to determine the physical spread of learners of the FPD and to determine whether it will be practical to utilise this existing infrastructure in the model.

- Communication preferences in an alumni network

In this category information on the communication preferences in an alumni network was collected to utilise in the development of the model.

- Alumni network interaction

In this category information was collected on the level of interaction learners regarded as important in the alumni network. The questions collected information in an escalating manner regarding involvement in the network from only knowing other members on the least level of involvement up to being evaluated by an expert as the maximum level of involvement. The second cluster of questions in this category collected information on respondents' willingness to actively take on roles as expert evaluators, peer evaluators and mentors in alumni network. The information on respondents' perception of the importance on the level of

interaction and willingness to actively take on roles was utilised in the development of the model.

- Accreditation by an alumni network

This category collected information on participants' willingness to be accredited as part of the concept of credentialling and to support the purpose of CPD. The information collected in this category was utilised to develop the credentialling component of the model.

- Educational products in an alumni network

This category collected information on respondents' educational product preferences in an alumni network. The information was used to develop the model and to differentiate educational product preferences for those who were willing and those who were not willing to take part in the network.

- Areas of expertise and interest

Information was collected on participants' clinical, health management, computer, health policy, ethical, interpersonal and personal growth areas of interest, expertise and experience. The information on interests was used to identify collective topics of interest, but also to identify whether there was a comparison between the clinical conditions perceived by respondents as most prevalent and the clinical topics they had interest in and, furthermore, to see if it was in tandem with the health strategies of the National DoH. The information on expertise and experience was collected to identify the potential source of experts available to utilise as mentors, expert evaluators and assessors in the alumni network model.

- Alumni network membership

This category collected information on the respondents' current membership status and products received from existing alumni associations, as well as the decisive question of interest to become a member of an alumni association. The information was utilised to determine the interest and potential participation of alumni in the alumni network.

- Patient profile

In this category information was collected on the profile of the patients of those respondents who had contact with patients. The information was utilised to identify the clinical topics to be included in the clinical updates. The information on the race, age and gender of the patients was utilised in designing the model in terms of the necessity of individualisation of the needs for CPD for alumni.

3.4 THE SAMPLE

The population is a group of potential participants to whom you want to generalise the results of the study (Salkind 2000:86).

The population of interest (target population) for the current study is defined as:

“Learners at the Foundation for Professional Development during August 2006 to November 2006”.

On completion of their training these learners would become alumni of the Foundation for Professional Development and would become eligible for inclusion in a continuous development alumni programme. This population would therefore be best positioned to test certain assumptions about a CPD alumni programme and start the building of a model to manage the programme.

Approximately 2000 learners were included in the training programme during this period and all learners were included in the sample. As the entire defined population was included in the population, no sampling was necessary.

Some information of the broader population, i.e. all alumni members of the Foundation for Professional Development, is available from statistics collected by the Foundation during 2006.

Participation in the research was voluntary and, as the completion of the questionnaire was not mandatory, a 100% response rate was not achieved. A final sample of 1177 was obtained.

3.5 DATA COLLECTION STRATEGY

"The objective of data collection," says Mouton (1996:146) "is to produce reliable data."

Various types of methods exist to distribute questionnaires in survey research. Methods are divided into five main types, namely personal interviews; telephone interviews; mail interviews; self-administered interviews; and electronic interviews (Cant 2003:82). The current research used self-administered interviews. During this type of survey, respondents are left on their own to complete questionnaires (Cant 2003:87).

The advantage of the self-completion method includes the following:

- It is relatively cost-effective.
- Interviewer bias is eliminated.

The disadvantage of this method, however, includes the fact that when respondents do not completely understand a question, there is no interviewer to explain anything. In the current research this disadvantage would be minimised, as there would be a facilitator in close proximity who could help with any questions.

Self-completion questionnaires were distributed to respondents at the onset of clinical and managerial workshops which they attended as participants of CPD learning programmes of the Foundation for Professional Development.

If they agreed to it, all the participants to the workshops received a questionnaire to complete. All the participants to the study signed a consent form to acknowledge that they were participating voluntarily in this research. The completed questionnaires were collected at the workshop. Time was allowed to complete the questionnaires during the workshop. (See Appendix B for the consent form.)

A pilot study to determine the time to complete, the understandability, the validity, as well as the reliability of the questionnaire was conducted with 20 members of the population prior to the implementation of the research. The expected completion time was not more than 20 minutes and all questions were clear to the pilot group. The cover letter was also evaluated for clarity and persuasion power.

While the data collected took place by means of self-completion questionnaires, the respondents were able to clarify any uncertainties during the workshop. Nobody but the researcher had access to the completed questionnaires and the names of the respondents and the completed questionnaires were kept separate at all times. All responses were confidential.

3.6 DATA ANALYSIS STRATEGY

Statistics can be grouped into two main categories, namely descriptive and inferential statistics (Clayton 1984:7). Both these types of statistics were calculated and used to answer the research questions. All statistical analyses in the present study were computed by using the SPSS statistical package for

Windows version 14.1. "SPSS" indicates Statistical Package for the Social Sciences. Statisticians of UNISA were contracted to assist in this regard.

3.6.1 Descriptive statistics

Descriptive statistics describe the general characteristics of a set or a distribution of scores (Salkind 2000:150). Simple descriptive statistics calculated for the study include frequencies, means and standard deviations.

3.6.2 Inferential statistics

Breakwell *et al.* (2000:352) define inferential statistics as the area of statistics which extends the information extracted from a sample to the actual environment in which the problem arises. It therefore seeks to draw inferences from the sample about the population.

3.6.2.1 *Parametric vs. non-parametric statistics*

According to Terre Blanche and Durrheim (1999:118), inferential statistics can be broken down into two broad categories, namely parametric and non-parametric statistics. Non-parametric statistical analysis requires few assumptions about the population and focuses on the order or ranking of scores (or merely the classification function of numbers) and ignores the properties of numbers at interval and ratio scales. Parametric tests require variables to be measured on an interval or ratio scale. Terre Blanche and Durrheim (1999:120) explain that, while some researchers still feel that measures in behavioural science are ordinal in nature and that only non-parametric statistics are applicable, many studies have shown that parametric and non-parametric often yield similar results.

3.6.2.2 *Parametric statistics*

- **T-test**

“This is a commonly used test to measure the significance of the difference between two means based on two independent, unrelated groups” (Salkind 2000:173). “Independence” is defined by Rosnow and Rosenthal (1996:271) as that the results in one group are not influenced by the results in the other group.

The t-value will be positive if the first mean is larger than the second and negative if it is smaller. However, the t-value is seldom interpreted and the p-value is used to gain an indication of the significance of the result (The Web Centre for Social Research Methods 2004:s.p.).

- **Chi-square**

The Chi-square is a statistical significance test based on expected frequencies. Clayton (1984:263) explains that expected frequencies are those that you would expect in a contingency table (cross tabulation of categorical data) if the null hypothesis of independence were true (in other words, that there is no relationship).

3.6.3 **Statistical significance**

Field (2005:31) explains that there are two possibilities in the real world (in the actual population):

- 1) There is, in reality, an effect on the population; or
- 2) there is no effect on the population.

Statistical significance tests begin with the supposition that the null hypothesis is true, in other words that there is not really an effect on the

population. Breakwell *et al.* (2000:357) explain the null and alternative hypothesis as follows:

The null hypothesis states that there is no difference between, for instance two mean scores or no real relationship exists between variables in the population. The alternative hypothesis however states that there is a real difference or relationship.

If assuming that the null hypothesis is true makes the results from the study seems unlikely, then the researcher rejects the null hypothesis and concludes that there is support for the alternative (Leong & Austin 1996:211).

Inferential statistics are therefore used to calculate the probability of obtaining the observed data if the null hypothesis is true. If the probability is small it is unlikely that the null hypothesis is true and one could therefore conclude that the null hypothesis is false. The somewhat arbitrary cut-off that is decided upon is called the Alpha level or p-value.

There is always a chance that the researcher might be wrong in his or her decision, using the probability guidelines. If the researcher rejects the null hypothesis and concludes that the population means are not equal, when in fact they are in the real population, then a Type I error was made. If the significance value is set at 0.05, it indicates that this type of error will occur 5% of the time (Graziano & Raulin 1989:104).

The most frequently used level of statistical significance is 0.05. According to Breakwell *et al.* (2000:360), this is not a magical figure but rather one of convention. For some studies on particularly controversial topics or where making a type I error could have critical consequences, a more strict level could be chosen. For the purpose of this study however, the significance level of 0.05 is considered adequate.

3.7 RELIABILITY AND VALIDITY

Reliability is an indicator of dependability. "Reliability" is defined as the extent to which a measurement instrument yields consistent, stable, and uniform results over repeated observations or measurements under the same conditions each time. "Validity" indicates the degree to which an instrument measures the construct it is aiming to measure (Goodwin 1995:96).

While reliability is most important when measuring psychological *construct* such as depression which can not be measured directly through a range of different questions (mostly scale type questions), it is less of a concern in a study where questions measure more concrete and direct concepts. When asking direct questions, mostly categorical in nature, there is often little doubt as to what is being measured. Therefore no real reliability or validity calculations exist for these types of questions (mostly categorical). Where applicable, and if necessary, a Cronbach Alpha value can be calculated to measure reliability. Rosnow and Rosenthal (1996:124) define the "Internal-consistency reliability" as the degree of relatedness of the individual items in one factor or scale or construct and explain that the Cronbach alpha is the most commonly used calculation for this type of reliability.

The Cronbach alpha has a range of 0-1, where 0 is no internal consistency and 1 is the maximum internal consistency. General rules of thumb for determining what constitutes a good internal reliability are given at 0.75 (Terre Blanche & Durrheim 1999:90). Cronbach alpha was, however, not necessary in this study and therefore not calculated.

Validity will be addressed through "Face validity", which refers to a type of sense check by an expert in the area. While this type of validity is often not enough and needs to be backed up with tests (Goodwin 1995:99), it is

considered sufficient for the current study considering the qualitative nature of the questions and the topic.

3.8 ETHICAL CONSIDERATIONS

To ensure compliance with the code of ethics in research the following precautions were taken:

- **Informed consent**

The participants were given a description of the study and the expected duration of participation. The participants knew that their participation was voluntary and that they would have the choice of either participating or not participating. Participants were informed that there would be no implication for non-participation. Participants to the study would sign a consent form and they would place the signed consent forms in sealed envelopes. The consent forms would be separated from the anonymous questionnaires. This would be done by placing the respective forms in two designated boxes at the workshops. Participants would be guaranteed that all information would remain confidential and anonymous. The researcher's name and contact details would be available to the participants, who would have access to the results of the study.

- **Right to privacy**

The nature and quality of participants' responses would be confidential. No respondent's name would appear on any document. Only a code number would be used.

- **Honesty with professional colleagues**

All information and results of the research project would be complete and honest, founded on evidence-based results.

- **Results of findings**

Conclusions and recommendations regarding results would be made to the FPD, international conferences, and published in accredited subject matter journals.

- **Language of questionnaire**

The questionnaire was available in English and in Afrikaans, as most of the participants to FPD courses understood these languages, although all courses are presented in English.

- Approval had to be obtained from the Ethics Committee of the Faculty of Health Sciences, the University of the Free State. The protocol for this study was approved by the Ethics Committee of the Faculty of Health Sciences, the UFS (ETOVS number: 104/06).

3.9 CONCLUDING REMARKS

This chapter gave the operational direction in attaining the goal of the study. The research design and methodology were discussed. The population and sample were described, as well as the concepts of "validity" and "reliability" and how they were assured in this study.

In the next chapter the results and findings of the questionnaire, as well as the data analysis will be discussed.

CHAPTER 4

RESULTS, DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 INTRODUCTION

The focus of this chapter is the discussion of the results and the data analysis of the questionnaire of the study.

All statistical analyses in the present study were computed by using the software, SPSS statistical package for Windows version 14.1. "SPSS" indicates Statistical Package for the Social Sciences. The quality assurance, appropriateness and processing of the data were done by statisticians from UNISA.

Percentages were rounded off to one decimal and this might result in a total of not exactly 100% in the tables as indicated with "**(x)**" where applicable. As respondents had the option of selecting more than one response to some questions, this will also lead to a total percentage exceeding 100%. This is indicated with a "**(y)**" where applicable.

4.2 RESPONSE RATE

During the research period of August 2006 to November 2006, 1968 questionnaires were distributed to all learners at the Foundation for Professional Development. A total of 1177 questionnaires were completed by learners. Only 1033 could, however, be used and this therefore calculates to a response rate of 52.49%. The 144 questionnaires were not included in the sample, because the answers to questions four to eight - which are pertinent to the alumni network - were omitted. The study was dependent on a self-completion questionnaire and thus 100% completion could not be attained.

4.3 SPECIFIC FINDINGS OF THE QUESTIONNAIRE

The questionnaire was divided into the following categories:

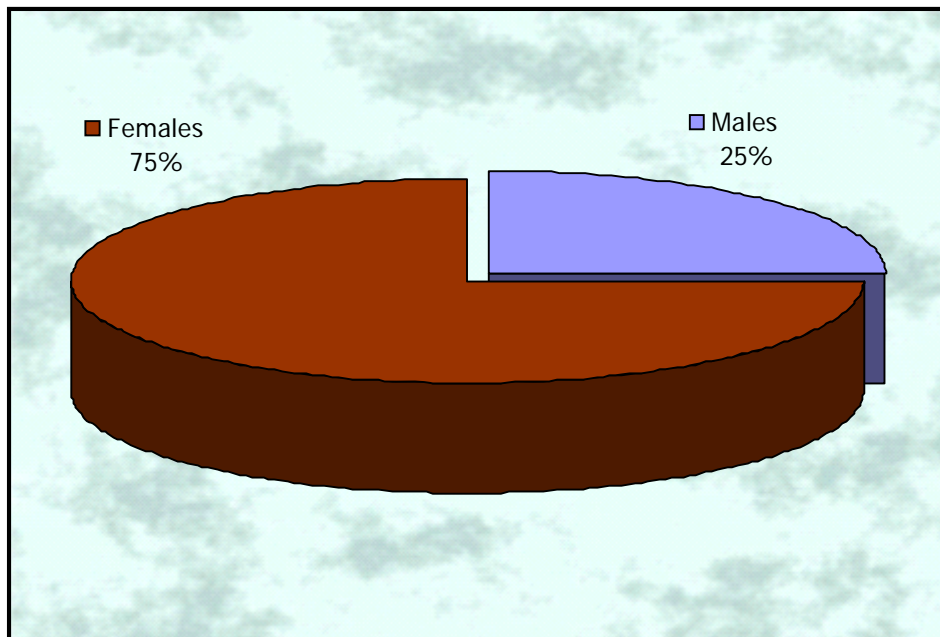
- Personal profile.
- Professional profile.
- Employment background.
- Geographical profile.
- Communication preferences in an alumni network.
- Alumni network interaction.
- Accreditation by an alumni network.
- Educational products in an alumni network.
- Areas of expertise and interest.
- Alumni network membership.
- Patient profile.

The results will be discussed in these categories in paragraphs 4.3.1 – 4.3.7. Graphs or tables will be used to present results.

4.3.1 Personal profile

This section provides the descriptive statistics for the personal profile questions, in other words, gender, age, race and access to technology.

FIGURE 4.1: GENDER DISTRIBUTION OF THE SAMPLE (n = 1018)
(Question 1)



- **Discussion**

Figure 4.1 presents the gender distribution of the sample. Two in three respondents were female. The base size for the gender question is 1018, indicating that 15 respondents did not provide their gender. The gender distribution for the whole learner population of the FPD for 2006 was 67% female and 33% male, which corresponds well with the gender distribution of the sample population.

TABLE 4.1: DESCRIPTIVE INFORMATION ON AGE (n = 1000)
(Question 1)

	Minimum	Maximum	Mean	Std. Deviation
What is your age	20	84	40.49	9.99

- **Discussion**

In terms of age, respondents were asked to provide their actual ages as opposed to choosing from categories and this variable is therefore a continuous variable. The descriptive information is presented in the form

of a table (Table 4.1) in which the minimum age (youngest respondent), the maximum age (oldest respondent), the mean (average age), and the standard deviation (deviation from the mean) are provided.

The youngest member of the survey was 20 years old, while the oldest was 84. On average, respondents tended to be 40 years old and the standard deviation of 10 (9.99 rounded) indicates that approximately 68% of the respondents were between the ages of 30 and 50 years.

TABLE 4.2: AVERAGE AGES OF GENDER GROUPS

(Question 1)

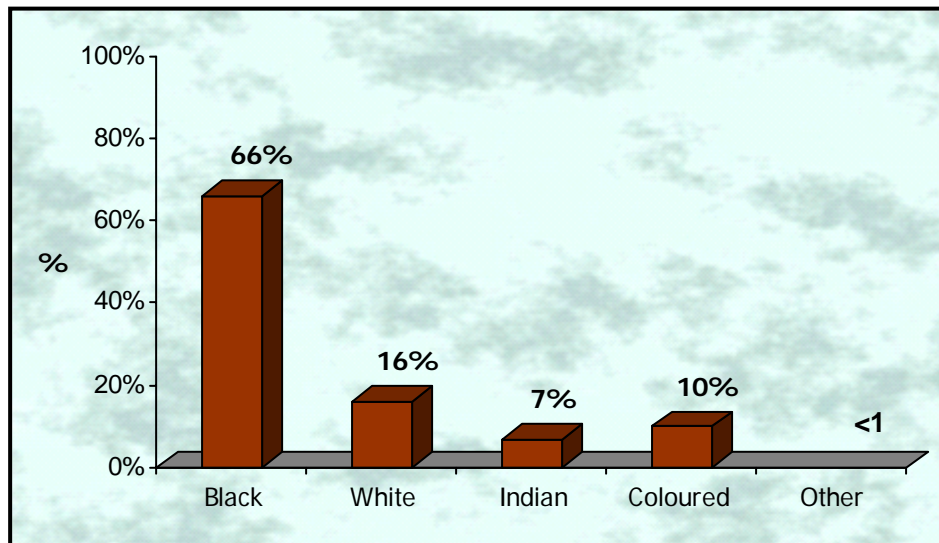
	Minimum	Maximum	Mean	Std. Deviation
Male	21	70	39.56	10.00
Females	20	84	40.78	10.00

- **Discussion**

The males and females who participated in the sample were of similar ages. The average age of males was 40 years and females 41 with similar standard deviations and maximum and minimum ages. A t-test for independent means confirms that there is no difference between the ages (t-value = -1.66; p-value = 0.10). The p-value of 0.100 is above the cut off of 0.05 and the difference is therefore not significant.

FIGURE 4.2: RACE DISTRIBUTION OF THE SAMPLE (n = 1007)

(Question 1)

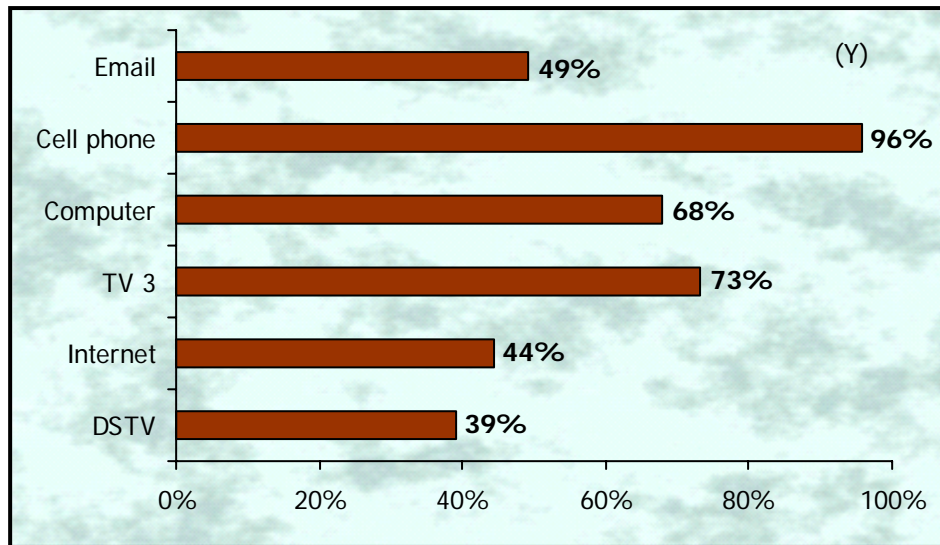


- **Discussion**

The racial group in which the respondents fell is provided in Figure 4.2. The sample consists of 66% black learners; 16% whites; 10% Coloured; and 7% Indian. According to the *South African Health Review 2006* (2006:378), the demographic indicators by ethnic group are 79.5% black, 8.9% Coloured, 2.5% Indian, and 9.2% white. The race of the learner population of the FPD for 2006 was only recorded as white and previously disadvantaged (PDAs) - which included black, Coloured and Indian - and encompassed 16% white learners and a total of 84% PDAs. There is thus a good relation between the race distribution of the learner population of 2006 and the sample population of the study.

FIGURE 4.3: ACCESS TO TECHNOLOGY (n = 1019)

(Question 1)



- **Discussion**

The last question in this section asked respondents to select all technologies from a list that they had access to. The graph in Figure 4.3 presents the percentage respondents who had access to each type of technology.

Nearly all the respondents had access to cell phones (96%). Most had access to television (73%) and computers (68%), although those with computers did not necessarily have access to the internet and e-mail.

TABLE 4.3: PERCENTAGE MALES AND FEMALES WITH ACCESS TO TECHNOLOGIES

(Question 1)

Technology	Males (Y)	Females (Y)
Cell phone	97%	96%
Computer	81%	64%
TV 3	75%	73%
E-mail	70%	43%
Internet	67%	37%
DSTV	55%	34%

- **Discussion**

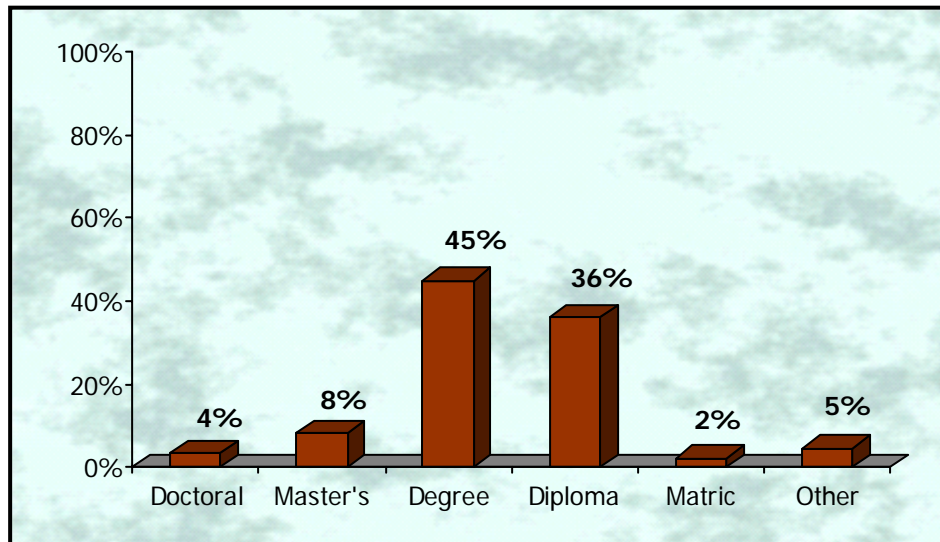
Table 4.3 compares the access of males and females to the different technologies.

Females were less likely to have access to technologies (with the exception of cell phones and TV3). There is a possibility that this is a function of professional qualification, as females might more likely be from the nursing occupational categories with less access. This is further investigated in Figure 4.4 when professional qualification is presented.

4.3.2 Professional profile

FIGURE 4.4: HIGHEST QUALIFICATIONS OBTAINED (n = 923)

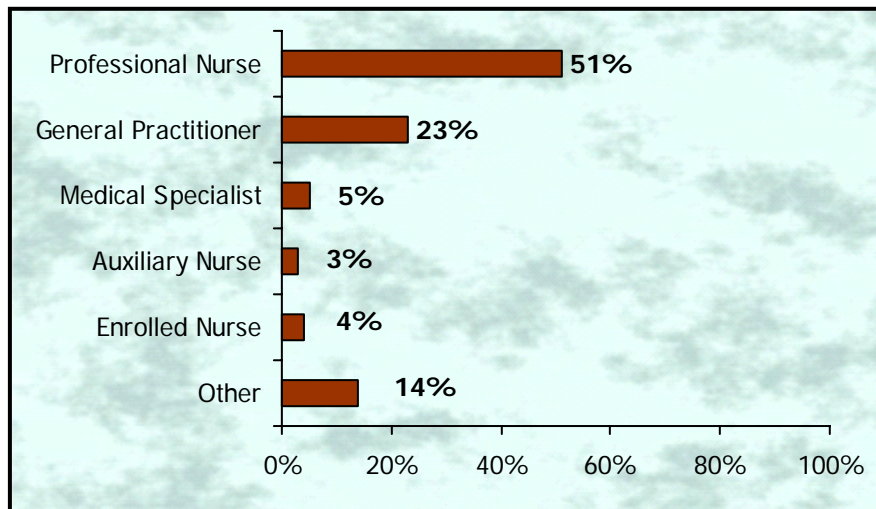
(Question 2)



- **Discussion**

The professional profile questions focus on the qualifications of the respondents. The first question in this section asked respondents to indicate their highest qualifications and Figure 4.4 presents the distribution across the different answers. The sample indicates highly skilled as would be expected of learners and health professionals from a PHEI in the health environment, namely 45% of the respondents with degrees.

FIGURE 4.5: PROFESSIONAL QUALIFICATION OBTAINED (n =978)
(Question 2)



- **Discussion**

Just more than half of the sample consists of professional nurses (51%), with other nursing staff comprising an additional 7%. General practitioners (23%) and medical specialists (5%) make up 28% of the sample. The other 14% consists of dentists, pharmacists, occupational therapists, administrative staff, and also a relatively large component of social workers and councillors.

According to the *South African Health Review 2006* (2006:475), the total number of professional nurses registered with SANC in 2005 was 99 534 and enrolled nurses 37 085. The HPCSA reported that 20530 general practitioners and 10635 specialists had been registered with the Medical and Dental Board by Ms Yvette Daffue of the IT Department on 31 December 2006. There are therefore approximately five professional nurses for every one general practitioner and one specialist for every two general practitioners.

The learner population of the FPD for 2006 was distributed very similar to the sample population in terms of professional breakdown. In 2006

the learner population of the FPD consisted of 49% professional nurses; 26% general practitioners; 29% learners including dentists, pharmacists, occupational therapists, and administrative staff; but also learners who did not indicate their professional qualifications.

This study will mainly focus on the professional nurses' and the general practitioners' preferences and needs in the development of the model given the low percentage representation of the other occupational groups, making it difficult to draw statistically valid inferences for these smaller groups.

TABLE 4.4: PERCENTAGE OF GPs AND NURSES WITH ACCESS TO DIFFERENT TECHNOLOGIES

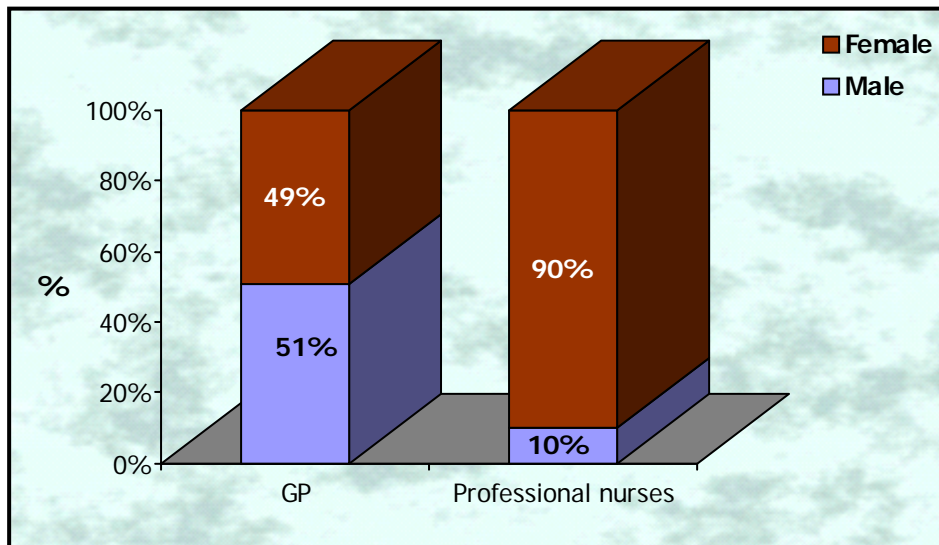
Technology	GP's (Y)	Professional nurses (Y)
Cell phone	99%	96%
Computer	86%	59%
E-mail	84%	32%
Internet	81%	25%
TV 3	74%	76%
DSTV	68%	28%

- **Discussion**

Table 4.4 compares the access to certain technologies across the two main respondent groups, namely GPs and professional nurses.

GPs are more likely to have access to the different technologies than professional nurses. The gender distribution within these two main categories, as indicated in Figure 4.6, shows that GPs are more likely to be male than professional nurses, accounting for the lower access to technology within the female sample.

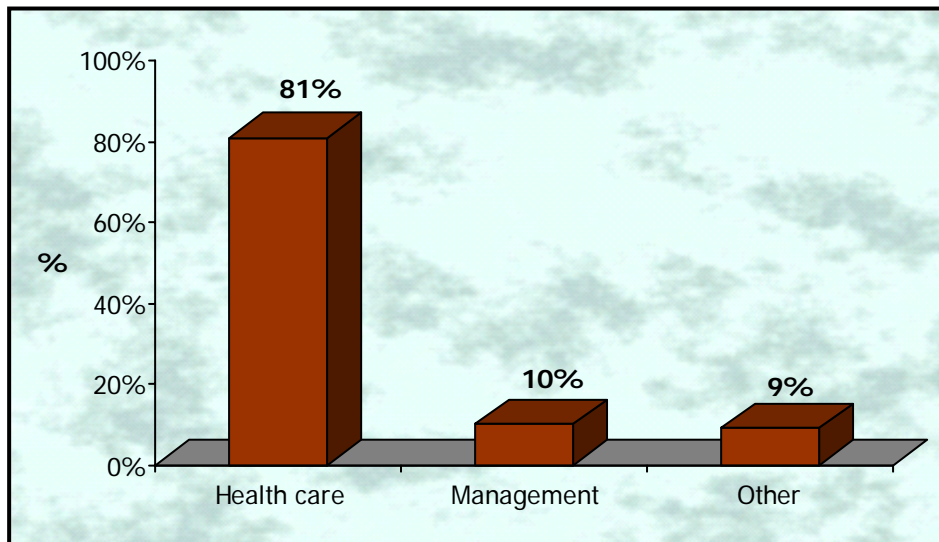
FIGURE 4.6: GENDER SPLIT WITHIN GENERAL PRACTITIONERS AND PROFESSIONAL NURSES



The field of study of respondents is indicated in Figure 4.6.

FIGURE 4.7: FIELD OF STUDY (n = 858)

(Question 2)



- **Discussion**

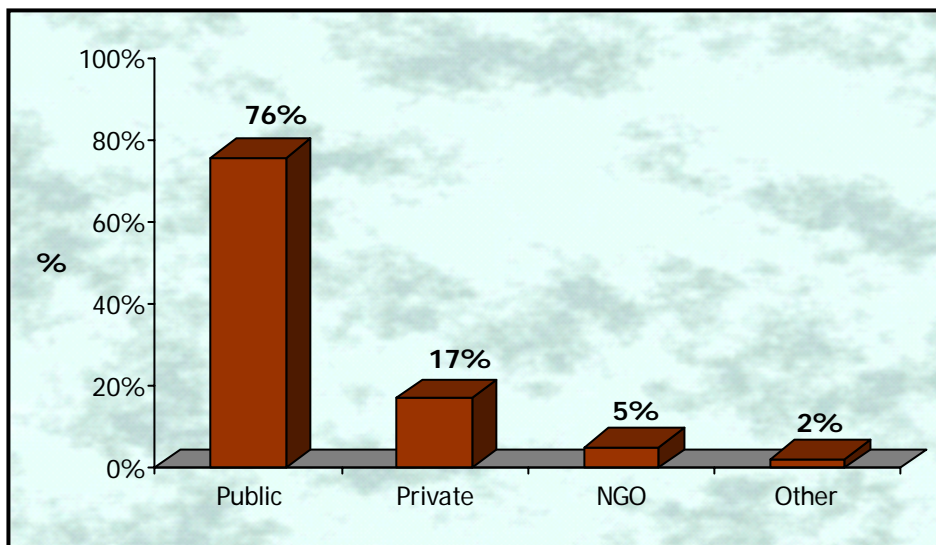
Eight in 10 respondents were from a health care-related field of study. The “other” mentioned referred mostly to social sciences- and counselling-related fields of study, as well as administrative fields.

4.3.3 Employment background

The first aspect of employment surveyed was the industry in which respondents were employed. Figure 4.8 indicates the percentage respondents employed in each of the different industries.

FIGURE 4.8: TYPE OF INDUSTRY EMPLOYED IN (n = 999)

(Question 3)



- **Discussion**

Participants to the study were predominantly from the public sector (76%). The learner population of the FPD in 2006 presented with a similar profile with 76% learners from the public sector.

Managerial responsibilities were examined by means of various questions, the first of which asked respondents if they had any

management responsibilities and the level of management that they were at. Thereafter they were asked if they managed any manager and the exact number of people that they did manage (if they were in management positions).

FIGURE 4.9: MANAGEMENT RESPONSIBILITIES (n = 878)

(Question 3)

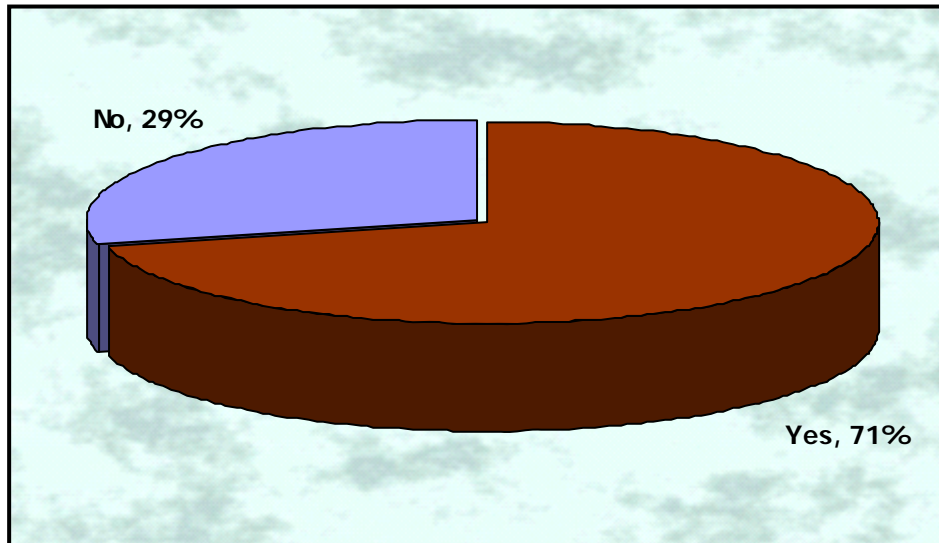
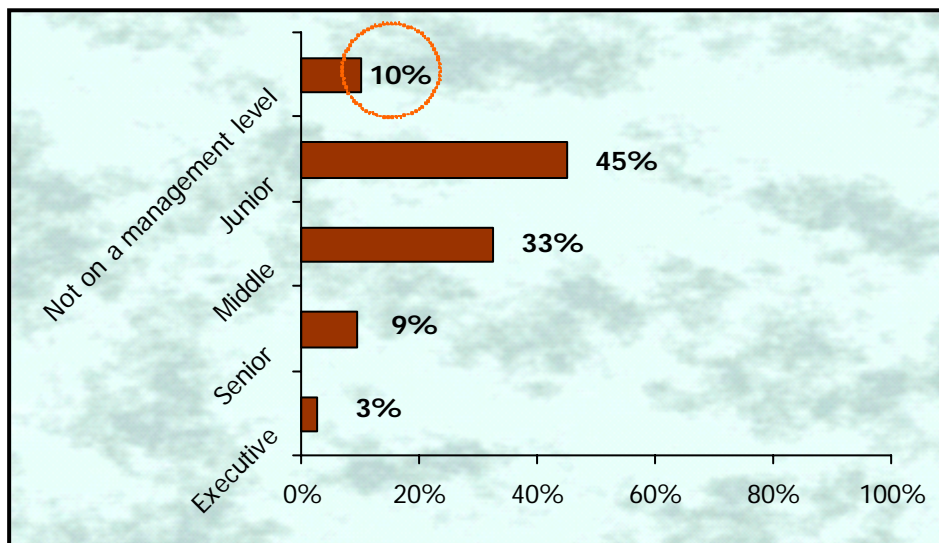


FIGURE 4.10: MANAGEMENT LEVEL OF RESPONDENTS (n = 565)

(Question 3)

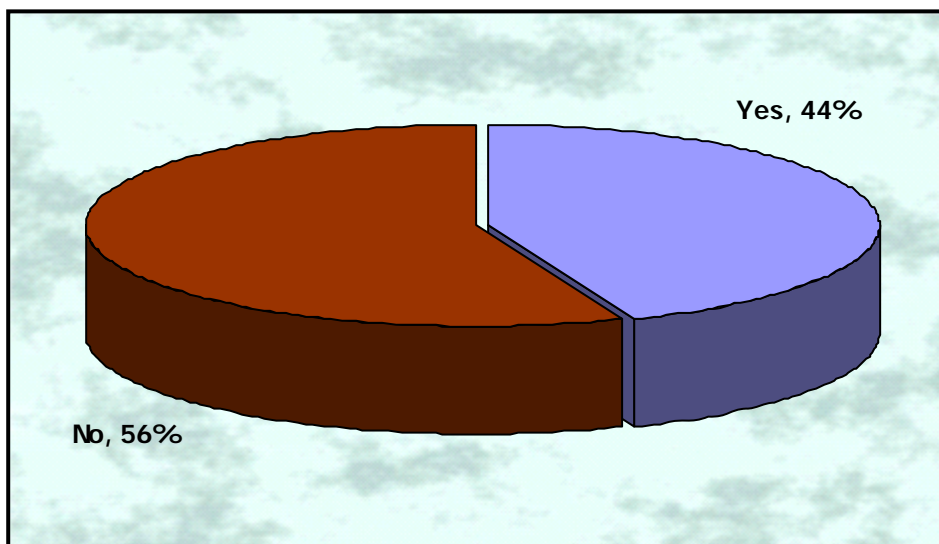


- **Discussion**

While most respondents felt that they had managerial responsibilities (71%), when asked which management level they were at, 10% of the 71% indicated that they were not at management level at all and another 45% were at junior management levels. Some people doubtless felt that they fulfilled management responsibilities, although they were not actually at management level.

**FIGURE 4.11: THOSE WITH MANAGEMENT RESPONSIBILITIES
MANAGING OTHER MANAGERS (n = 462)**

(Question 3)



- **Discussion**

As to the question of whether they managed other managers, 44% of those with management responsibilities claimed to also manage other managers. The considerable increase in "missing" answers (those who indicated "yes" to having management responsibilities but did not provide an answer to this question) could be a further indication that the actual percentage who managed other managers might in fact have been lower. This is due to the fact that the percentages were calculated on valid answers only and 44% might therefore be an artificial increase.

To gain a further understanding of the management responsibilities that respondents faced, they were asked to indicate the number of people they managed and the number of managers they managed (cf. Appendix A, question 3).

TABLE 4.5: NUMBER OF PEOPLE AND MANAGERS MANAGED BY THOSE WITH MANAGEMENT RESPONSIBILITIES

	N	Minimum	Maximum	Mean	Std. Deviation
Number of people managed	411	1	999	35.52	97.79
Number of managers managed	172	1	400	8.09	31.88

- **Discussion**

Table 4.5 presents the descriptive information for these variables in a similar way that age was presented.

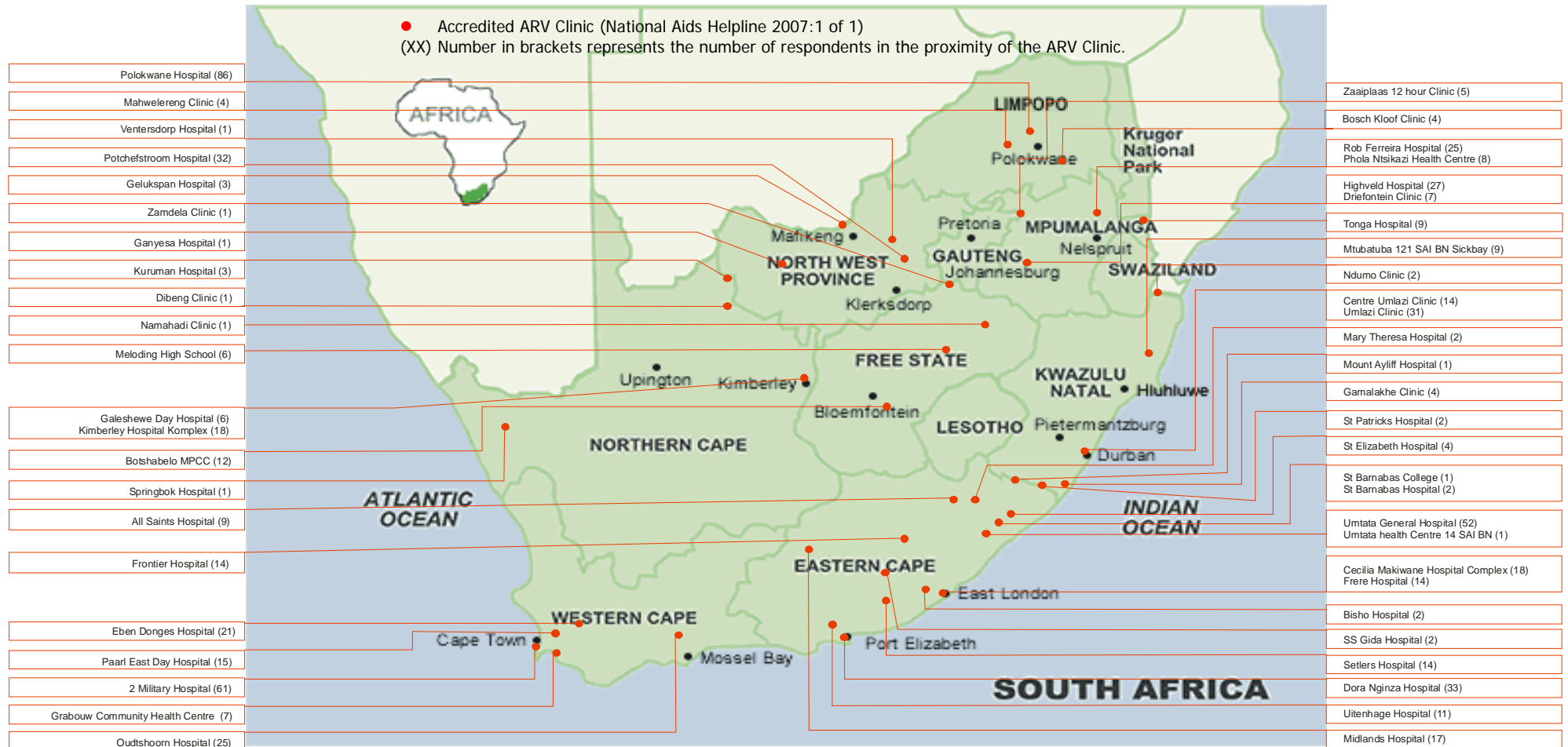
Of the original 660 who had indicated that they had management responsibilities, 411 responded to the question of “how many people do you manage”. On average respondents managed around 35 people, although a large standard deviation of 97.9 indicates that there is a wide band around the mean in which most respondents fall. Only 172 respondents actually indicated any number to the questions of how many managers they managed.

4.3.4 Geographic profile

A geographic profile was established which focuses on the actual province or area in which the respondents worked and the distance to the closest accredited ARV clinic. The researcher used maps published in *Book in Africa* (2007a and b:1 of 1) to plot the actual number of respondents in proximity to the accredited ARV clinics as indicated in the results of question 4a.

FIGURE 4.12a: SPECIFIC GEOGRAPHIC AREA WITHIN EACH PROVINCE WHERE RESPONDENTS WERE LOCATED

(Question 4)

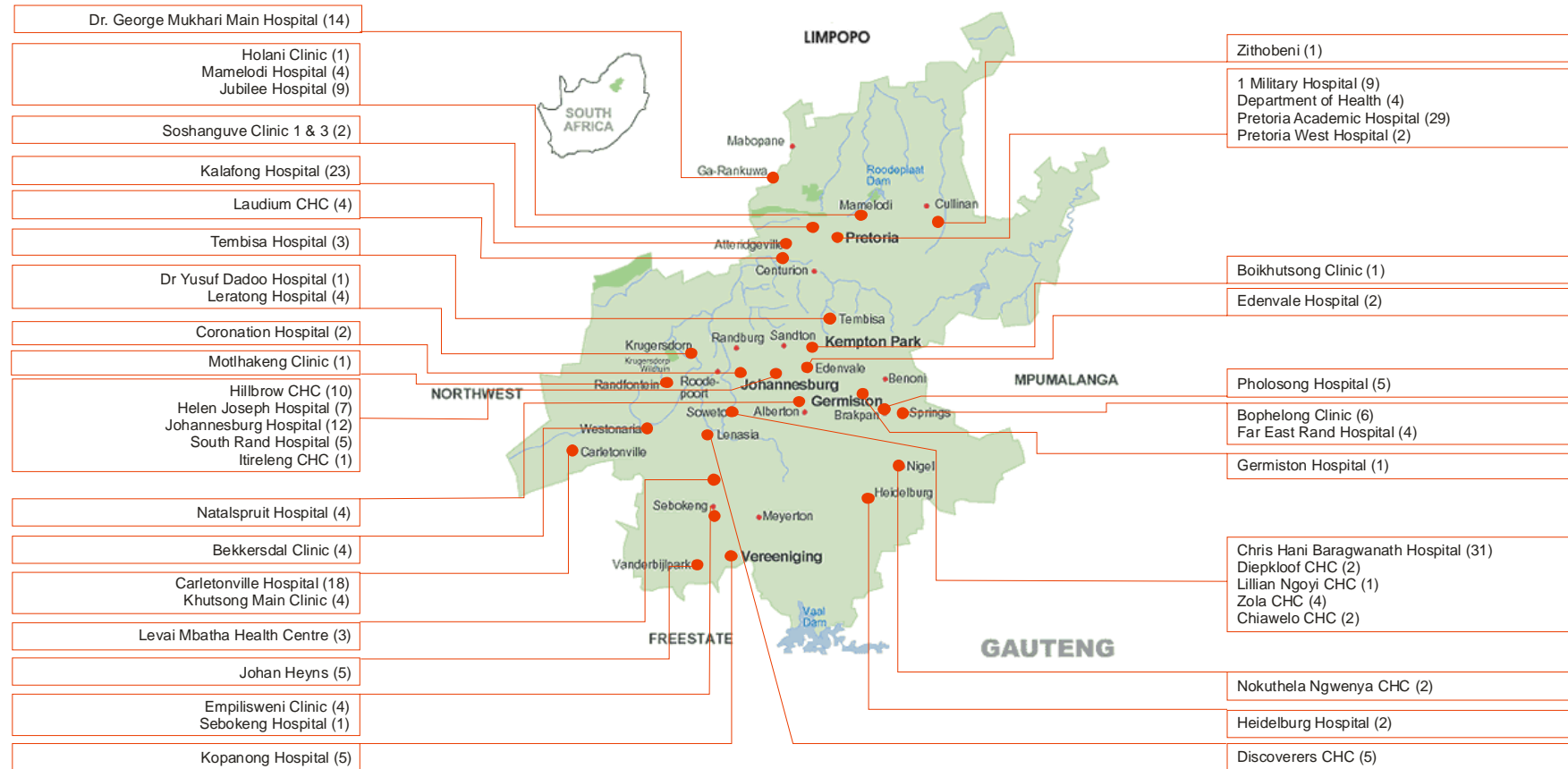


Source: *Book in Africa* (2007b:1 of 1).

FIGURE 4.12b: SPECIFIC GEOGRAPHIC AREA WITHIN GAUTENG WHERE RESPONDENTS WERE LOCATED

(Question 4)

● Accredited ARV Clinic (National Aids Helpline 2007:1 of 1)
 (XX) Number in brackets represents the number of respondents in the proximity of the ARV Clinic.



Source: *Book in Africa* (2007a:1 of 1).

TABLE 4.6: LOCATION OF ALUMNI PER PROVINCE (n = 934)

(Question 4a)

	Frequency	Percent (X)
Gauteng	267	29%
Eastern Cape	199	21%
Western Cape	129	14%
Limpopo	97	10%
Mpumalanga	81	9%
KZN	60	6%
North West	51	5%
North Cape	30	3%
Free State	20	2%

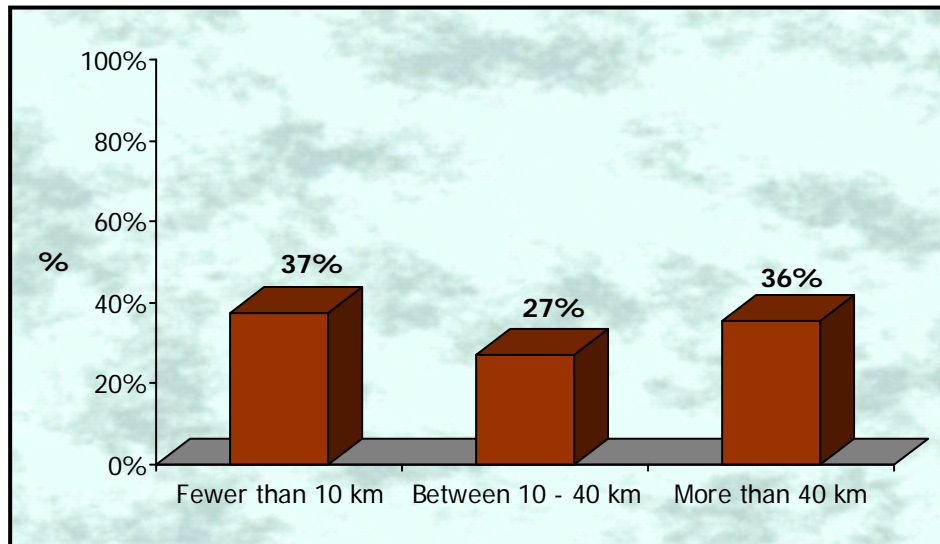
- **Discussion**

A total of 100 accredited ARV clinics (National Aids Helpline 2007:1 of 1) was collectively selected by respondents in all nine the provinces as closest to their workplaces. The province in which respondents worked is indicated in Table 4.6. Figures 4.12a and 4.12b contain detail of the specific geographic area within each province where respondents were located. This information visually presents the geographical distribution of the sample in relation to accredited ARV clinics (National Aids Helpline 2007:1 of 1) of the Department of Health (DoH). Most of the sample was located in Gauteng (29%) and the Eastern Cape (21). The Free State (2%) and North Cape (3%) had little representation in the study.

In 2006 most learners of the FPD came from Gauteng (41%); followed by Eastern Cape (11%); KwaZulu-Natal (11%); Limpopo (11%); Mphumalanga (8%); and Western Cape (7%). North West (5%); Free State (3%); and North Cape (3%) were the three provinces with the least learners. It can thus be concluded that the geographical profile of the sample of this study was very similar to the geographical profile of the population of the FPD learners for 2006.

FIGURE 4.13: DISTANCE FROM AN ACCREDITED ARV CLINIC (n = 857)

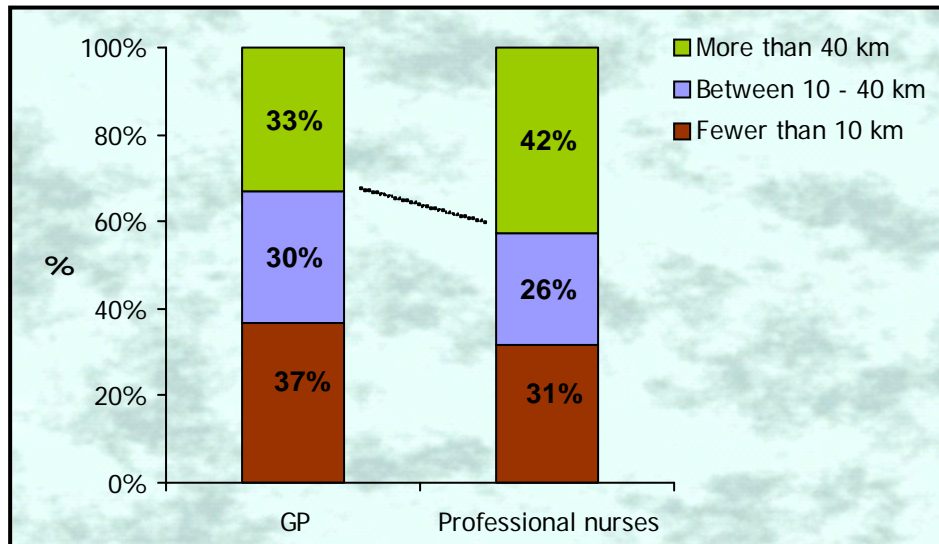
(Question 4b)



- **Discussion**

The workplace of 36% of the respondents was more than 40km from the closest ARV clinic. To examine this in more detail, this question was cross-tabulated with the type of professional group respondents fell into. Only the results for GPs and professional nurses are compared, as these are only two groups with sufficient base size to instil confidence in the interpretation of the analysis.

FIGURE 4.14: COMPARISON BETWEEN PROFESSIONAL GROUPS REGARDING DISTANCE TO THE CLOSEST ACCREDITED ARV CLINIC



- **Discussion**

Professional nurses were slightly more likely than GPs to work further away from an accredited ARV clinic (National Aids Helpline 2007:1 of 1).

In addition to the professional group, the different provinces were also compared with regard to the distances respondents worked from the closest accredited ARV clinic. Table 4.7 presents the percentage of respondents in each province having to travel the different distances. Again, only the results for Gauteng, Limpopo, Western and Eastern Cape are presented due to the small base sizes in the other provinces.

TABLE 4.7: COMPARISON OF DISTANCE TO ARV CLINIC BETWEEN PROVINCES

Distance travelled	Main provinces			
	Gauteng	Limpopo	Western Cape	Eastern Cape
Fewer than 10 km	59.1%	25.0%	18%	39.4%
Between 10 - 40 km	32.0%	43.8%	49.6%	15.4%
More than 40 km	8.9%	31.23%	32.5%	45.1%
Total	100.00%	100.00%	100.00%	100.00%

- **Discussion**

In Gauteng most of the respondents worked relatively close to an accredited ARV clinic (National Aids Helpline 2007:1 of 1), as 60% worked within 10km from such a clinic. In Limpopo and the Western Cape most respondents worked further away, yet it is in the Eastern Cape where 45% of the respondents worked more than 40km from such a clinic.

4.3.5 Patient profiles

Respondents were asked to indicate the distribution of their patients across gender, race and age group. These questions were asked at the end of the questionnaire and many respondents did not answer these questions or did not fully understand the questions. Therefore the base size on these questions is smaller than on most of the other questions.

Only respondents with contact with patients were asked to complete these questions. Of the 744 people who answered this question, 88% said that they had contact with patients.

TABLE 4.8: AVERAGE DISTRIBUTION OF GENDER ACROSS PATIENTS

(Question 11a)

	N	Minimum	Maximum	Mean	Std. Deviation
Males	524	0	100.00	41.81	21.82
Female	525	0	100.00	58.24	21.71

- **Discussion**

Table 4.8 provides the average percentage male and female patients that respondents saw during the course of their work. Only 554 respondents, fewer than 50% of the original sample, responded coherently to this question. From Table 4.8 it appears that some people saw exclusively males or females, although on average the split between males and females is 40/60. Table 4.9 presents the average percentage in different two-age groups. Again a 40/60 split is observed with patients mostly being younger (45 years or younger at 64%).

TABLE 4.9: AVERAGE DISTRIBUTION OF AGE ACROSS PATIENTS

(Question 11a)

	N	Minimum	Maximum	Mean	Std. Deviation
45 years of age and younger	528	5	100	63.6	18.40
Older than 45 years of age	518	0	95	36.8	18.05

TABLE 4.10: AVERAGE DISTRIBUTION OF RACE ACROSS PATIENTS

(Question 11a)

	N	Minimum	Maximum	Mean	Std. Deviation
Black	567	0	100	74	29.31
Indian	528	0	100	5	12.28
Coloured	535	0	100	13	22.12
White	531	0	100	8	16.90

- **Discussion**

Table 4.10 indicates the patient distribution across the patient race groups. Although some respondents worked exclusively with one race group only (as can be seen from the maximum values), the average split across race groups is 74% black; 5% Indian; 13% Coloured; and 8% white.

TABLE 4.11: THREE MOST PREVALENT CONDITIONS (n = 850)

(Question 11b)

	N	Percent (Y)
HIV/AIDS	695	82%
TB	337	40%
Hypertension	327	38%
Diabetes	248	29%
Diarrhoea and vomiting, Gastroenteritis	147	17%
STDs	137	16%
Asthma	126	15%
Upper respiratory track infections	118	14%
Psychiatric disorders	63	7%
Obstetrics	61	7%
Trauma	54	6%
Substance abuse	46	5%
Epilepsy	37	4%
Obesity	27	3%
Ischaemic heart disease	24	3%
Malaria	17	2%
Hyperlipidaemia	14	2%
Other	9	1%
Peri-menopausal disorders	6	1%

TABLE 4.12: THREE LEAST PREVALENT CONDITIONS (n = 829)

(Question 11b)

	N	Percent (Y)
Malaria	392	47%
Hyperlipidaemia	256	31%
Peri-menopausal disorders	222	27%
Ischaemic heart disease	175	21%
Trauma	152	18%
Substance abuse	150	18%
Obesity	141	17%
HIV/AIDS	138	17%
Obstetrics	108	13%
Epilepsy	106	13%
Psychiatric disorders	83	10%
TB	83	10%
Diabetes	79	10%
Asthma	77	9%
STDs	74	9%
Hypertension	67	8%
Diarrhoea and vomiting, Gastroenteritis	60	7%
Upper respiratory track infections	33	4%
Other	1	0%

- **Discussion**

Respondents were also asked to indicate the three most and three least prevalent conditions among their patients. Table 4.11 presents the percentage that indicates the most prevalent conditions and Table 4.12 presents the percentage that indicates the least prevalent conditions. Respondents to this study identified HIV/AIDS (82%), tuberculosis (40%), and hypertension (38%) as the three most prevalent conditions seen by them in the clinical situation. Malaria (47%); hyperlipidaemia (31%) and peri-menopausal disorders (27%) were identified by respondents as the least prevalent conditions seen by them.

4.3.6 Alumni network receptiveness and preferences

4.3.6.1 *Communication*

Communication with alumni members is paramount to the success of an alumni network and it is therefore important to understand the communication preferences of the respondents. The respondents were asked to indicate, on a scale of “definitely not preferred” to “highly preferred”, the extent to which they preferred certain communication methods. It should be noted that it appears that many respondents only indicated the preferred or highly preferred categories where applicable and left the other, non-preferred methods, blank. Mean scores are therefore likely biased towards the positive pole of the scale. To illustrate the missing values problem on this question, Table 4.13 presents the number of valid answers and the number of missing responses to each communication option.

TABLE 4.13: MISSING VALUES ANALYSIS TO QUESTION 5

(Question 5)

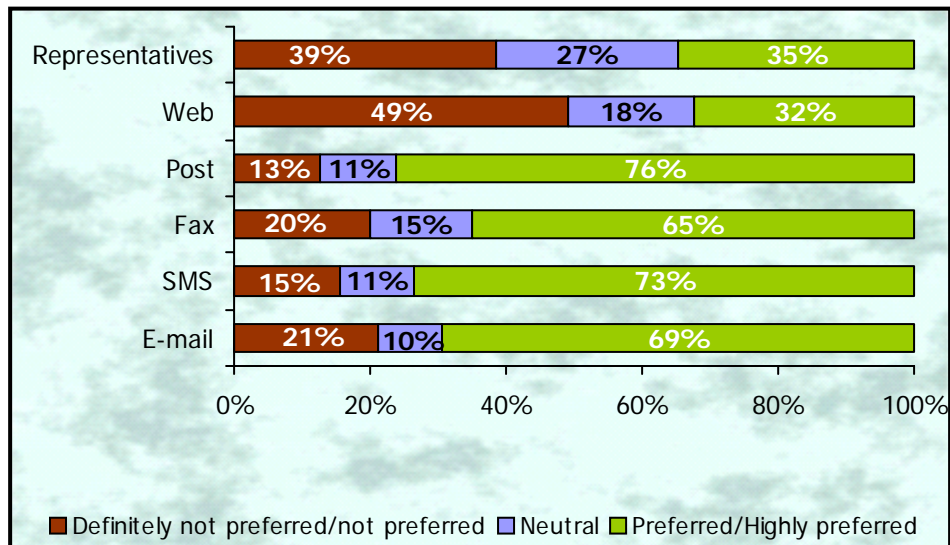
	E-mail	SMSs	Fax	Post	Web	Representatives
Valid	641	731	685	782	455	494
Missing	387	297	343	246	573	534

- **Discussion**

It is clear that “web contact” and “representatives” have a much higher “missing” component (nearly 50%), while “e-mail”, “SMSs” and “post” have low missing values. The actual negative response to “web” and “representative” might therefore be much higher than indicated by the results, as it could be assumed that some of those left blank could indicate “non-preference”. This is just an assumption though; preferences are based on valid answers only.

FIGURE 4.15: COMMUNICATION PREFERENCES IN AN ALUMNI NETWORK

(Question 5)



- **Discussion**

“SMSs” and “post” were preferred by the majority of the respondents (73% and 76% respectively), while “fax” and “e-mail” were also popular. “Representatives” and “web communication” were not good communication methods for this population.

Looking at the actual numbers of respondents who had answered preferred/highly preferred to each channel, as opposed to the percentage figures, it is easier to establish a clear order of preference:

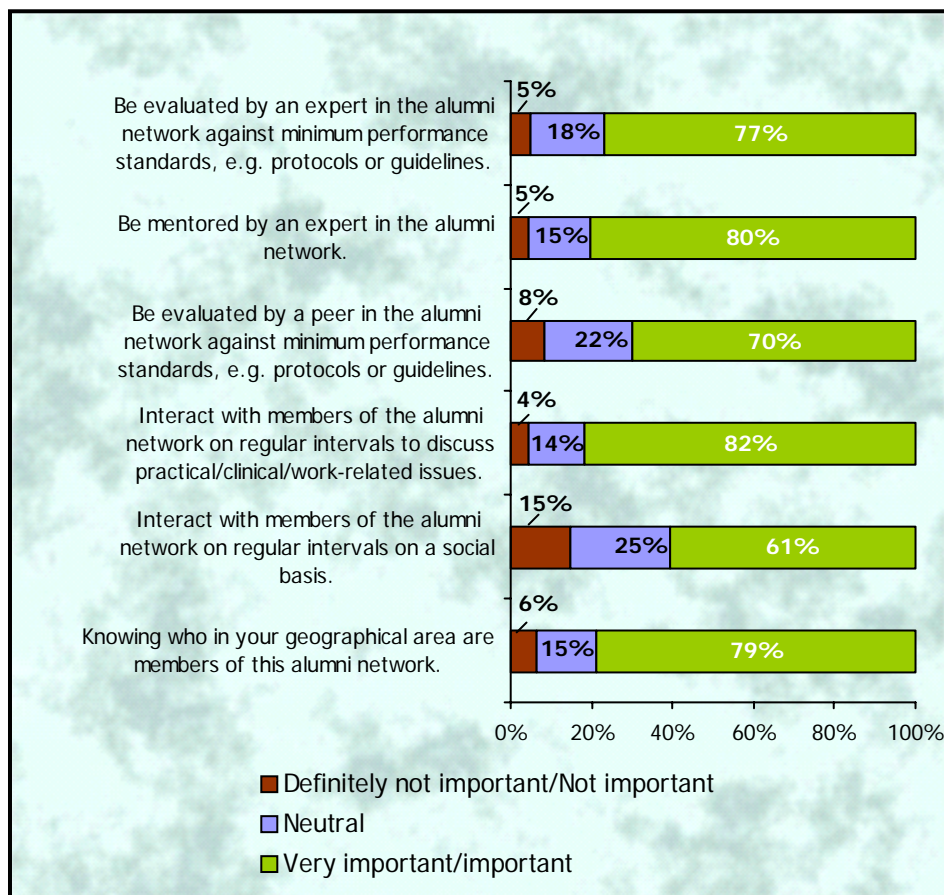
- Post 595 people
- SMSs 537
- Fax 445
- E-mail 444
- Representatives 171
- Web 147

4.3.6.2 *Interaction requirements*

Respondents were presented with a list of interaction options and asked how important each was to them. Missing responses seem to have affected this question to a lesser degree and only between 72 to 100 respondents did not provide answers to these questions on each attribute.

FIGURE 4.16: ALUMNI NETWORK INTERACTION PREFERENCES
(951 > n < 930)

(Question 6)



- **Discussion**

Most of the respondents did feel that it was important to them to interact with peers and experts in an alumni network to gain knowledge and (less so) interact socially. Very few respondents were not interested in being mentored by experts and most were willing to be evaluated against standards by an expert.

4.3.6.3 *Educational preferences*

TABLE 4.14: NEED FOR EDUCATIONAL PRODUCTS (n = 1028)

(Question 8)

	Missing	No need	Probably not needed	May be needed	Needed	Definite need
Training workshops (X)	11%	1%	1%	7%	32%	47%
Alumni newsletter on the latest development in FPD (X)	12%	1%	2%	10%	30%	46%
A summary of the latest development in your areas of interest (X)	12%	1%	1%	8%	37%	42%
One-day refresher seminars (X)	13%	1%	2%	9%	34%	42%
Full journal articles in your areas of interest (X)	13%	1%	2%	11%	34%	39%
Distance learning (X)	14%	2%	3%	15%	30%	35%
Television broadcasting of educational programmes (X)	14%	3%	6%	18%	29%	30%
Self-assessment of your practice against minimum performance standards (X)	18%	1%	3%	14%	35%	29%
Organised group case/ problem discussions (X)	15%	2%	4%	15%	36%	29%

Access to mentors (X)	19%	2%	4%	17%	32%	27%
24-hour hotline with expert clinical advice (X)	19%	2%	6%	19%	27%	27%
Access to Telemedicine (X)	20%	3%	6%	17%	28%	27%
Compact disk-based educational programmes (X)	20%	3%	4%	17%	29%	27%
Facilitated sessions (X)	19%	2%	4%	18%	32%	25%
Evening expert talks (X)	17%	5%	7%	22%	27%	22%
Journal clubs	18%	4%	8%	25%	25%	19%
Internet-based educational programmes (X)	20%	5%	9%	24%	24%	18%
Internet-based conference attendance (X)	19%	6%	10%	28%	23%	14%

- **Discussion**

The needs of respondents were investigated to better understand the products that could be provided to alumni members. Table 4.14 presents the percentage people with needs for different products. This question is also affected by respondents who indicated where they had a definite or dire need; then possibly provided no answers to those questions where no need was felt (classifying as missing). The missing responses are therefore included in the table as part of the percentage calculations.

4.3.6.4 Areas of expertise and interest

TABLE 4.15: INTEREST AREAS (n = 815)

(Question 9)

Clinical Area	Frequency	Percentage (Y)
Human immunodeficiency virus/Acquired immunodeficiency syndrome (HIV/AIDS)	305	37%
Tuberculosis (TB)	270	33%
Dermatology	185	23%
Sexually transmitted diseases	184	23%
Diabetes Mellitus	177	22%
Clinical pharmacology	158	19%
Allergic disorders	153	19%
Cardiovascular disorders (medical)	146	18%
Paediatrics	140	17%
Psychiatric disorders (for example depression, anxiety, psychosis, etc.)	117	14%
Gynaecology	103	13%
Trauma	102	13%
Pulmonary disorders	95	12%
Substance abuse	95	12%
Malaria	88	11%
Ear, nose and throat	85	10%
Obstetrics	85	10%
Nutritional and Metabolic disorders	84	10%
Intensive care	78	10%
Gastrointestinal disorders	76	9%
Infertility	75	9%
Oncology	74	9%
Dental and oral disorders	72	9%
Endocrine disorders	70	9%
Sport medicine	70	9%
Cardiovascular disorders (surgical)	67	8%
Poisoning, venomous bites and stings	67	8%
Orthopaedics	66	8%
Musculoskeletal and connective tissue disorders	64	8%
Ophthalmologic disorders	62	8%
Genetics	60	7%
Renal and Urologic disorders	57	7%
Rheumatology	57	7%
Neurologic disorders	56	7%
Haematologic disorders	55	7%
Hepatic and Biliary disorders	48	6%
Gerontology (Geriatrics/Elderly)	44	5%

Health Management Area		
Leadership	252	31%
Project Management	247	30%
Strategic Planning	231	28%
Financial Management	206	25%
Monitoring and Evaluation	184	23%
Human Resource Management	170	21%
Information Management	141	17%
Marketing and Customer Relations	115	14%
Computer Area		
Internet skills	367	45%
Database management	198	24%
Word processing	188	23%
Software programming	155	19%
Data recovery	146	18%
Worksheet creation	133	16%
Network management	121	15%
Desktop publishing	92	11%
Firewall management	58	7%
Health Policy Area		
National Health Policies	325	40%
Health Law and Regulations	246	30%
Public Private Partnership in Health	224	27%
Managed Care	222	27%
Ethical Area		
HIV/AIDS and ethics	411	50%
General ethical principles in health	272	33%
Confidentiality	256	31%
Informed consent	230	28%
Perverse incentives	89	11%
Interpersonal Area		
Communication skills	346	42%
Counselling	311	38%
Conflict management	305	37%
Negotiation skills	226	28%
Debriefing	156	19%
Personal Growth Area		
Stress management	422	52%
Self-management	370	45%
Time management	361	44%

TABLE 4.16: INTEREST AREAS PER PROFESSIONAL GROUP (n=815)

(Question 9)

	GPs		Professional nurses	
	Frequency	Percentage (Y)	Frequency	Percentage (Y)
Clinical Area				
Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome (HIV/AIDS)	86	45%	150	38%
Tuberculosis (TB)	61	32%	151	38%
Dermatology	58	31%	93	23%
Diabetes Mellitus	55	29%	86	22%
Paediatrics	46	24%	65	16%
Cardiovascular disorders (medical)	42	22%	71	18%
Allergic disorders	39	21%	80	20%
Sexually transmitted diseases	36	19%	110	28%
Clinical pharmacology	35	18%	82	21%
Psychiatric disorders (for example depression, anxiety, psychosis, etc.)	33	17%	62	16%
Gynaecology	32	17%	49	12%
Obstetrics	32	17%	41	10%
Trauma	32	17%	44	11%
Malaria	31	16%	39	10%
Pulmonary disorders	30	16%	44	11%
Ear, nose and throat	25	13%	43	11%
Orthopaedics	25	13%	30	8%
Sport medicine	23	12%	29	7%
Rheumatology	22	12%	22	6%
Infertility	22	12%	36	9%
Intensive care	20	11%	37	9%
Ophthalmologic disorders	20	11%	32	8%
Poisoning, venomous bites and stings	20	11%	35	9%
Endocrine disorders	19	10%	32	8%
Musculoskeletal and connective tissue disorders	18	9%	32	8%
Nutritional and Metabolic disorders	17	9%	43	11%
Renal and Urologic disorders	17	9%	28	7%
Substance abuse	17	9%	52	13%
Haematologic disorders	16	8%	26	7%
Gastrointestinal disorders	15	8%	43	11%
Neurologic disorders	14	7%	28	7%
Dental and oral disorders	13	7%	48	12%
Oncology	13	7%	44	11%
Cardiovascular disorders	12	6%	42	11%

	GPs		Professional nurses	
	Frequency	Percentage (Y)	Frequency	Percentage (Y)
(surgical)				
Genetics	12	6%	30	8%
Hepatic and Biliary disorders	11	6%	24	6%
Gerontology (Geriatrics/Elderly)	5	3%	28	7%
Health Management Area				
Financial Management	54	14%	105	26%
Project Management	52	14%	137	35%
Leadership	50	13%	139	35%
Strategic Planning	46	12%	140	35%
Information Management	34	9%	73	18%
Monitoring and Evaluation	34	9%	106	27%
Human Resource Management	30	8%	103	26%
Marketing and Customer Relations	20	5%	67	17%
Computer Area				
Internet skills	102	27%	175	44%
Word processing	35	9%	110	28%
Database management	31	8%	121	30%
Data recovery	26	7%	90	23%
Worksheet creation	24	6%	76	19%
Software programming	24	6%	101	25%
Network management	19	5%	72	18%
Desktop publishing	16	4%	48	12%
Firewall management	7	2%	39	10%
Health Policy Area				
Public Private Partnership in Health	55	15%	107	27%
National Health Policies	55	15%	195	49%
Managed Care	51	13%	125	31%
Health Law and Regulations	42	11%	141	36%
Perverse incentives	22	6%	48	12%
Ethical Area				
HIV/AIDS and ethics	106	28%	203	51%
General ethical principles in health	67	18%	134	34%
Confidentiality	60	16%	126	32%
Informed consent	49	13%	121	30%
Interpersonal Area				
Counselling	77	20%	162	41%
Communication skills	70	19%	183	46%
Conflict management	59	16%	168	42%
Negotiation skills	42	11%	117	29%
Debriefing	26	7%	97	24%
Personal Growth Area				
Stress management	86	23%	236	59%
Self-management	81	21%	193	49%
Time management	72	19%	193	49%

- **Discussion**

In Table 4.15 the interest areas as per clinical, health management, computer, health policy, ethical, interpersonal and personal growth areas are given in a descending order for all respondents. In Table 4.16 the interest areas are listed for GPs and professional nurses separately. When looking at the interest areas of GPs and professional nurses separately it is noticeable that they had similar interests in clinical areas, although professional nurses had a much higher interest in some non-clinical areas such as computer skills, interpersonal areas and personal growth areas. The main areas of interest are in line with the most prevalent conditions that they experience when working with patients (HIV/AIDS, TB and diabetes).

Table 4.17 presents the distribution of answers across the “expert areas”.

TABLE 4.17: EXPERT AREAS (n = 815)

(Question 9)

	Frequency	Percentage (Y)
Clinical Area		
Human immunodeficiency virus/Acquired immunodeficiency syndrome (HIV/AIDS)	146	18%
Tuberculosis (TB)	94	12%
Sexually transmitted diseases	77	9%
Paediatrics	59	7%
Diabetes Mellitus	49	6%
Psychiatric disorders (for example depression, anxiety, psychosis, etc.)	44	5%
Obstetrics	38	5%
Cardiovascular disorders (medical)	35	4%
Trauma	34	4%
Gynaecology	26	3%
Intensive care	23	3%
Clinical pharmacology	22	3%
Orthopaedics	20	2%
Pulmonary disorders	20	2%
Ear, nose and throat	18	2%
Oncology	17	2%
Ophthalmologic disorders	17	2%

	Frequency	Percentage (Y)
Substance abuse	15	2%
Cardiovascular disorders (surgical)	14	2%
Poisoning, venomous bites and stings	13	2%
Gastrointestinal disorders	12	1%
Malaria	12	1%
Rheumatology	11	1%
Dermatology	10	1%
Nutritional and Metabolic disorders	10	1%
Allergic disorders	9	1%
Neurologic disorders	9	1%
Renal and Urologic disorders	9	1%
Genetics	8	1%
Gerontology (Geriatrics/Elderly)	8	1%
Haematologic disorders	8	1%
Infertility	7	1%
Sport medicine	7	1%
Dental and oral disorders	6	1%
Hepatic and Biliary disorders	6	1%
Endocrine disorders	5	1%
Musculoskeletal and connective tissue disorders	4	0%
Health Management Area		
Leadership	82	10%
Strategic Planning	40	5%
Monitoring and Evaluation	38	5%
Project Management	32	4%
Human Resource Management	23	3%
Financial Management	17	2%
Information Management	17	2%
Marketing and Customer Relations	16	2%
Computer Area		
Word processing	46	6%
Internet skills	42	5%
Database management	19	2%
Worksheet creation	19	2%
Software programming	15	2%
Data recovery	10	1%
Desktop publishing	9	1%
Network management	8	1%
Firewall management	5	1%
Health Policy Area		
Managed Care	35	4%
National Health Policies	27	3%
Health Law and Regulations	25	3%
Public Private Partnership in Health	18	2%
Ethical Area		
Confidentiality	140	17%
HIV/AIDS and ethics	112	14%
Informed consent	103	13%

	Frequency	Percentage (Y)
General ethical principles in health	54	7%
Perverse incentives	7	1%
Interpersonal Area		
Counselling	137	17%
Communication skills	123	15%
Conflict management	83	10%
Negotiation skills	39	5%
Debriefing	27	3%
Personal Growth Area		
Time management	83	10%
Self-management	76	9%
Stress management	76	9%

TABLE 4.18: DESCRIPTIVE INFORMATION OF YEARS' EXPERIENCE IN AREAS CLASSIFIED AS EXPERT AREAS

(Question 9)

	N	Minimum	Maximum	Mean	Std. Deviation
Clinical Area					
Allergic disorders	6	2	22	8.33	8.311
Cardiovascular disorders (medical)	31	0.2	40	7.20	8.578
Cardiovascular disorders (surgical)	6	0.6	22	6.77	7.970
Clinical pharmacology	19	1	40	8.05	10.036
Dental and oral disorders	3	2	20	9.33	9.452
Dermatology	7	0.3	40	9.19	13.853
Diabetes Mellitus	30	0.6	33	8.16	7.812
Ear, nose and throat	11	0.3	18	8.78	6.323
Endocrine disorders	0				
Gastrointestinal disorders	4	2	14	9.00	5.292
Genetics	1	0.5	0.5	0.50	
Gerontology (Geriatrics/ Elderly)	6	0.3	9	3.22	3.131
Gynaecology	25	0.9	30	6.12	6.237
Haematologic disorders	3	1	6	4.33	2.887
Hepatic and Biliary disorders	2	2	4	3.00	1.414
Human immunodeficiency virus/Acquired immunodeficiency syndrome (HIV/AIDS)	109	0.2	17	3.84	3.482
Intensive care	14	0.4	13	5.60	4.465
Malaria	8	0.5	10	3.44	3.178
Musculoskeletal and connective tissue disorders	0				
Neurologic disorders	2	1	1	1.00	-

	N	Minimum	Maximum	Mean	Std. Deviation
Nutritional and Metabolic disorders	3	1	5	2.33	2.309
Obstetrics	25	0.5	20	7.90	5.835
Oncology	8	0.2	20	5.93	7.599
Ophthalmologic disorders	9	0.3	11	3.43	3.677
Orthopaedics	11	0.4	40	7.91	11.552
Paediatrics	41	0.5	25	7.94	6.331
Poisoning, venomous bites and stings	3	0.3	4	1.53	2.136
Psychiatric disorders (for example depression, anxiety, psychosis, etc.)	30	0.1	23	4.99	5.336
Pulmonary disorders	12	0.5	14	5.07	5.326
Renal and Urologic disorders	2	1	6	3.50	3.536
Rheumatology	4	0.1	8	2.65	3.659
Sexually transmitted diseases	45	0.1	50	7.14	8.287
Infertility	4	1	9	4.25	3.594
Sport medicine	3	3	12	6.67	4.726
Substance abuse	6	0.3	10	4.22	3.960
Trauma	18	0.1	20	6.23	5.750
Tuberculosis (TB)	56	0.4	20	5.68	6.024
Health Management Area					
Strategic Planning	14	0.3	19	5.16	4.998
Financial Management	5	1	19	8.80	6.907
Information Management	10	2	10	5.60	3.239
Leadership	24	0.3	20	6.92	6.495
Marketing and Customer Relations	5	0.5	19	7.30	7.413
Human Resource Management	6	0.9	6	2.98	2.117
Project Management	8	0.3	17	6.29	5.553
Monitoring and Evaluation	20	0.3	19	5.21	4.888
Computer Area					
Internet skills	12	1	10	5.08	3.554
Desktop publishing	0				
Database management	1	2	2	2.00	.
Word processing	12	0.4	22	6.03	6.233
Worksheet creation	5	0.4	10	4.48	4.296
Network management	0				
Software programming	2	0.6	2	1.30	0.990
Firewall management	1	0.4	0.4	0.40	.
Data recovery	1	0.9	0.9	0.90	.
Health Policy Area					
Managed Care	16	1	22	8.13	7.023
Health Law and Regulations	5	2	21	8.60	7.797
Public Private Partnership in Health	2	2	2	2.00	-
National Health Policies	10	0.9	20	5.89	6.017

	N	Minimum	Maximum	Mean	Std. Deviation
Ethical Area					
Perverse incentives	1	6	6	6.00	.
Confidentiality	43	0.1	22	7.98	6.589
Informed consent	27	0.1	20	6.93	5.892
General ethical principles in health	15	0.1	22	8.25	8.210
HIV/AIDS and ethics	34	0.6	12	5.07	3.553
Interpersonal Area					
Communication skills	29	0.6	25	8.68	6.090
Debriefing	8	2	8	4.50	1.927
Counselling	39	0.5	25	6.24	5.556
Negotiation skills	9	2	14	8.33	3.937
Conflict management	26	2	25	9.88	6.550
Personal Growth Area					
Self-management	12	3	20	7.92	5.384
Time management	9	2	25	9.33	7.937
Stress management	11	2	33	9.09	9.343

- **Discussion**

In Table 4.17 the results on the respondents self perceived expertise per clinical, health management, computer, health policy, ethical, interpersonal and personal growth areas are given in a descending order. In Table 4.18 descriptive information of years' experience in areas classified as expert areas are given in a descending order.

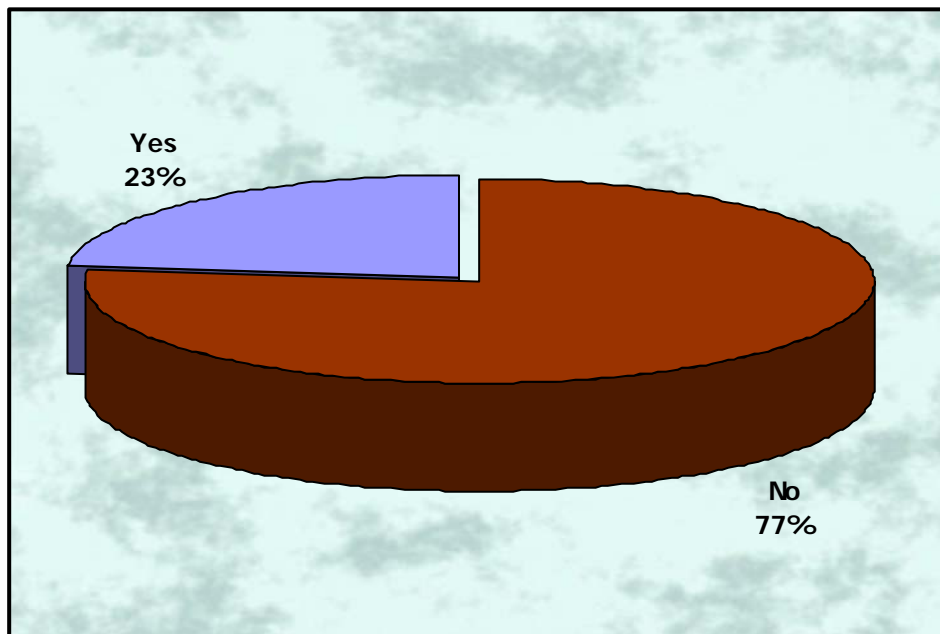
Respondents were asked to indicate the areas in which they were interested (cf. Tables 4.15 & 4.16) and the areas in which they were experts. When classifying themselves as experts, they were asked to indicate the number of years' experience that they had, as well as any academic qualification. While the interest area was completed relatively well, the expert area section of this question was completed less well. Many respondents did not provide any evidence to support their claim at expertise. The section on academic qualifications proved so difficult to analyse that it was excluded from the analysis in this study, pointing to an area of improvement for future studies or data collection projects.

Quite a few people considered themselves experts in HIV/AIDS (18%). Other “soft” skills such as counselling and communication skills also topped the list.

4.3.7 Existing alumni membership

FIGURE 4.17: CURRENT ALUMNI MEMBERS OF EDUCATION INSTITUTIONS (n = 836)

(Question 10a)



- **Discussion**

Only 23% of the respondents claimed to already be alumni members of an education institution. These individuals were asked to indicate which institutions they belonged to. Table 4.19 provides a list of the institutions mentioned.

TABLE 4.19: EDUCATION INSTITUTIONS THAT RESPONDENTS BELONGED TO AS ALUMNI MEMBERS (n= 208) – MULTI-MENTION POSSIBLE

(Question 10a)

	Frequency	Percentage (X)
University of Natal	24	12%
University of Pretoria	23	11%
University of Stellenbosch	21	10%
UNISA	20	10%
FPD	20	10%
University of Cape Town	20	10%
Wits Medical School	15	7%
MEDUNSA	12	6%
SA College of Medicine	11	5%
University of Limpopo	8	4%
University of Johannesburg	7	3%
Technicon Northern Gauteng	6	3%
Others with 2% or less representation	5	2%

- **Discussion**

In this question the University of Natal (12%); the University of Pretoria (11%); the University of Stellenbosch (10%); UNISA (10%); FPD (10%); and the University of Cape Town (10%) were indicated as the education institutions most respondents belonged to.

These members were also asked which products they received from the institutions they were alumni members of. Table 4.20 presents the percentage of these respondents who received each type of product.

TABLE 4.20: PRODUCTS RECEIVED BY ALUMNI MEMBERS OF EDUCATION INSTITUTIONS

(Question 10a)

	Frequency	Percentage (Y)
Alumni newsletter on the latest development in the education institution (courses, seminars, conferences, legislation updates in the health sector, social news, news on development in the network, events in the network, etc.)	93	45%
Training workshops	80	38%
Full journal articles in alumni members' areas of interest	48	23%
A summary of the latest developments in alumni members' areas of interest	44	21%
One-day refresher seminars	38	18%
Distance learning	34	16%
Television broadcasting of educational programmes	33	16%
Evening expert talks	30	14%
Organised group cases/discussions of problems	29	14%
Journal clubs	23	11%
24-hour hotline with expert clinical advice	21	10%
Facilitated sessions	20	10%
Access to mentors (see definitions)	18	9%
Access to Telemedicine (the use of information and communication technology to provide and support health care activities, when distance separates the participants)	17	8%
Internet-based educational programmes	17	8%
Self-assessment of your practice against minimum performance standards, e.g. protocols/guidelines	15	7%
Internet-based conference attendance	12	6%
Compact disk-based educational programmes	9	4%

- **Discussion**

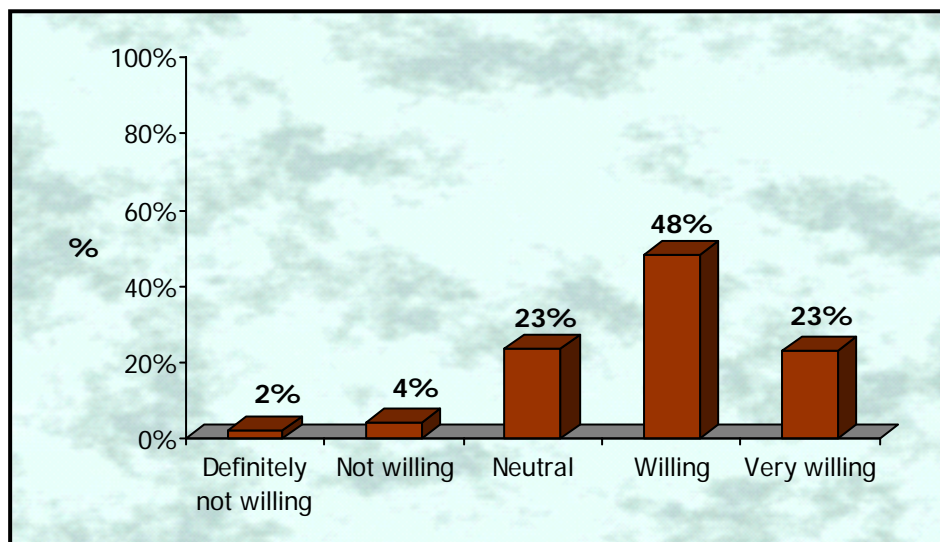
Just fewer than half of the 23% respondents (45%, n=93) received newsletters and 38% (n=80) indicated that they received training workshops as an educational product. The other products were indicated by fewer than 30% of these respondents as educational products received by them as alumni of other education institutions.

4.3.7.1 *Willingness to take part*

After a brief explanation of what accreditation by an alumni network would entail (five-star grading according to level of participation in CPD, from mere attendance to external assessment of competence), respondents were asked to indicate their willingness to be accredited by an alumni network.

FIGURE 4.18: WILLINGNESS TO BE ACCREDITED BY AN ALUMNI NETWORK (n = 906)

(Question 7)



- **Discussion**

Figure 4.18 presents the distribution of answers to this question.

71% of those who responded to this question would be willing or very willing to become accredited.

Willingness to act in certain capacities within an alumni network is presented in Figure 4.19.

FIGURE 4.19: WILLINGNESS TO TAKE ROLES WITHIN THE ALUMNI NETWORK (887 > n < 908)

(Question 6)

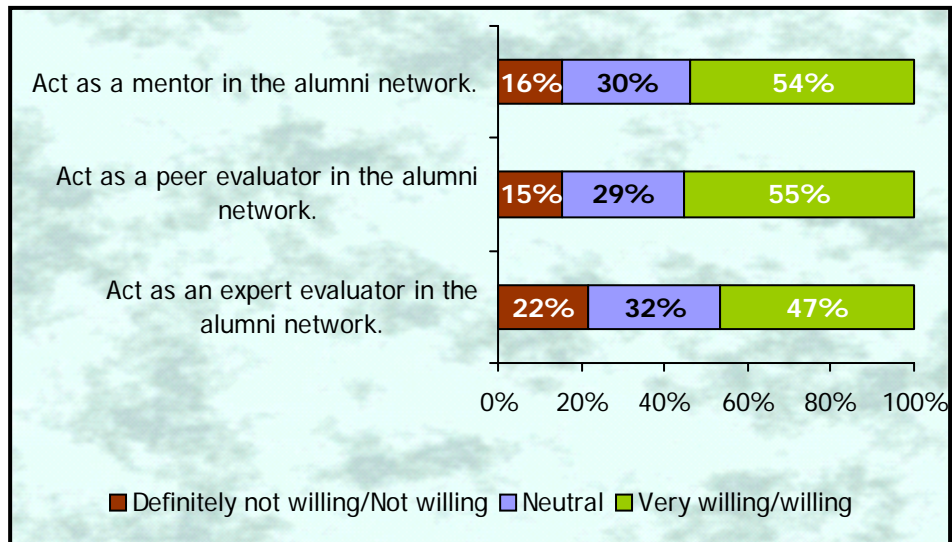


TABLE 4.21: WILLINGNESS TO TAKE ROLES WITHIN THE ALUMNI NETWORK PER PROFESSIONAL GROUP

(Question 6)

	Not willing	Neutral	Willing
Act as an expert evaluator in the alumni network			
GPs	32%	36%	32%
Specialists (X)	5%	32%	62%
Professional nurses (X)	36%	35%	29%
Act as a peer evaluator in the alumni network			
GPs	18%	39%	43%
Specialists	11%	36%	53%
Professional nurses	12%	25%	63%
Act as a mentor in the alumni network			
GPs	18%	37%	45%
Specialists	8%	38%	54%
Professional nurses	12%	28%	60%

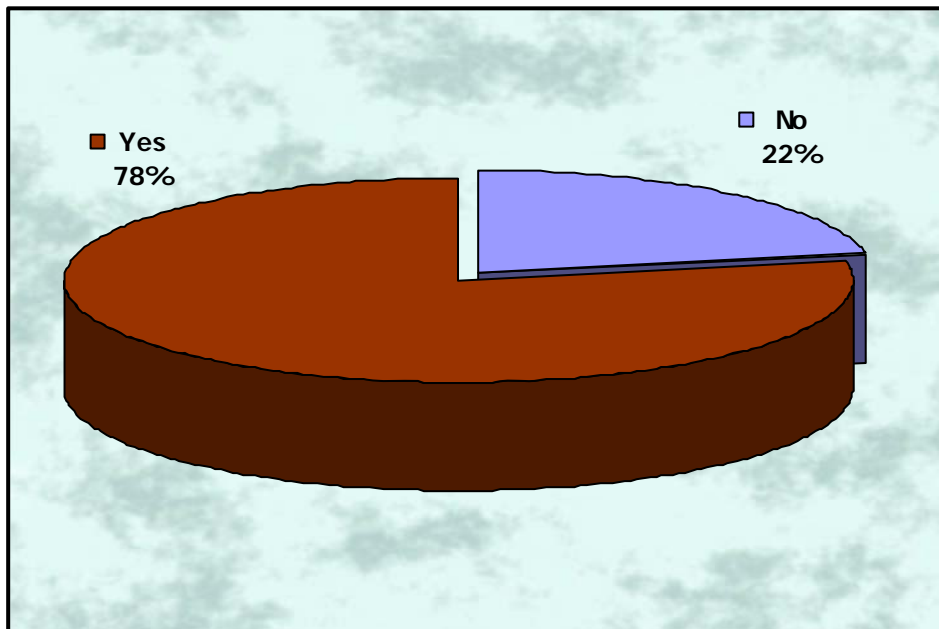
- **Discussion**

While most (71%) were willing to be accredited by an alumni network (cf. Figure 4.18), respondents were less eager to actually volunteer active duties such as being a mentor, a peer evaluator or an expert evaluator. Still, few respondents were outright unwilling (between 16-22%). Specialists were most likely to act in the various roles in the alumni network. Professional nurses were particularly willing to act as peer evaluators and mentors, but less likely to act as expert evaluators. General practitioners followed the same pattern as the professional nurses.

Willingness to become a member of a CPD alumni network is presented in Figure 4.20.

FIGURE 4.20: WILLINGNESS TO BECOME CPD ALUMNI MEMBERS
(n = 809)

(Question 10b)

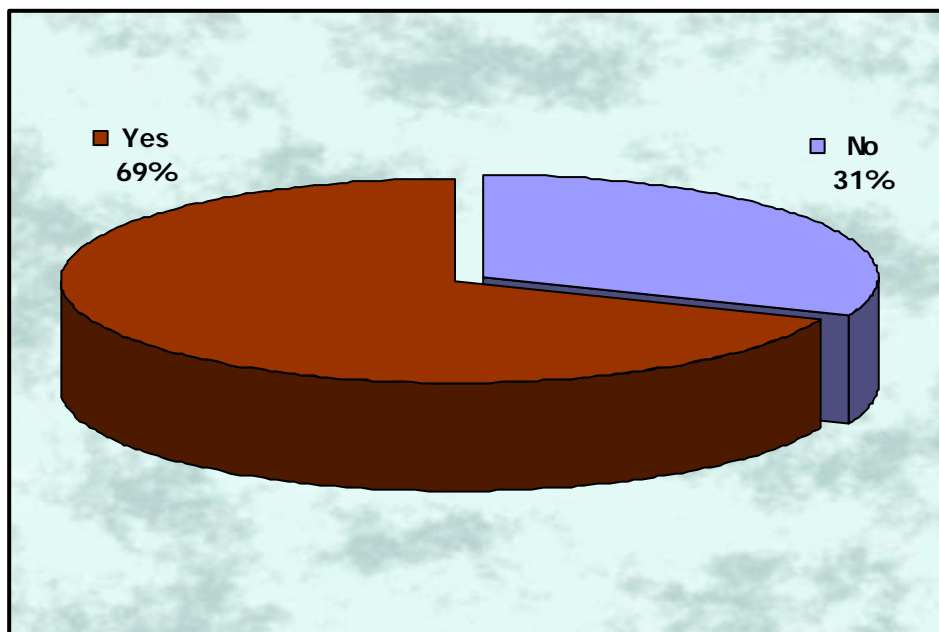


- **Discussion**

Nearly eight out of 10 respondents who had answered this question were willing to become members of the CPD alumni network.

FIGURE 4.21: WILLINGNESS TO PAY FOR CPD ALUMNI NETWORK MEMBERSHIP (n = 513)

(Question 10c)



- **Discussion**

Of the 78% respondents who indicated that they were willing to become members of the alumni network, only 31% would not be willing to pay anything at all to belong to the alumni network. The respondents who were willing to pay were asked to indicate the maximum and minimum amounts that they would be willing to pay. Table 4.22 summarises the average amounts.

TABLE 4.22: AVERAGE AMOUNTS WILLING TO BE PAID FOR CPD ALUMNI NETWORK MEMBERSHIP

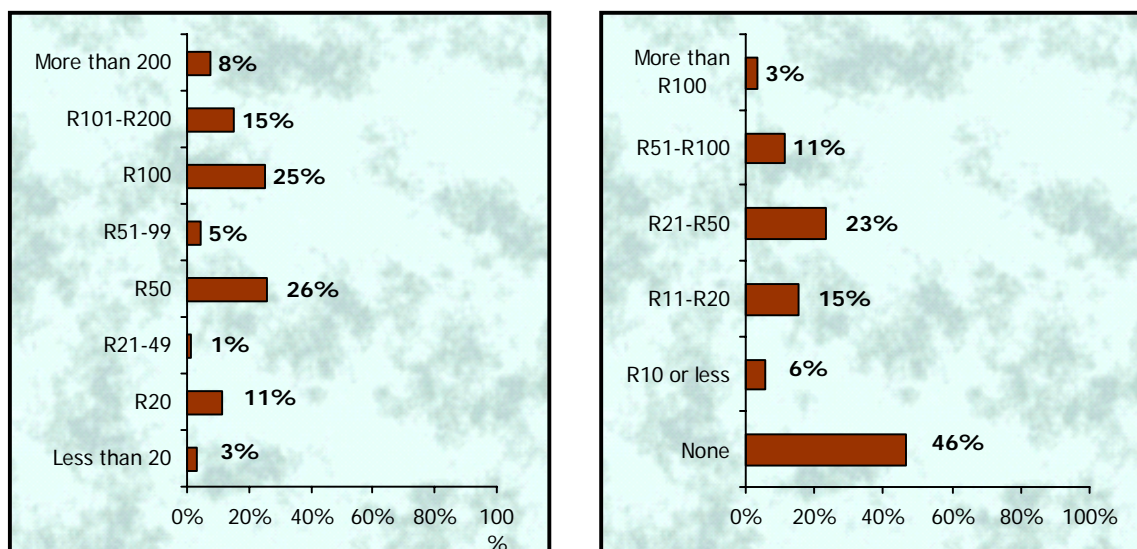
(Question 10c)

	N	Minimum	Maximum	Mean	Std. Deviation
Maximum	261	5	2000	108.28	162.92
Minimum	352	0	500	30.42	51.55

- **Discussion**

The most any respondent was willing to pay for membership was R2000 a month, while another would not pay more than R5. The average maximum price to be paid is R108, while the average minimum is R30. However, the standard derivations are very large and the distribution of answers is examined in more detail. Figure 4.22 presents the percentages of the answers of the most amounts in both sets of questions.

FIGURE 4.22: MOST AMOUNTS MENTIONED TO BE PAID FOR CPD MEMBERSHIP (n = 261 FOR MAXIMUM AND 354 FOR MINIMUM)

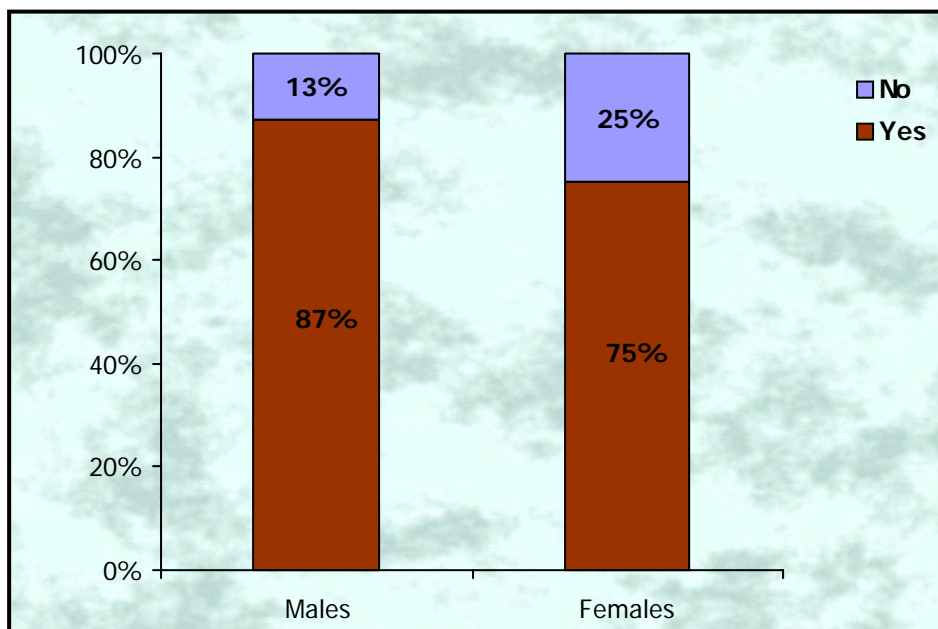


4.4 PROFILING ALUMNI NETWORK MEMBERS

As a first step in profiling the alumni network members, those respondents willing to participate and those less likely to participate are compared with regard to certain variables.

4.4.1 Demographics

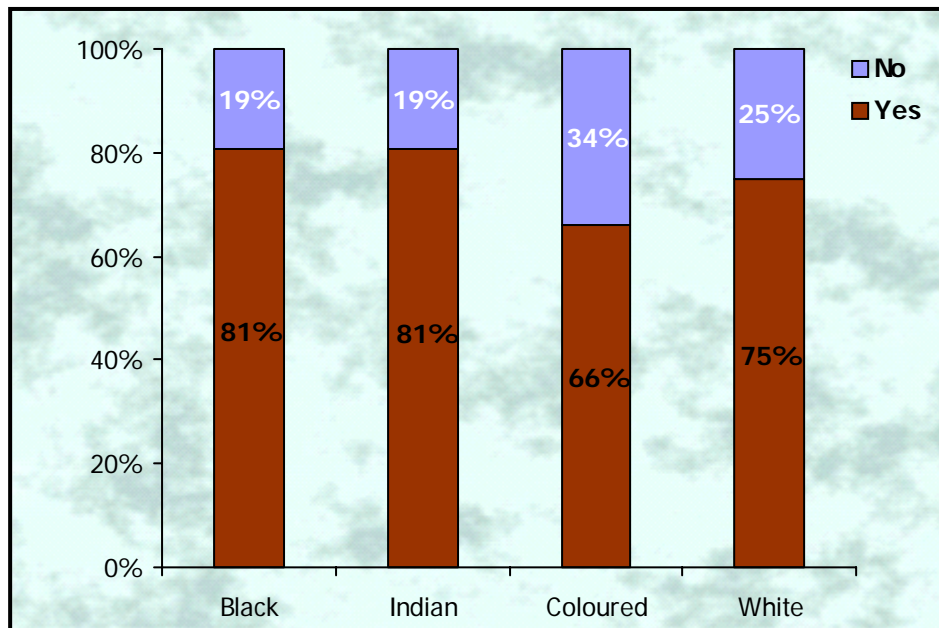
FIGURE 4.23: WILLINGNESS TO BECOME CPD ALUMNI MEMBERS BY GENDER (n = 798)



- **Discussion**

Female respondents were less likely to agree to become members of an alumni network. 13% of the males declined, while this figure is almost double for females (25%). This difference is statistically significant (*Chi-square* = 13.012; *p* = 0.000).

**FIGURE 4.24: WILLINGNESS TO BECOME CPD ALUMNI MEMBERS
BY RACE (n = 786)**

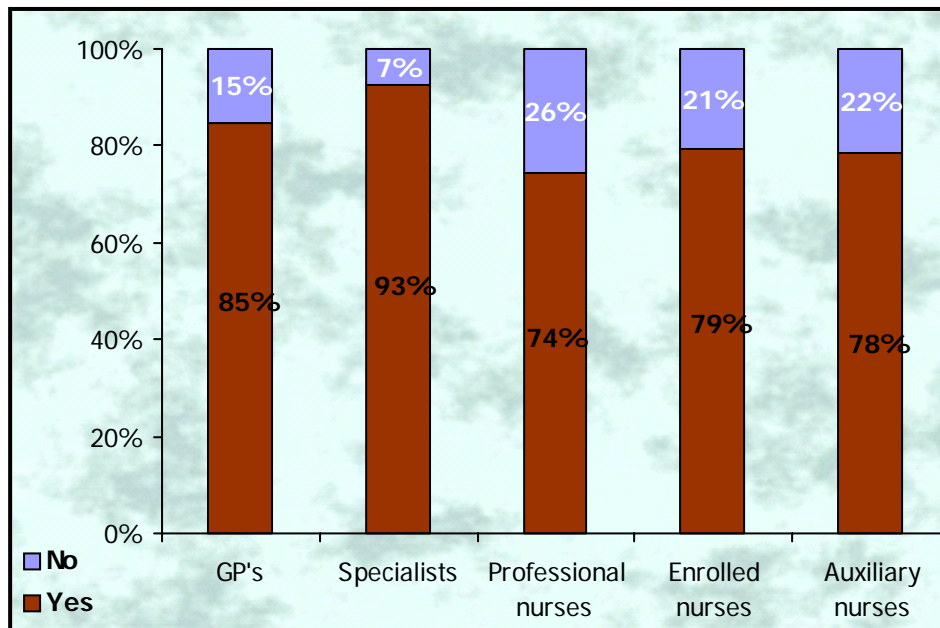


- **Discussion**

Race was also compared with regard to the participants' willingness to belong to the CPD alumni network. The differences were tested by means of a Chi-square test. Figure 4.24 presents the percentage within each race group willing to participate in the network.

Coloureds and whites were less likely than blacks and Indians to take part in the network. Differences in willingness to become CPD alumni members between races are statistically significant (*Chi-square* = 9.163; $p = 0.027$).

FIGURE 4.25: WILLINGNESS TO BECOME CPD ALUMNI MEMBERS BY PROFESSIONAL GROUP (n = 659)



- Discussion**

Specialists were particularly willing to belong to an alumni network, while professional nurses (mostly females) were less likely to do so. Once willing to take part in the network, all groups were equally likely to pay or not pay for membership (*Chi-square = 3.175; p = 0.529*).

TABLE 4.23: .AVERAGE AGE OF THOSE WILLING AND NOT WILLING TO TAKE PART IN ALUMNI NETWORK: T-TEST FOR INDEPENDENT MEANS

	N	Mean	t-test	p-value
Willing	634	38.59	-0.612	0.535
Not willing	175	39.22		

- Discussion**

There is no difference in terms of average age between the two groups.

4.4.2 Interaction requirements

TABLE 4.24: MEANS SCORES ON INTERACTION REQUIREMENT FOR WILLINGNESS TO TAKE PART IN ALUMNI NETWORK: T-TEST FOR SIGNIFICANT DIFFERENCES

	Willing	Not willing	t-value	p-value
Knowing who in your geographical area are members of this alumni network	4.15	3.84	3.58	0.000
Interact with members of the alumni network on regular intervals on a social basis	3.72	3.31	4.32	0.000
Interact with members of the alumni network at regular intervals to discuss practical/clinical/work-related issues	4.22	3.88	3.88	0.000
Be evaluated by a peer in the alumni network against minimum performance standards, e.g. protocols or guidelines	3.92	3.55	4.05	0.000
Be mentored by an expert in the alumni network	4.33	3.75	6.25	0.000
Be evaluated by an expert in the alumni network against minimum performance standards, e.g. protocols or guidelines	4.16	3.72	4.88	0.000
Act as an expert evaluator in the alumni network	3.50	2.75	7.53	0.000
Act as a peer evaluator in the alumni network	3.68	2.93	7.59	0.000
Act as a mentor in the alumni network	3.68	2.98	3.58	0.000

- **Discussion**

Consistent with expectations, the degree of alumni-related interactions desired was higher among those who were willing to take part in the alumni network. Means were calculated for each group on question 6. The means scores to each statement are provided in Table 4.24, as well as the results of the independent t-test for the statistical differences of these means.

All p-values are below the cut-off of 0.05 and the differences are therefore significant. A higher mean score indicates a greater need for

interaction. Those willing to take part have higher mean scores on all the interaction aspects.

4.4.3 Educational needs

TABLE 4.25: MEANS SCORES ON EDUCATIONAL NEEDS FOR WILLINGNESS TO TAKE PART IN ALUMNI NETWORK: T-TEST FOR SIGNIFICANT DIFFERENCES

	Willing	Not willing	t-value	p-value
Training workshops	4.20	3.36	6.00	0.000
Alumni newsletter on the latest development in FPD	4.14	3.33	5.96	0.000
A summary of the latest development in your areas of interest	4.09	3.36	5.35	0.000
Full journal articles in your areas of interest	4.01	3.22	5.82	0.000
One-day refresher seminars	4.01	3.29	5.03	0.000
Distance learning	3.88	2.85	7.45	0.000
Organised group case/problem discussions	3.72	2.82	6.42	0.000
Self-assessment of your practice against minimum performance standards, e.g. protocols/guidelines	3.62	2.87	5.13	0.000
Access to mentors (see definitions)	3.58	2.55	7.01	0.000
Television broadcasting of educational programmes	3.52	3.04	3.34	0.001
Facilitated sessions	3.48	2.65	5.88	0.000
24-hour hotline with expert clinical advice	3.47	2.59	5.98	0.000
Compact disk-based educational programmes	3.46	2.64	5.41	0.000
Access to Telemedicine	3.41	2.66	5.22	0.000
Evening expert talks	3.30	2.63	4.96	0.000
Journal clubs	3.22	2.31	6.73	0.000
Internet-based educational programmes	3.13	2.36	5.42	0.000
Internet-based conference attendance	3.04	2.30	5.53	0.000

- **Discussion**

In terms of the educational needs of the respondents, those more willing to take part have a greater need for educational products. Table 4.25 presents the means scores on the educational needs question. A higher score again indicates a greater need for products.

4.5 CONCLUSION

The results of the questionnaire were analysed and discussed in this chapter. Summatively, it can be said that the response rate (52%) of this study was good according to literature on self-completion questionnaires.

The sample distribution was, however, fairly similar to the actual population of learners of the FPD in 2006. The sample size of 1177 is also a fair size.

The next chapter will consist of a discussion of the research results in relation to the literature study and the development of a model to manage CPD for alumni of a PHEI.

CHAPTER 5

DEVELOPMENT OF THE MODEL TO MANAGE CPD

5.1 INTRODUCTION

In this chapter, the final outcome of the study on a model to manage CPD for alumni from a PHEI will be provided through synthesising conclusions from the literature review and the results of the questionnaire survey. To keep CPD in the right perspective the origin, purpose and process of CPD will be provided in a succinct manner as an introduction to the chapter. This will be followed by a framework for the CPD process (cf. Figure 5.1) and the CPD functions of an HEI as was concluded from the literature review. These functions will be placed in context with the framework for the CPD process in Figure 5.3, while the coordination of these functions and the management of the constraints will also be recommended. The chapter will develop step by step through a process of consolidating the results of the literature survey with the results of the questionnaire survey if applicable, following the sequence of the framework of the CPD process (cf. Figure 5.3).

A final recommendation on needs assessment with a model will be made (cf. Figure 5.4) to follow as part of the management of CPD of the alumni of a PHEI. This will be followed by a model on how to accommodate adult learning preferences (cf. Figure 5.5) in a model to manage the CPD of the alumni of a PHEI. Linking on to adult learning the CPD development plan as a planning tool will be discussed next. This will be followed by recommendations on the organisation and communication in the learning network.

Mentoring as part of the model to manage the CPD of the alumni of a PHEI will be discussed next. In the last instance a final recommendation of the mentoring process to follow on operational level will be provided in a

framework (cf. Figure 5.6). It will summarise the roles of the PHEI, the mentor and the mentee.

CPD learning methods to be included in the model will be recommended in consideration of the results of both the literature and the questionnaire surveys as summarised in Table 5.2.

Final recommendations on a framework for quality assurance and credentialling are provided in a summative manner in Table 5.3 for inclusion in the model to manage CPD for the alumni of a PHEI.

The chapter will be concluded with the final result of the research report of a discussion of a model to manage CPD for the alumni of a PHEI (cf. Figure 5.9) as a triangulation of the literature study, the questionnaire survey results and the conclusions of the researcher.

Supplemented to the model a suggested implementation plan is provided for optional use.

The researcher would like to emphasise the approach followed in this chapter. A step by step (methodological) approach similar to the order followed in the literature study was followed to build up to the final model by drawing all the various components of the study together into one model. It was therefore necessary to revisit relevant aspects from the literature study, the questionnaire survey and combining those with the experience of the researcher.

It is further important to take note of the colour coding utilised in Figures 5.1, 5.3 and 5.9 to support this approach as mentioned above.

5.2 THE ORIGIN, PURPOSE AND PROCESS OF CPD

In the literature study on the origin of CPD it was concluded that CPD should enable health professionals to respond to the ever-changing health needs of the individual, family and communities they serve at internationally recognised standards (WFME 1995:15; WHO 1994:13). The role of HEIs on equipping health professionals initially with the necessary knowledge, attitude and skills to meet this challenge is well acknowledged in the literature. The continuous role of these institutions towards alumni in CPD is accepted in the development of this model to manage CPD for all their alumni, even those in remote areas (Woollard 2006:306).

It was concluded from the literature that health professionals need to maintain and improve standards of professional practice continuously through the development of knowledge, skills, attitude and behaviour. It is a continuous process and it is the broad purpose of CPD (Grant & Stanton 1998:4; HPCSA 2002:1; Peck *et al.* 2000:432; WFME 2002:8).

It can be concluded from the literature study that the CPD process is a continuous process (Blandford 2000:9; Lewkonja 2001:427; Price 2005:260; Stinson *et al.* 2006:310) and managed primarily by the health professional through a process of self-awareness (Stinson *et al.* 2006:310). It is, however, for CPD providers to nurture a culture for CPD (Stinson *et al.* 2006:309); to create opportunities for CPD (Blandford 2000:9); be mentors in CPD (Blandford 2000:9; Skovholt 1995:133); ensure application of adult learning principles conducive for effective and efficient learning (Blandford 2000:9; Skovholt 1995:132; Stinson *et al.* 2006:310); and support alumni to plan CPD through tools like a CPD plan with CPD goals and objectives (Skovholt 1995:134, Stinson *et al.* 2006:311). The assessment of the attainment of learning outcomes is an integral part of the CPD process (Cervero 1988:116; Ellis 2000:95; Tomlinson 1997:22). The CPD process should therefore be a

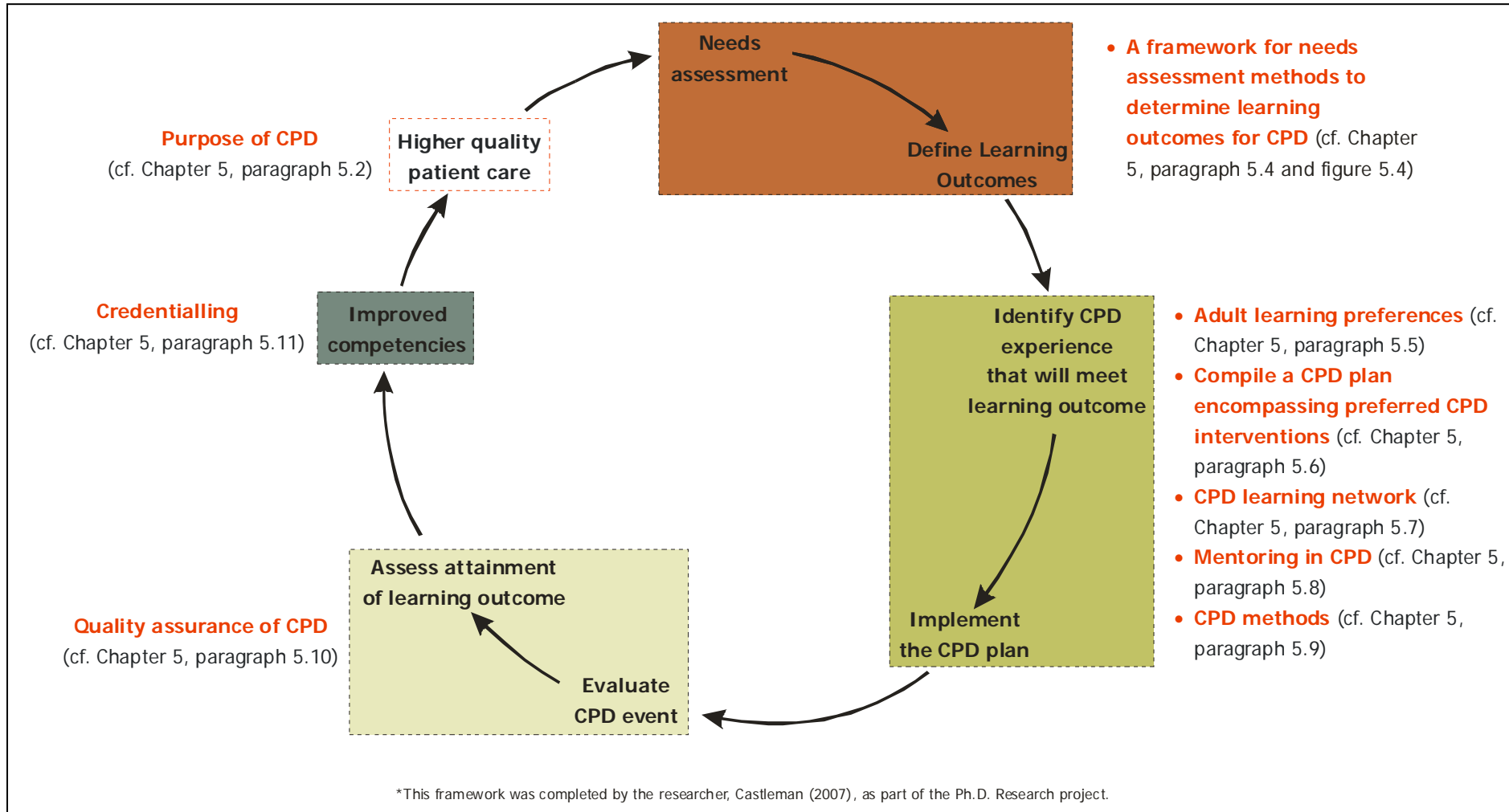
planned and coordinated process. The ideal is further that it should be planned and cumulative throughout a professional's career (Roberts & Konn 1991:48).

5.2.1 Conclusion on the origin, purpose and process of CPD

The origin, purpose and process of CPD are characterised by a cyclic, planned and cumulative approach.

Thus the proposed framework for the CPD process based on information from the literature can be depicted as follows in Figure 5.1:

FIGURE 5.1: FRAMEWORK FOR THE CPD PROCESS



5.3 PROVIDERS OF CPD

From the literature review it was concluded that there are currently four categories of CPD providers. These are education institutions, professional associations, employers, and independent providers. The primary function of HEIs is undergraduate and formal post-graduate education and CPD is seen as a secondary function (Cervero 1988:91; Riesenber *et al.* 2006:13).

The content health professionals learned at HEIs in undergraduate studies needs to be updated throughout their careers to reflect changes in best evidence medicine and changes in the needs of the patients and the health care delivery systems. High quality patient care depends on health practitioners making sure that they maintain and improve the standards of their practice of medicine through CPD (Charap *et al.* 2005:1042).

5.3.1 Functions of HEIs in CPD

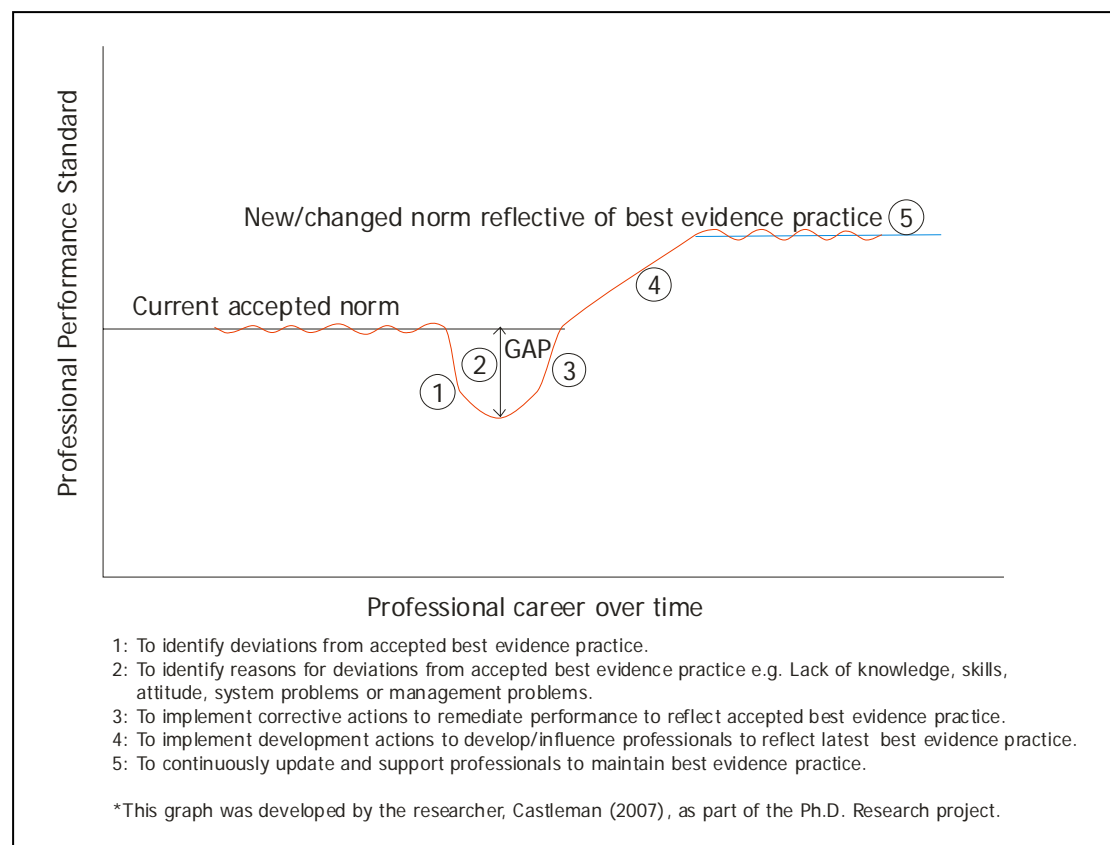
From the literature review it can be concluded that HEIs have five functions in CPD, namely:

- to identify deviations of practice from accepted norms through research;
- to identify reasons for deviations from accepted best evidence practice, for example lack of knowledge, skills or attitude, system problems or management problems;
- to implement corrective actions to remediate performance to reflect accepted best evidence practice, for example workshops or other CPD activities or influence policy documents or guidelines;
- to implement development interventions to develop professionals to reflect latest best evidence practice; and
- to continuously update and support professionals to maintain best evidence practice, for example if research shows practice needs to change or to implement new guidelines or policy documents (Blandford 2000:4;

Lewkonia 2001:426, 427; Roberts *et al.* 2002:900; Sheldon *et al.* 2004:11).

These functions can effectively be depicted in the following graph (cf. Figure 5.2):

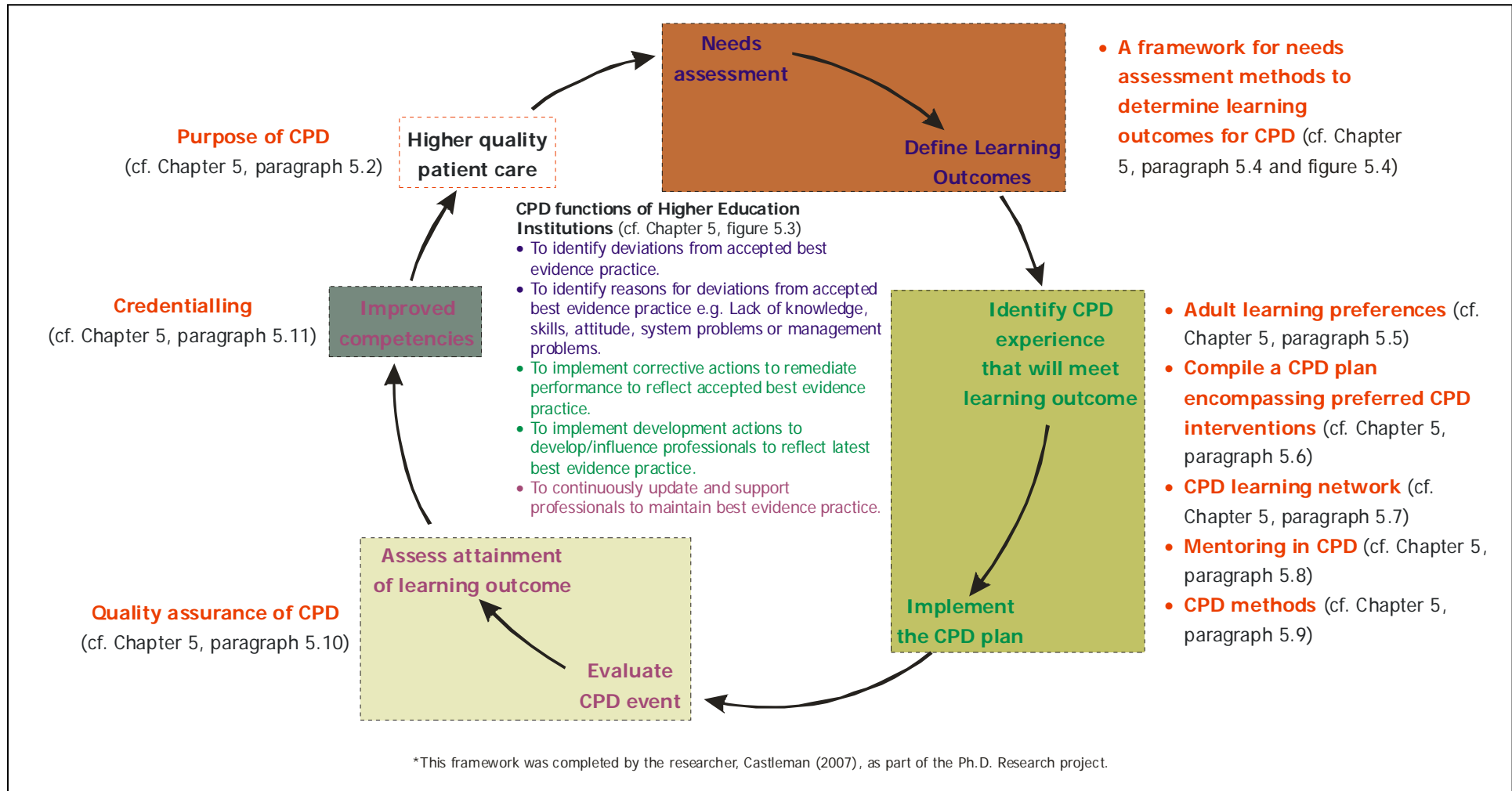
FIGURE 5.2: CPD FUNCTIONS OF HIGHER EDUCATION INSTITUTIONS



It can thus be concluded that HEIs have a definite responsibility towards their alumni in supporting the purpose of CPD.

If the functions of an HEI are placed in context with the framework for the CPD process, it can be pictured as follows (cf. Figure 5.3):

FIGURE 5.3: THE FUNCTIONS OF AN HEI IN CONTEXT WITH THE FRAMEWORK FOR THE CPD PROCESS



5.3.2 Research results on the responsibility of HEIs towards alumni in supporting the purpose of CPD

Given the conclusion that HEIs do have a continued responsibility towards alumni in supporting the purpose of CPD, it is noteworthy that only 23% of the respondents to this study (cf. Figure 4.17) were at the time of the research alumni members of an education institution, 45% of whom were receiving alumni newsletters (cf. Table 4.20), while 38% reported that they received an educational product in the form of workshops. Some of the respondents (23%) also selected full journal articles as an educational product that they received at that stage, being part of the alumni association. A further 21% reported that they received a summary of the latest development in their areas of interest (cf. Table 4.20). The fact remains, however, that 77% of the respondents (cf. Figure 4.17) did not have the benefit of receiving educational products from an alumni association.

In an open question most of those respondents (23%) (cf. Figure 4.17) that did belong to alumni associations indicated the University of Natal (12%), the University of Pretoria (11%), the University of Stellenbosch (10%), UNISA (10%), the FPD (10%), and the University of Cape Town (10%) as the education institutions parenting these alumni associations (cf. Table 4.19). The University of Limpopo, followed by Wits, Pretoria, the UCT, the UKZN and the UFS are listed as the universities enrolling the largest number of medical students for five consecutive years (1999-2003) (Breier & Wildschut 2006:24). Similar figures for professional nurses could not be found, but the SANC published figures on its website for universities' output of professional nurses per province (SANC 2007:1 of 1). According to these figures, the Eastern Cape had the biggest output of professional nurses for 2006, followed by Gauteng, KwaZulu-Natal, North West and the Western Cape.

There is thus a relation between the output of universities per province for

professional nurses and the number of respondents already members of alumni associations given that the University of Natal and the University of Pretoria represented the most existing alumni of other HEIs and most of the respondents were professional nurses (51% of the sample) (cf. Figure 4.5). It is interesting to note that the Walter Sisulu University was not selected by any respondents in this category, even though Eastern Cape had the biggest output of PN in 2006.

No direct relation between the output of the specific universities for doctors and the number of respondents already members of alumni associations could be identified. It can be concluded that this might contribute to the higher willingness of specialists (93%) and GPs (85%) than professional nurses (74%) who indicated that they were willing to become alumni members (cf. Figure 4.25).

In this study the respondents were alumni of a PHEI and, given the functions as identified for HEIs as well as the 77% of the respondents who at that stage were not part of an alumni association (cf. Figure 4.17) and the 78% of the respondents who were interested in becoming members of CPD alumni networks (cf. Figure 4.20), it can be concluded that there is a need for a model to manage CPD for an alumni network from a PHEI.

5.3.3 Coordination of CPD functions in PHEIs

In the global review of the approach of HEIs to CPD in the 21st century to identify the trend in HEIs with reference to centralisation or decentralisation of the CPD function and the involvement of alumni associations in CPD the following conclusions were reached: Globally there seems to be a lack of organisation and coordination (cf. Chapter 2, Table 2.2) of CPD over departments and programmes in most HEIs (Cervero 1988:3; Roberts & Konn 1991:48). Examples of centralising the CPD function for all professionals in HEIs were only found in, for example, the Universities of Leicester, Dundee,

Yale, Oxford and Pretoria but no evidence was found that the interventions were cyclic. Harvard Medical School, the Universities of Yale and Cape Town, and FPD seem to have collaborations between the alumni associations and the CPD units to render CPD events as a special service to alumni, but it seems to be fragmented as well. It seems that currently none of the institutions reviewed (cf. Chapter 2, Table 2.2) approached CPD as a continuous planned process for their alumni (cf. Chapter 5, Figure 5.1) encompassing the functions as depicted in Figure 5.2.

5.3.3.1 *Conclusion on coordination of CPD functions in PHEIs*

It was concluded from the literature review (cf. 2.7) that CPD should be a centralised function in PHEIs in order to enable the implementation of the functions of an HEI as placed in context with the framework for the CPD process in Figure 5.3. This should enhance coordination of resources and ensure that strategies are implemented, because then it will be a core function for that programme or unit or department (cf. 1.1).

5.3.4 Opportunities and constraints of PHEIs as providers of CPD

Next the opportunities and constraints of HEIs as providers of CPD were reviewed and it can be concluded that PHEIs in South Africa have strategic advantages associated with opportunities of both public education institutions and independent providers (cf. Table 2.1), but the constraints are not similar to those of the independent providers because of the quality assurance criteria PHEIs have to comply with according to the Higher Education Act in South Africa (Cervero 1988:91; RSA 1997:10).

TABLE 5:1: OPPORTUNITIES AND CONSTRAINTS ASSOCIATED WITH PHEIs AS PROVIDERS OF CPD

	Private higher education institutions
Opportunities	Target audience
	Alumni are potential audience and all health professionals in the free market
	Credibility
	Able to certify the successful candidates High dependence on superior quality in order to survive in a free market enterprise
	Financing
	Return on investment can be done over several programmes
	Resources
	Marketing expertise Innovative educational strategies Quick turn around and response time to learners' needs Large pool of faculty through contracting of faculty of academic institutions
Constraints	Target audience
	No constraint
	Credibility
	Low credibility
	Financing
	Education is usually the first cost-saving consideration under economical pressure
	Resources
	Limited facilities

Source: This table was assembled by the researcher, Castleman (2007), as part of the Ph.D. research project.

5.3.4.1 *Conclusion on opportunities and constraints of PHEIs as providers of CPD*

Given the summary of opportunities and constraints of PHEIs (cf. Chapter 5, Table 5.1) as providers of CPD the identified constraints are low credibility, potential financial constraints under economical pressure, and limited resources. Low credibility could be dealt with in a model where the best evidence quality assurance of CPD as per the literature review be implemented. The financial constraints will be dealt with through a membership fee for services rendered as well as subcontracting services instead of employing experts. Another strategy will be to access infrastructure through collaborative agreements, for example with the accredited ARV clinics in order to utilise the infrastructure as CPD hubs. In this infrastructure technology exists from non-profit educational organisations and alumni will be able to access CAL in CPD hubs (Mindset Network 2007:1 of 1). There can also be collaborative agreements with existing e-learning providers (Foundation for Professional Development 2007:1 of 1) and furthermore workshops can be facilitated decentralised by faculty contracted from public institutions and other recognised experts. All of these strategies can be employed to mitigate the financial constraints.

Of the 78% respondents who indicated interest in becoming members of the alumni network (cf. Figure 4.20), 69% indicated that they were willing to pay a monthly subscription fee (cf. Figure 4.21). Respondents indicated a willingness of an average maximum subscription fee of R108 per month (cf. Table 4.22), while the average minimum was R30 (cf. Table 4.22). It is proposed that a membership fee structure is linked with products to be implemented to accommodate the large standard deviation (cf. Table 4.22 and Figure 4.22).

5.4 NEEDS ASSESSMENT

The needs assessment is the first step in the framework for the CPD process (cf. Figure 5.3) and the outcome of CPD events should be focused on those competencies as identified as needed in the needs assessment process. (Grant 2002:156; Norman *et al.* 2004:999). It was concluded that needs assessments should be done on all three levels as discussed in Chapter 2, namely on the national, organisational and individual levels. On the individual level both gap assessments and self-perceived or learning needs assessments should be accommodated (ACCME 2003:1; GMCUK 2003:3; Gravett 2005:13; RACGP 2001:13; WFME 2002:12, 15, 24).

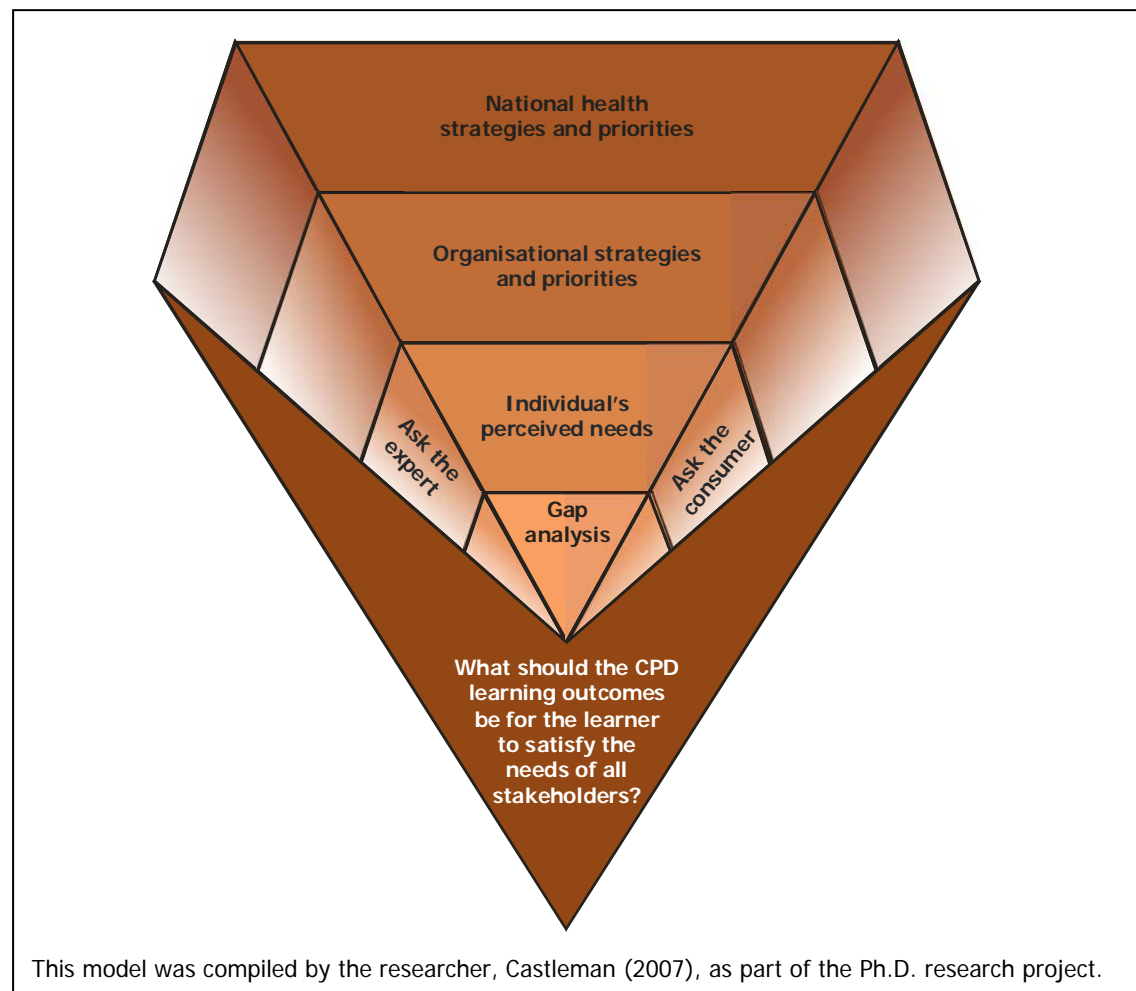
All four methods of needs assessment on the individual level as identified in the literature study should be employed, namely to ask health professionals what they would be interested in; what relates to their work and what causes them problems (knowledge, skills and or attitude); ask experts what they see as commonly found practice deficiencies; practice audit methods and what good practitioners should be able to do; and perceived needs of consumers of health services (Bouhuijs in Todd 1987:54; Cornford 2001:46; Dent & Harden 2001:133; Evans *et al.* 2002:79; Grant 2002:159; Grant & Stanton 1998:31; Handfield *et al.* 2002:953; Norman *et al.* 2004:1000; Roberts & Konn 1991:48; Saidi & Weindling 2003:332; Stross 1999:304; Waddell 2001:104; Wun *et al.* 2002:62).

5.4.1 Conclusion on needs assessment

It is proposed that individual self-perceived needs assessment be done annually through a questionnaire to simple random sample alumni from the PHEIs as was compiled by Castleman (2004:162). The results to this research should be validated with experts to identify common found practice deficiency as well as verification with the national health priorities. Consumer surveys

should also be implemented annually as part of the quality assurance process and results from these surveys should in addition give some feedback on gaps from expected norms of health services. The credentialing process as described in paragraph 5.11 suggests an assessment process which will also serve as a gap analysis to identify needs. In following these methods needs could be identified through all four methods to collectively identify CPD learning outcomes for health professionals (cf. Figure 5.4).

FIGURE 5.4: A FRAMEWORK FOR NEEDS ASSESSMENT TO DETERMINE LEARNING OUTCOMES FOR CPD



5.5 ADULTS' LEARNING PREFERENCES

It was concluded from the literature study that adult learning preferences can be condensed to three dimensions which will be discussed here in a summative manner. The first of the three dimensions is that most adults are self-directed, take responsibility for their own learning and prefer autonomy in learning. The second dimension entails the concept of the need of adults to acknowledge their experiences. The third dimension evolves around the timing and content of adults' need to learn. They want to learn when they need information and then the information should be relevant and they should be able to apply newly gained information in their life worlds. Each dimension will now be discussed in a summative manner.

- **Who makes adults learn?**

Adults take responsibility for their own learning, decisions and well-being but it needs to be acknowledged that there are those who have been modelled into passive receivers of knowledge, taught by authoritarians (Gravett 2005:9; Jarvis 2004:144; Livingstone 1999:24; Sectish *et al.* 2002:152; Vella 1994:188).

- **What experiences have they had?**

Other than children adults have been exposed to many experiences and therefore bring to the learning intervention a variety of life experiences, beliefs and needs that need to be acknowledged. These experiences can be both conducive or a limitation to the learning process because they can be utilised as a resource for learning for themselves and for other learners, but if life experiences are not acknowledged they may feel rejected. Existing paradigms may also be obstacles to new ways of thinking and doing if they are contradictory. Therefore facilitators need to explore learners' experiences, beliefs and needs and utilise and complement those. Furthermore, with this in mind, ensure relevance and

applicability of content (Gravett 2005:9; Jarvis 2004:144; Price 2005:260; Sectish *et al.* 2002:152; Vella 1994:181).

- **What do they want to learn when?**

Adults' motivations for participation in education are frequently from the need to acquire knowledge, attitude and skills to apply in life problems or life tasks. Many adult learners participate in learning because of the need to solve problems or address challenges in their life-worlds. Therefore the new learning needs to be useful immediately (Merriam & Caffarella 1999:199; Sectish *et al.* 2002:152; Vaughn & Baker 2001:610; Vella 1994:187; Wlodkowski 1999:33).

With these dimensions in mind the PHEI needs to accommodate these principles in various aspects in conducting CPD in order to be more effective. These aspects are knowledge of the target group; aligned learning outcomes; content compiled; accompanied study material; methodologies used; kinds of learning events offered; and assessment procedures.

With regard to knowledge of the target group it starts with knowledge of each learner. The PHEI needs to consider designing a specific CPD event or activity information on each learner's:

- particular background;
- learning preference;
- abilities;
- needs;
- experiences; and
- working environment (ACCME 2003:1; Du Boulay 2000:393; GMCUK 2003:3; Grant 2002:156; Gravett 2005: vii, 6, 7, 9; Grol 2001:2580; Harden & Laidlaw 1992:2; Jarvis 2004:29; Merriam & Brockett 1997:8; Norman *et al.* 2004:999; Price 2005:260; RACGP 2001:13; Sectish *et al.* 2002:152; Vella 1994:181; WFME 2002:12, 15, 24).

PHEIs must also ensure that learning outcomes are clear to the learners to enable them to make informed choices (ACCME 2003:1; RACGP 2001:13; WFME 2002:24).

Furthermore CPD content should be based on:

- best evidence medicine or practices; and
- accepted guidelines (Bernal-Delgado *et al.* 2002:656; Gambrill 1999:3).

It was also concluded that comprehensive study material based on best evidence medicine should support CPD opportunities (Bernal-Delgado *et al.* 2002:656).

From the literature review it was concluded that CPD events which are supportive of adult preferences, will have a variety of teaching methodologies inclusive of:

- Problem-based learning (Gambrill 1999:4; Gravett 2005:17; Harden & Laidlaw 1992:2; Merriam & Caffarella 1999:199; Sectish *et al.* 2002:152; Vella 1994:187; Wlodkowski 1999:33).
- Participative learning (Gravett 2005:10, 15; Jarvis 2004:144; Vella 1994:182).
- Small group discussions (Gravett 2005:14, 15, 16; Jarvis 2004:144, 145; Vella 1994:181, 189).
- Case studies from own practices and discussions of problems from learners' working environment (Gravett 2005:16; Jarvis 2004:145; Kim *et al.* 2006:873; Vaughn & Baker 2001:610; Vella 1994:185, 186).
- Facilitation (Gravett 2005:15; Jarvis 2004:144; Vella 1994:182).
- Lecturing (Gravett 2005:9).
- Experiential learning and peer-helping activities (Vella 1994:184).
- Identification of expectations of learners (Harden & Laidlaw 1992:2; Norman *et al.* 2004:999; Vella 1994:188).

It was noted from the literature review that a combination of different teaching methodologies within an event has an accumulative effect on retention rate as well as the additional benefit of satisfying the different learning preferences of learners within that event (Blandford 2000:22; National Training Laboratories 2006; St Clair 2003:215, 222).

Apart from the variety of teaching methodologies adults should be able to select from a variety of learning events to allow for independence in CPD. This selection of a learning event will be based upon individual learning preferences, skills, knowledge, attitudes and experiences, place and time of the event. Examples of typical learning events will include:

- distance learning;
- reading;
- facilitated workshops;
- lectures with opportunities for questions and answers;
- mentoring programmes; and
- e-learning (Blandford 2000:22; Bouhuijs in Todd 1987:54; Dent & Harden 2001:147; Epstein & Hundert 2002:232; Gravett 2005:9; Harden & Laidlaw 1992:2; St Clair 2003:215).

From the literature review it was also concluded that assessment must be an integral component of CPD events and learners must know what the assessment process entails. Feedback on assessment must be timely, constructive and detailed (Grant & Stanton 1998:9; Stross 1999:304).

5.5.1 Conclusion on adults' learning preferences

Adults' learning preferences are depicted in a summative manner in Figure 5.5. In a model to manage CPD for alumni of PHEIs the impact of adult learning preferences can be best illustrated if the circle of influence is considered. In order for the PHEIs to manage CPD for alumni they first need

to know who the alumni are, what they do, what they want to learn, when, and what experiences they have as the core of the circle of influence. Therefore the management process starts with gathering information through a registration form on biographical information, academic achievements, technology access, professional category, work functional area, patient profile, geographical position, interest and expertise area (Alumni Registration form; Appendix C). An electronic alumni database with special fields to store these should be utilised to manage the information (Alumni Database fields, Appendix D). This should be done annually to enable the planning of CPD events according to the information gathered through the registration forms as well as considering the results of the needs assessment (cf. Figure 5.4).

There should be a variety of CPD products to select from to satisfy the needs of all alumni. All CPD events should be evaluated by alumni and have an assessment component to assure quality and sustain the purpose of CPD.

5.6 CPD DEVELOPMENT PLAN

From the literature review it was concluded that, to support health professionals in their responsibility to ensure that CPD needs are met and to nurture a CPD culture, a CPD development plan as a structuring tool with clear goals and objectives should be implemented (Beard *et al.* 2005:841; Blandford 2000:9; Hilton & Slotnick 2005:59; Lewkonja 2001:426; Roberts & Konn 1991:53; Skovholt 1995:134; Smith 2006:48; Stinson *et al.* 2006:311; Wilkens 1997:16).

It was concluded that the development of a CPD plan should consist of a benchmark of expected standards of practice; specific learning outcomes for the learner; the identification of resources to support achievement of the outcomes; evidence of accomplishment of the outcomes; and an assessment process (Barnes 1998:278; Gravett 2005:9; Mahmoud *et al.* 2006:812; Majumdar 1999:38; Vella 1994:187, 188; Wlodkowski 1999:33). The development plan should start in the learners' life-world and identify areas for development. Learners should be able to list issues that they want to learn more about with an incident from their life-world that caused this need and the impact a learning activity will have in their life-world. In this manner learners develop their own structured plan for learning (Barnes 1998:281).

It was also concluded from the literature research that the completion of development plans should stimulate professionals to go through a systematical process of reflection through questioning and critical reflection on their original training and experience (Beard *et al.* 2005:841; Hansten 2000:26; Wilkens 1997:17).

5.6.1 Conclusion on CPD development plan

It is proposed that the development plan be done annually by alumni and sent in to the PHEI to consolidate and to plan interventions for the year in terms of what, where, when and how CPD events should be offered. These plans can be completed by individuals or in collaboration with mentors or peers. It is further proposed that, to stimulate the completion of development plans, an array of events should be implemented by the PHEI, for example annual workshops should be conducted at CPD hubs; newsletters prompting readers with topics stimulating critical thinking; mentoring programmes conclude with a final stage of identifying new development needs; new research being published in clinical and management updates to challenge current practice and stimulate the critical analysis.

The CPD development plans should start with a list of work-related problems or challenges, for example:

- What is in your control regarding these work-related problems or challenges?
- Define learning or development outcomes.
- How are you going to achieve these learning/development outcomes? (List resources needed.)
- What is the target date?
- How are you going to measure completion?
- How are you going to verify your completion? (See Appendix E for the CPD Development Plan.)

5.6.2 Research result on alumni access to technology in facilitating the CPD development plan

Although male respondents indicated that 70% of them had access to e-mail, females were less likely to have access to e-mail (43%) (cf. Table 4.3). The sample represented 51% PNs (cf. Figure 4.5) and only 32% of PNs had access to e-mail (cf. Table 4.4). Furthermore, of the 51% PNs (cf. Figure 4.5), 90% were female (cf. Figure 4.6). This has a relation with the overall access of the females of the sample to e-mail.

Given the result of the research it is suggested that the development plan should initially not be electronic-based because of accessibility issues in South Africa and it is merely a planning tool. It should, however, be monitored annually based on the information update on alumni.

5.7 LEARNING NETWORKS AND COMMUNITIES

It was concluded from the literature that a model to manage CPD for alumni of PHEIs should have as an integral component a network of mentors, peers and small groups (Grant & Stanton 1998:9; McDonnell *et al.* 2003:16; Ockene & Zapka 2000:33s; RICS 2006; Roberts & Konn 1991:50; Stross 1999:304; Tomlinson 1997:84; Vaughn & Baker 2001:610) managed by the PHEIs with alumni as members and improved health care as the shared vision, which is in tandem with the purpose of CPD of high quality patient care (ACCME 2003:7; Bennett *et al.* 2000:1169; GMCUK 2003:3; RACGP 2001:13; Tomlinson 1997:17; WFME 2002:11, 12). In order to achieve the purpose of CPD it was concluded that PHEIs should implement a process in which health professionals can participate continuously to maintain and improve standards of professional practice through the development of knowledge, skills, attitudes and behaviour (Grant & Stanton 1998:4; HPCSA 2002:1; Murphy *et al.* 2004:10; Peck *et al.* 2000:432; WFME 2002:8).

It was further concluded from the literature review that a network should be provided for learners in which the focus will still be on independent learning and supportive of problem-based and experiential learning where learners can form small groups and have the opportunity to listen, reflect and share opinions and clinical experiences (Merriam & Caffarella 1999:70; Pereles *et al.* 2002:206; Todd 1987:64).

Pereles *et al.* (2002:213) assert that small groups dissolve when they become tired of the additional responsibility of logistical arrangements. The model should take preventative measures to support maintenance of the network.

Electronic newsletters should also be distributed based on the needs of the learners. To ensure accessibility to large numbers and flexibility in terms of time, the message should be consistent and customised. The benefits are that it suits certain learning styles and it is available "just in time" (St Clair 2003:218). These newsletters should also be employed to promote creativity and writing skills among learners through the creation of a platform to develop the ability to express themselves and promote communication among members of the network (Moon 1999:34).

5.7.1 Conclusion on learning networks and communities

The researcher suggests that the existing CPD hubs should be utilised as clinical skills centres in the network. These CPD hubs are geographically decentralised and convenient in terms of time and place to the learners. These centres are equipped with innovative technology such as Telemedicine (MRC 2007:1 of 1) and interactive computer-based technology (Mindset Network 2007:1 of 1) which can be utilised as additional learning methodologies supportive of problem-based and experiential learning, as and when needed. Those health professionals with no access to computers may obtain access to computers through these clinical skills centres and CAL will

become a reality to these learners.

The researcher also suggests small groups should be sustained by a dedicated operational person from the PHEI who can act as the facilitator who should be responsible for the operational and logistic arrangements of time, place, topics and hand-outs.

The researcher further suggests that an alumni newsletter be implemented. The alumni newsletter will have as purpose to satisfy alumni network needs through promoting communication among members of the network and to promote creativity and writing skills among learners through the creation of a platform to develop the ability to express themselves. Network membership updates; updates on current surveys in the network, for example needs assessments; information on CPD events; updates on the mentor programme; a column for alumni comments, complaints and compliments will also be covered. It will in addition serve as a medium to communicate changes, for example in the health environment or legislation that will impact on alumni or to inform them about new guidelines or protocols. The geographical specific newsletters will be sent to all alumni in a specific province with the purpose of informing the alumni of that specific geographical area of all educational events planned for the area and to keep them up to date with developments in the alumni network. (See Appendix F for the layout of an example of an alumni newsletter and Appendix G for the layout of an example of a geographical specific newsletter.)

5.7.2 Research result on alumni communication preferences, geographical profile and willingness to participate in a network

The communication to and among members in the network will be dependent on the access they have to technology. The result of the research was that almost all the respondents (males 97% and females 96%) to this study had cell phones (cf. Table 4.3) which could effectively be employed as a communication medium through direct calls or short message services (SMSs). E-mailing seemed to be more problematic as a communication medium because it was less accessible to female (43%) respondents than to the male (70%) respondents (cf. Table 4.3) of this study and a similar tendency was seen with access to internet (males 67% and females 37%) (cf. Table 4.3), which has an implication for using the website as a communication medium.

Apart from whether the communication medium was accessible to the respondents or not, the respondents were also asked which medium they preferred. The four communication mediums preferred and highly preferred by respondents were post (76%, n=595); SMSs (73%, n =537); e-mail (69%, n =444); and faxes (65%, n=445) (cf. Figure 4.15). The post, SMSs and faxes would correlate with the accessibility the respondents had to communication mediums. Although post and faxes were not directly asked, it is an assumption that most of the respondents would have access to postal services in their personal and professional capacity and to fax services in their professional capacity. It is, however, to be noted that although e-mail may be a preferred communication medium to 69% of the respondents (cf. Figure 4.15), only 43% of the female respondents (cf. Table 4.3) had access to e-mail.

It will therefore be safe to propose that SMSs will be the preferred communication method to professional nurses, while SMSs and e-mail will be the preferred communication method to GPs.

The geographical profile of the respondents to this study emphasised effective communication with and among members of the network because of the vast geographical distribution of alumni. The geographical distribution of the sample in relation to accredited ARV clinics of the DoH (National Aids Helpline 2007:1 of 1) revealed that the respondents represented every province and also selected collectively a 100 of these clinics as clinics closest to their workplace (cf. Figures 4.12a and b). When distance between the sample and the closest accredited ARV clinic was investigated further, it appeared that professional nurses (42%) were only slightly more likely than GPs (33%) to work further away (more than 40 kilometres) from an accredited ARV clinic (cf. Figure 4.14). It is, however, to be noted that 57% professional nurses and 67% GPs indicated that they worked fewer than 40 km away from such clinics (cf. Figure 4.14). These ARV clinics are therefore best positioned as a physical infrastructure for clinical centres in this network. It should, however, be noted that the nature of a province, for example the size and urbanisation, also seems to influence the distance of health professionals' workplace to the closest ARV clinic, for example in comparison between Gauteng, Limpopo, Western Cape and Eastern Cape most of the respondents from the Eastern Cape (45%) worked more than 40 kilometres away from such a clinic (cf. Table 4.7). Eastern Cape is also geographically a big province and the province with the second biggest non-urban proportion of population in the country (Van Rensburg 2004:181).

In order to ensure sustainability in terms of alumni's participation in the network as a learning community cognisance should be taken of the interaction preferences of those who indicated willingness to participate. The degree of alumni-related interactions desired was higher among those who

were willing to take part in the alumni network (cf. Table 4.24). Most of the respondents indicated a preference for interaction with others if it had a CPD purpose and (less so) to interact socially (cf. Figure 4.16). Opportunities to discuss practical, clinical and/or work-related issues were indicated by 82% of the respondents as a highly preferred interaction with others in the network. To be mentored by an expert was indicated by 80% of the respondents as a highly preferred interaction and third on the list was to know who in their immediate geographic area were members of the network. The willingness to interact with members of the AN at regular intervals on a social basis was indicated by the least respondents (61%) (cf. Figure 4.16). Therefore these opportunities should be created in the network by the PHEIs. The results on willingness to participate and to act as mentors will be discussed in paragraph 5.8.1.1.

5.8 MENTORING IN CPD

It was concluded from the literature review that mentoring should be an integral component in a model to manage CPD. The mentoring relationships should be voluntary relationships initiated by the mentee but facilitated by the PHEI. From the literature review the mentoring relationship is defined as: "A mentoring relationship is one that may vary along a continuum from informal/short-term to formal/long-term in which faculty with useful experience, knowledge, skills, and/or wisdom offers advice, information, guidance, support, or opportunity to another faculty member or student for that individual's professional development" (Berk *et al.* 2005:67).

The seven roles of the mentor are concluded to be teacher of skills, sponsor or link to a network, advisor or councillor, confidante or sound board, role model, coach or motivator, and agent to liaise on the mentee's behalf when necessary without making the mentee dependent (Duda 2004:325; Tobin 2004:114).

5.8.1 Mentoring models

It was concluded from the literature review that the mentoring programme should have four role-players, namely the mentee, peer mentors, onsite mentors, and distance mentors. Further a combination of the multiple approach to mentoring can be employed, namely components of mosaic, collaborative, special interest group and mid-career mentoring. Mosaic mentoring is described as a model where the mentee has several mentors to satisfy a diversity of needs. Collaborative mentoring is a combination of peer support with directed learning in a planned programme. Mentoring through special interest groups is specifically applicable for professional development in specific interest areas and in mid-career mentoring a broad array of needs is addressed as CPD. All of these components could be employed through the development plan and each alumnus's specific CPD needs. There should not be specific rules to which model to apply, but rather to address all the mentoring needs of the alumnus (Dilenschneider 2000:175, 176; Duda 2004:325; Lewellen-Williams *et al.* 2006:278; Rose *et al.* 2005:345; Singletary 2005:857, 858).

According to the literature review the preferred methods for communication with mentors are indicated as telephone and face-to-face over e-mail communication (Rockman *et al.* 2004:399).

It was concluded from the literature review that enrolled mentors should preferably receive a stipend; that mentors should commit to be available for a specific time period per month for contact with mentees; and to respond to e-mail or faxes as agreed upon. Furthermore mentors should be divided among the mentees per subject interest and geographical location (Rockman *et al.* 2004:399). Formalised expectations between mentor and mentee should be written in the agreement between the mentors and the mentees (Levy *et al.* 2004:849; Rockman *et al.* 2004:401; Sowan *et al.* 2004:333).

The alumni network inclusive of the mentoring programme should be launched through a conference with topical issues as well as issues integral to mentor relationships emphasise the benefits of mentoring programmes and make alumni aware of the constraints of mentoring programmes in an effort to prevent and limit these (Rockman *et al.* 2004:401).

5.8.1.1 *Research result on willingness to participate in a mentoring programme and access to technology*

The mode of contact between each mentee and mentor should be decided on in the planning phase and may differ in each dyad because of the variants in access to technology and preferences in communication mode. Although females indicated that only 43% of them had access to e-mail (cf. Table 4.3), it was also concluded in the literature study that face-to-face and telephone communication were preferred modes of communication in mentoring programmes. Cell phone accessibility as a mode of communication was also indicated by respondents to this study as highly accessible with 97% for males and 96% for females (cf. Table 4.3).

Cognisance should also be taken of the willingness of respondents to participate in a mentoring programme and the accessibility to e-mail. Females are less likely to have access to technologies (with the exception of cell phones and TV3). The possibility exists that there is a relation between access to technology and professional qualification, as females might more likely be from the nursing occupational categories with less access. Most of the respondents from this sample were nurses [professional nurses (51%); auxiliary nurses (3%); enrolled nurses (4%)] (cf. Figure 4.5), while 90% of professional nurses from this sample were female (cf. Figure 4.6). Most of the respondents (80%) to the study rated being mentored by an expert in the alumni network as very important (cf. Figure 4.16).

It is also noteworthy that access to mentors as a possible CPD product to alumni was a definite need for 27% of the respondents; a need for 32% of the respondents; while 19% of the respondents did not bother to respond to the question (cf. Table 4.14). It can thus be concluded that 59% (27% plus 32%) of the respondents might have participated in a mentoring programme. It should, however, be born in mind that females (25%) were less likely to agree to become members of an alumni network as opposed to the 13% males who declined (cf. Figure 4.23). This difference is statistically significant (*Chi-square* = 13.012; *p* = 0.000). Males (87%) indicated a higher willingness to become members of this CPD alumni network than females (75%) (cf. Figure 4.23). This corresponds with the analysis of the high percentage of GPs (85%) and specialists (93%) (cf. Figure 4.25) who indicated a willingness to become members of the CPD alumni network as opposed to the relatively lower percentage professional nurses (74%), enrolled nurses (79%), and auxiliary nurses (78%) (who were predominantly female) (cf. Figure 4.6) who indicated a willingness to become members of the CPD network.

The degree of alumni-related interactions desired was also higher among those who were willing to take part in the alumni network and on the Lickert scale this rating is calculated as 4.33 for those who were willing and preferred to be mentored by an expert in the alumni network and 3.75 for those not willing (cf. Table 4.24). To act as a mentor in the alumni network the preference rating is calculated as 3.68 for the willing and 2.98 for those not willing (cf. Table 4.24). The results on willingness to act as a mentor without taking cognisance of their interest to become a member of the CPD network might give pseudo results because most professional nurses (60%) indicated willingness to act as a mentor, half of the respondents who were specialists (54%), followed by even fewer GPs (45%) (cf. Table 4.21). Willingness to become members of the network is, however, a prerequisite for these respondents to be of value in their capacity as mentors for this network.

It can thus be concluded that it is likely that specialists and GPs are more

likely to be willing to participate in the CPD alumni network mentoring programme as both mentors and mentees and that they might prefer communication in the mentoring programme by e-mail and, given the geographic spread of the network, this mode of communication might be more practical than face-to-face communication. Further to the geographical spread time constraints might also dominate face-to-face and telephonic communication as preferred modes of communication. Although post (76%) and SMSs (73%) were indicated as the most preferred communication modes (cf. Figure 4.15), it was in general and not necessarily in a mentoring programme because it might not be considered practical.

5.8.2 Skills, attributes, characteristics and responsibilities of mentors

In the literature review the personality traits and interpersonal skills of mentors and mentees conducive to mentoring programmes were identified. It was, however, concluded that CPD mentoring programmes were to be voluntary and therefore no selection of mentors on the grounds of personality traits or interpersonal skills should be done. It was also concluded that, notwithstanding the fact that mentors should volunteer, their participation stipends should be paid for time spent to improve devotion. It should, however, be communicated to the alumni what the conducive personality traits and interpersonal skills of mentors and mentees were. Additionally, development programmes should be offered to participating mentors as part of CPD of mentors in the network to develop interpersonal relationship skills within the context of the mentoring programme. There should, however, be certain minimum professional criteria as entry requirements to the mentor programme such as applicable professional registration, qualifications and work experience (Berk *et al.* 2005:66; Levy *et al.* 2004:847, 848; Lewellen-Williams *et al.* 2006:278; Lister 2004:579; Rose *et al.* 2005:344; Steiner *et al.* 2004:865).

The roles and responsibilities of both mentors and mentees were identified in the literature review and should be clearly defined to support the relationship. The mentors should be committed to the following guided by the development plan as the facilitating tool:

- Facilitate the development of the mentee's CPD development plan (Berk *et al.* 2005:66).
- Support the mentee in the access to resources, experts and source materials in the attainment of set goals as per development plan (Berk *et al.* 2005:66; Dracup & Bryan-Brown 2004:449).
- Give continuous constructive feedback and do formative assessment on progress; identify and respect the strengths and needs of the mentee (Berk *et al.* 2005:66; Rose *et al.* 2005:347; Steiner *et al.* 2004:870).
- Facilitate the implementation of the mentee's development plans (Berk *et al.* 2005:66; Dracup & Bryan-Brown 2004:449; Kalinauckas in Clyne 1995:135; Levy *et al.* 2004:848; Rose *et al.* 2005:347; Steiner *et al.* 2004:870).
- Be accessible to the mentee and reply timely, directly and comprehensively to questions (Berk *et al.* 2005:66).
- Celebrate success with the mentee (Berk *et al.* 2005:66; Singletary 2005:849).
- Focus on future opportunities (Kalinauckas in Clyne 1995:135).
- Make mentoring appointment a priority (Rose *et al.* 2005:345; Steiner *et al.* 2004:872).

The mentee should be committed to the following, guided by the development plan as the facilitating tool:

- The mentor is not the mentee's problem-solver (Singletary 2005:849).
- It is ultimately the mentee's development plan and therefore the mentee's responsibility (Rose *et al.* 2005:347; Singletary 2005:850).
- The mentee should be committed to the development plan (Rose *et al.* 2005:347; Singletary 2005:850).
- The mentee should utilise the mentor relationship to attain the outcomes

as set out in the development plan and be prevented from adding on additional issues (Rose *et al.* 2005:347; Singletary 2005:850).

- The mentee should remember that the mentor is not accountable for attainment of the learning outcomes as per the development plan but merely a support in the process (Rose *et al.* 2005:347; Singletary 2005:850).

5.8.2.1 *Research result on experience and expertise of respondents*

It was concluded from the literature study that mentors should have certain professional capabilities. These include knowledge, skills and experience in both the clinical and management domains.

The research results revealed that respondents came predominantly from the public sector (76%), while only 17% came from the private sector and 7% from NGO and other sectors (cf. Figure 4.8).

The majority of the respondents (71%) to this study claimed to be managers (cf. Figure 4.9). Of the 71% managers, 45% indicated that they were junior, 33% middle, 9% senior and 3% executive managers (cf. Figure 4.10). There are thus managers on all levels of the management hierarchy. It should, however, be noted that of the 71% respondents, 10% indicated that they were on no management level (cf. Figure 4.10) and it may be that those respondents might not have managed people, but felt they had administrative tasks which were managerial by nature, for instance managing budgets, compiling operational plans, and having a responsibility in information management. It was also noted that both junior managers who did not necessarily manage other managers and more senior managers who managed other managers varied significantly in their span of control. The standard deviation for the number of people managed indicated by managers was 97.79 and the number of managers managed was on average 31.88 (cf.

Table 4.5). It can thus be concluded that there is a vast array of experience among these respondents on various levels of management to be utilised in a mentoring programme and it will be possible to match management-related needs and expectations with management-related skills, knowledge and expertise.

It should, however, be noted that the results on the category on expert areas in the questionnaire proved to be difficult to analyse due to the nature of the question on both experience and academic qualification. The open nature of this question gave respondents the opportunity to give a self-perceived value to their own expertise. The standard deviation on years to substantiate experience in the three priority clinical areas is for example for HIV/AIDS (3.48), tuberculosis (6.02), and diabetes mellitus (7.81) (cf. Table 4.18). To illustrate these differences in perception on experience in these priority clinical areas one needs to have a closer look at what the standard deviation really means in years. In HIV/AIDS it ranges from 0.2 years to 17 years, tuberculosis from 0.4 to 20 years, and in diabetes it ranges from 0.6 to 33 years.

On academic qualification no benchmark was given and respondents gave academic motivations for expertise so different in nature that they could not be used to analyse. It can thus be concluded that, according to the result, there were respondents with many years of experience and self-perceived expertise, but benchmarks should be set for alumni to be measured against to standardise experience and expertise in the network. It is proposed to use the National Qualifications Framework structure (SAQA 2007:1 of 1) to benchmark academic qualifications. The qualifications will therefore be benchmarked against post-doctoral research degrees, doctorates, master's degrees, professional qualifications, honours degrees, national first degrees, higher diplomas, national diplomas and national certificates. Short courses as presented by HEIs will be classified as such. There are therefore no research

results on respondents' expertise in the various fields, but the information should be gathered on registration of the alumnus.

5.8.3 Stages in the mentoring process

It was concluded from the literature study that the proposed model to manage a CPD mentoring programme should consist of four steps incorporated in the development plan. The first step is a holistic assessment of the mentee's professional background, academic background and personal circumstances; it will also include assessment of strengths and development needs. The second step is to identify the mentee's future development plans and career development plans. The third step is to identify possible resources to support attainment of set development goals and objectives. The fourth step is the assessment of accomplishments and giving feedback (Amorosa 2004:94, 95; Dilenschneider 180:2000; Levy *et al.* 2004:846).

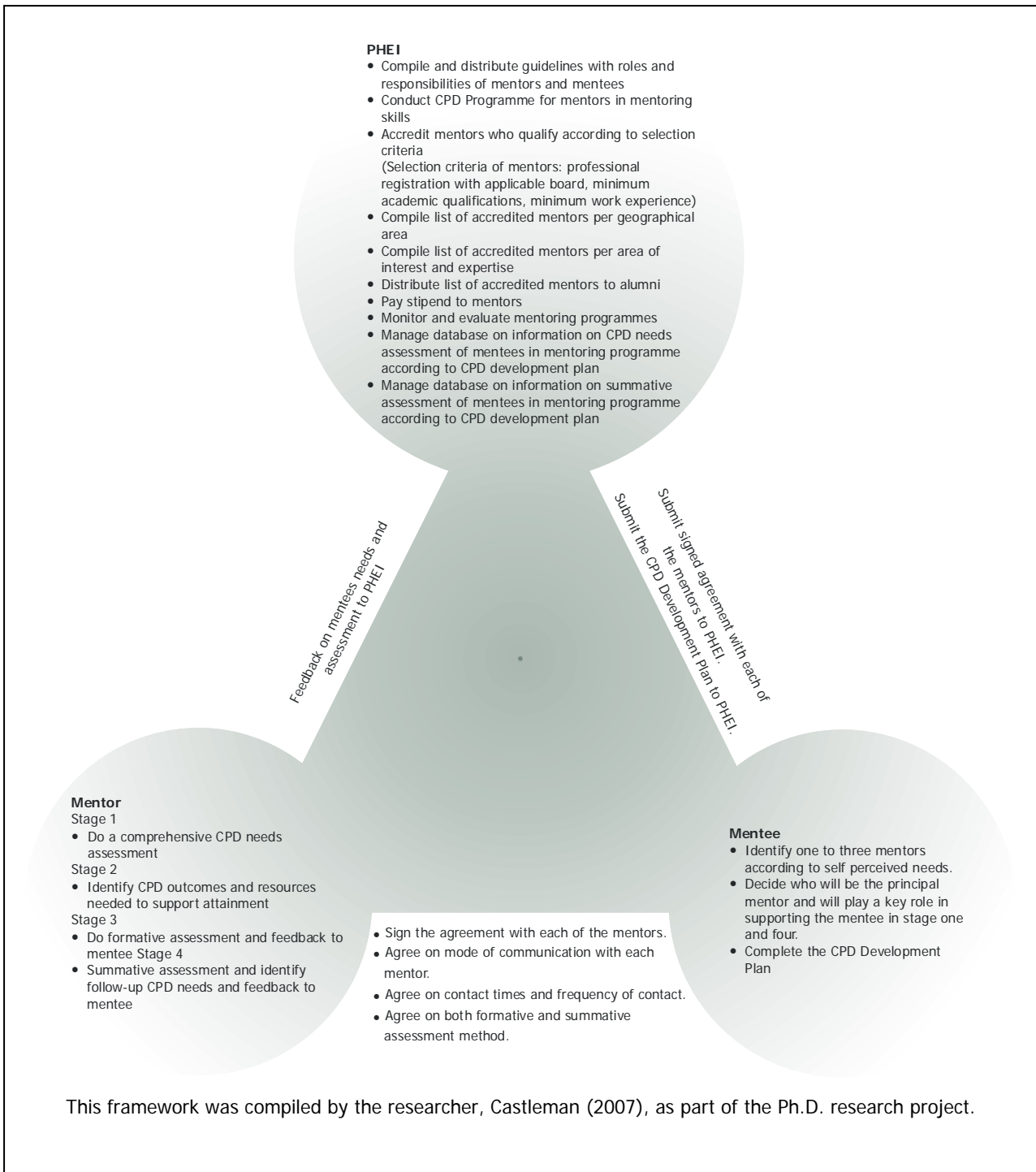
5.8.3.1 *Conclusion on stages in the mentoring process*

In the proposed mentoring model the contact sessions with mentors should be structured with the four stages in mind. There should initially be a formal contact session to implement the four steps of holistic assessment of the mentee's professional background, academic background and personal circumstances, strengths and development needs. The mentee's future CPD learning outcomes possible resources to support attainment of CPD learning outcomes should be identified in stage two. The subsequent contacts will be formative assessment of the accomplishments and giving feedback as stage three. Stage four will entail summative assessment and identification of follow-up needs to start the cycle of CPD and support the accumulative nature of the model to manage CPD for the alumni of a PHEI (cf. paragraph 5.10). The CPD development plan will be the tool employed to structure the mentoring process (cf. Appendix E).

5.8.4 Best evidence of implementation of mentoring

The mentoring programme should have clear guidelines to both the mentor and the mentee on their roles and responsibilities. Development programmes should be offered to the mentors to develop their mentoring skills. A network of mentors should be established to support the mentoring programme through peer groups. A mentoring guide should be available to mentors as a distance learning programme. The relationships should be monitored and evaluated through the implementation of evaluation tools. Mentors and mentees should be paired according to professional interests and experiences and development needs. In a multiple mentor model one mentee may have up to three mentors pending on the development needs. The mentoring programme should be characterised by planned mentoring conducted by a development plan. A network of mentors should be available as a potential pool of mentors to select from (Duda 2004:326; Hansten 2000:26; Howatson-Jones 2003:41; Price & Balogh 2001:209). In Figure 5.6 a framework of the roles for respectively the PHEI, the mentor and the mentee is given for the mentoring programme in a model to manage CPD for alumni of a PHEI.

FIGURE 5.6: A FRAMEWORK FOR THE MENTORING PROGRAMME IN A MODEL TO MANAGE CPD FOR ALUMNI OF A PHEI



5.8.4.1 *Research result on involvement in the mentoring programme*

Although 80% of the participants indicated that being mentored by an expert was an important interaction in the alumni network (cf. Figure 4.16), there was also a higher preference (4.33) to participate in a mentoring programme among those who were willing to participate in the network as opposed to those who were not willing to participate in the alumni network (3.75) (cf. Table 4.24). In this study 54% of the respondents indicated being willing to act as a mentor in the alumni network and 16% of the respondents indicated that they were not willing (cf. Figure 4.19). A similar scenario presents with willingness to act as a mentor (3.68) for those who were willing to participate in the alumni network as opposed to those who were not willing to participate in the network (2.98) (cf. Table 4.24). With regard to professional nurses 12% were not willing to act as a mentor in the alumni network (cf. Table 4.21). Thus there is a higher percentage of respondents not willing to act as a mentor than in the study of Sword *et al.* (2002:429) (cf. paragraph 2.12.6). It is also to be noted that, although this study did not *only* include professional nurses, 59% of the respondents in the study indicated a need to have access to mentors (cf. Table 4.14) and 51% of the respondents were professional nurses (cf. Figure 4.5). However, after further investigation, it seemed that professional nurses were less willing than other professional groups to join a network to participate in, among other things, a mentoring programme (cf. Figure 4.25).

5.9 CPD LEARNING METHODS

In the literature study on adults' learning preferences it was concluded that distance learning, facilitated workshops, lectures with opportunities for questions and answers, mentoring programmes, and e-learning are effective CPD learning events. In this section the focus will specifically be on the use of technology in CPD and reading as a CPD method.

5.9.1 Computer-assisted learning

Computer-assisted learning as a preferred learning method was well researched and many articles were found reporting on the methods, considerations, the benefits and constraints and uptake in the various forms of computer-assisted learning.

The following computer-assisted learning should be provided for through collaborative agreements utilising existing infrastructure:

- telemedicine (Yamakawa *et al.* 2002:444);
- teleconferencing (Demartines *et al.* 2000:290);
- internet distance learning (Peterson *et al.* 1999:1435);
- interactive video (Demartines *et al.* 2000:290; Reiss *et al.* 1996:350);
- videoconferenced grand rounds (Zollo *et al.* 1999:108);
- electronic discussion groups (Roberts & Fox 1998:215);
- bulletin boards (Roberts & Fox 1998:215);
- electronic newsletters (Pastuszak & Rodowicz 2002:164);
- electronic learning portfolios (Dornan *et al.* 2002:767); and
- health channel on television (Demartines *et al.* 2000:290; Peterson *et al.* 1999:1435; Roberts & Fox 1998:215; Yamakawa *et al.* 2002:444).

For quality assurance purposes as well as effective two-way communication anchors and facilitators from a registered provider should take care of the

registration criteria, responding to questions, dispensing of hand-outs, ensuring trouble free technology, evaluation of the programme, certifying attendance and monitoring the event during interactive video through tele-education (Zollo *et al.* 1999:114).

Roberts and Fox (1998:215) concluded that, for electronic discussion groups as an effective information-sharing platform, the prerequisites were similar to any CPD intervention. That includes clear aims and objectives, access to resources, and facilitation to independence. Additional conditions for effective and efficient learning are sufficient membership to improve participation and the necessary technological support, for example bulletin boards.

5.9.2 Reading as a CPD method

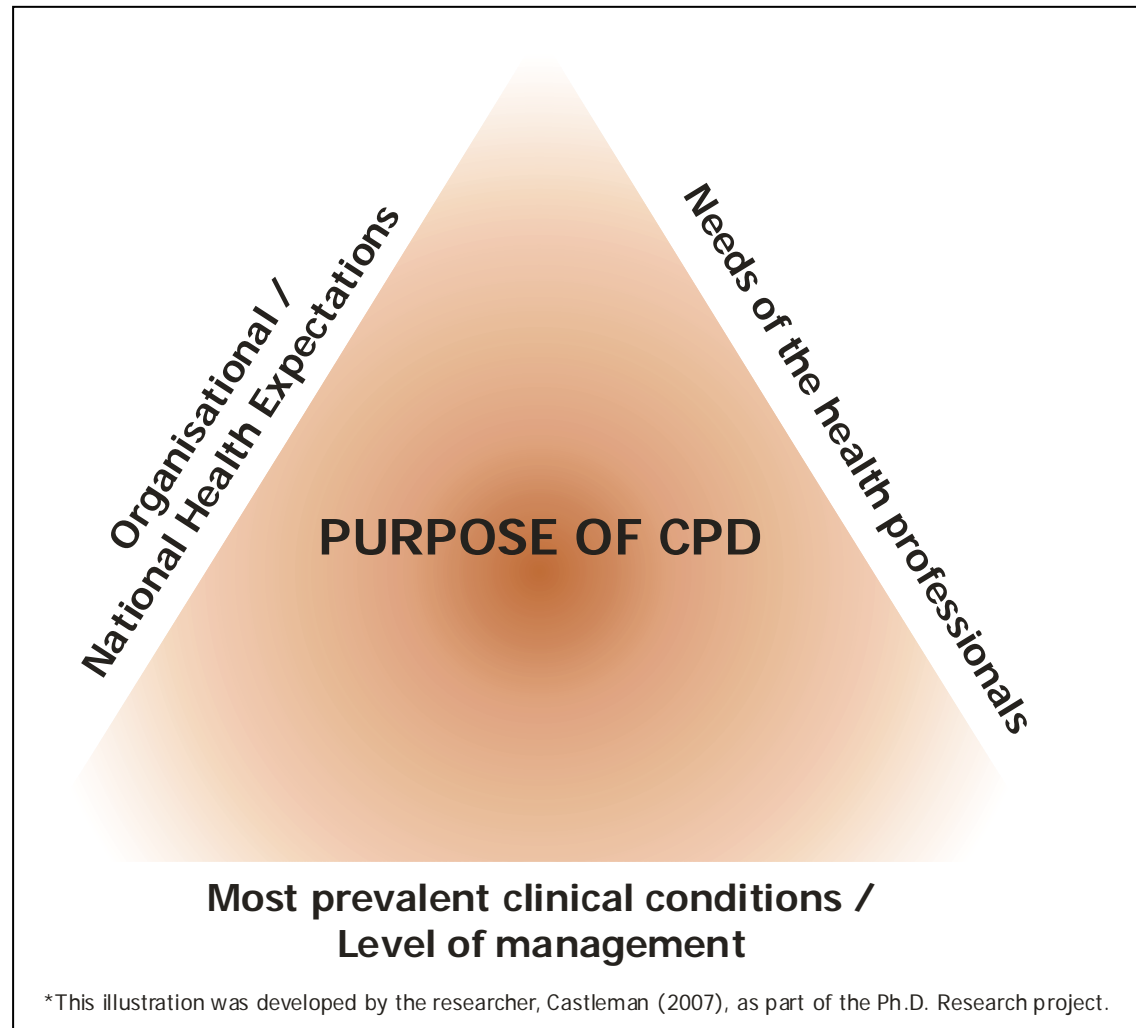
It was concluded in the literature review that reading as a CPD method is a very important component to encompass in CPD. Therefore libraries are important resources. Journal articles are utilised by readers to access latest research and best evidence medicine in specific interest areas. These articles are conducive to learning because they record experiences, develop critical thinking, and contribute to problem-solving. The use of journals as a form of assessment is well acknowledged (Armstrong *et al.* 2003:25; Corry 2001:76, 81; Gluck 2004:121; Gluck & Hassig 2001:273; Moon 1999:34; Roberts & Konn 1991:162; Tolnai 1991:416).

5.9.2.1 *Conclusion on reading as a CPD method*

To overcome the weakness of the availability of libraries to alumni in especially the rural areas information updates should be included in a model to manage CPD for alumni of a PHEI to encompass reading as a CPD method. These updates should be the source of latest research and best evidence practice in specific disease and business areas. These updates should therefore satisfy the need of the learners, the national expectations according

to the strategies of the National DoH and support the purpose of CPD. In Figure 5.7 the relation of the stakeholders' needs in the development of the updates in support of the purpose of CPD is illustrated.

FIGURE 5.7: INFORMATION UPDATES AS PART OF A CPD METHOD



These updates should be designed to record experiences and to facilitate learning from experiences; to develop critical thinking and ownership of learning; to increase the ability in critical reflection; and to improve problem-solving. These CPD updates should encompass the principles of evidence-based practice and problem-based learning as described in the literature review. Therefore the proposed layout for these is:

- Clarify terms and concepts.
- Describe current challenges and problems in practice.
- Give best evidence practice to manage identified challenges and problems in practice.
- Give outcome of latest research.
- Discuss a case study with the following components within the case:
 - define the problem;
 - analyse the problem through phrasing questions;
 - categorise information collected related to the problem;
 - identify case management objectives related to each question phrased in the problem analysis (resources, priorities and responsibilities will be identified here);
 - collect information in order to answer questions raised in order to attain set objectives;
 - synthesise and apply information to the initially raised questions; and
 - evaluate outcome (Gambrill 1999:4). (Also see Appendices H & I for examples of Clinical and Management CPD Updates.)

The purpose of the CPD Updates will be the development of specific knowledge and skills in a PBL and an evidence-based manner to support the purpose of CPD.

Various CPD methods were investigated as potential products to be included in a CPD learning network in consideration of the geographical spread of

learners; the nature of the learners as adults; the learners' life-worlds; learners' access to technology; learners' preferences for certain CPD methods; and the purpose of CPD.

5.9.3 Research result on technology access in support of CPD methods

Respondents to this study indicated (cf. Table 4.3) that almost all of them had access to cell phones (males 97% and females 96%) and no discrepancies were found in the accessibility to TV3 between males (75%) and females (73%). However, more males (81%) had access to computers than females (64%); to e-mail (males 70% and females 43%); internet (males 67% and females 37%); and DSTV (males 55% and females 34%). These results correlate with the professional groups and it was concluded that GPs had more access to technology in general than professional nurses, but in a CPD network considering technology in CPD methods it can be concluded that cell phones can be used for all members, while TV3 might be used for broadcasting special educational programmes. Computer-assisted programmes might be utilised for males who are in this study predominantly GPs, but for the professional nurses access to computers should be provided through existing infrastructure such as the accredited ARV clinics, which can be utilised as CPD hubs through collaborative agreements. E-mail and internet seem to be problematic to utilise as a stand alone CPD method for males who are predominantly GPs and it is proposed that it would also not be employed in CPD methods for professional nurses, who are predominantly female. The accessibility to DSTV is low for all and it is proposed not to be employed in the CPD network for alumni.

5.9.4 Research result on interest areas

To understand the learners' life-worlds their clinical roles as well as their managerial functions were investigated. This will influence the design and

selection of CPD methods. It will also give an indication of the clinical topics to concentrate on for the clinical updates in order to satisfy the needs of the learners, the national expectations according to the strategies of the National DoH, and to support the purpose of CPD.

Respondents to this study identified HIV/AIDS (82%), tuberculosis (40%), and hypertension (38%) as the three most prevalent conditions seen by them in the clinical situation (cf. Table 4.11). Diabetes was identified by some respondents (29%) as one of three most prevalent conditions. Between 14% and 17% of the respondents selected diarrhoea and vomiting, gastroenteritis, STDs, asthma and upper respiratory track infections as prevalent conditions. It should also be noted that none of these conditions were reported as the three least prevalent conditions seen by these respondents. Malaria as a least prevalent condition should be noted in the context of the respondents' geographical spread. Most of the respondents were from Gauteng (29%), Eastern Cape (21%) and Western Cape (14%) (cf. Table 4.6).

According to the results on the clinical interest areas of GPs and professional nurses, there are similarities between the five priority interest areas which are collectively HIV/AIDS, tuberculosis, dermatology, diabetes mellitus, STDs and paediatrics. HIV/AIDS, tuberculosis and diabetes mellitus correspond with the most prevalent conditions identified by respondents (cf. Table 4.16). These conditions are also in line with the health priorities of the DoH (RSA DoH 2004:13, 14). It is concluded that - for topics to be covered in the clinical updates - at least HIV/AIDS, tuberculosis, hypertension, and diabetes should be covered to sustain the purpose of CPD.

In the question on interest in health management the priority interest areas were indicated as leadership, project management and strategic management. In the differentiation between GPs and professional nurses, GPs indicated financial management as their priority interest area followed by project management, leadership, and strategic management (cf. Table 4.15).

Professional nurses indicated project management, leadership and strategic management as equally important followed by monitoring and evaluation. In the interest area of computers both GPs and professional nurses identified internet skills as a priority interest. In the health policy interest area both groups identified national health policies as a priority interest and GPs identified public private partnerships in health as an equally priority interest. In the ethical area both groups identified HIV/AIDS and ethics as priority interests. In the interpersonal area GPs identified counselling as the priority interest, followed by communication skills. Professional nurses identified communication skills as the priority interest, followed by conflict management and then counselling skills. In the personal growth area stress management was identified by both groups as a priority area.

It is proposed that CPD updates should cover health management, computer skills, health policy, ethical issues, interpersonal skills, personal growth and health management. The CPD updates should be developed by experts in the various fields. The focus should be according to those areas indicated by the respondents as priority areas of interest. It should be noted that, although 71% (n=623) of the respondents indicated that they were managers (cf. Figure 4.9), in this category of interest the frequency of answers was not dominated in the health management area where the highest frequency was n=252 as opposed to personal growth (n=422), ethical area (n=411), computer area (n=367), interpersonal area (n=346), and health policy area (n=325) (cf. Table 4.15). (See Appendix I for layout of an example of a Management CPD Update.)

The CPD Updates should be sent to members of the network by post and/or e-mail considering the result of the communication preferences of the respondents to the study (cf. par. 5.9.3). Considering professional nurses' limited access to e-mail they will have to receive it by post and GPs may select either one of the two modes. The proposed model therefore should provide for both modes, but will have a financial implication and members

must have an option. It is, however, also proposed that the CPD hubs and available technology in these hubs be employed to place electronic versions of these updates digitally on the information platforms to remove cost as a barrier to those members who may want to consider using these facilities. The SMS facility as preferred communication mode will also be applied in the model in using it to alert members in the network if new clinical updates are available, or of any other event at, for example, the CPD hub.

5.9.5 Research result on preferred CPD interventions

Most respondents indicated a need for training workshops (79%); an alumni newsletter on the latest development in FPD (76%); a summary of the latest developments in their areas of interest (79%); one-day refresher seminars (76%); full journal articles in their areas of interest (73%); distance learning (65%); self-assessment of their practice against minimum performance standards (64%); and organised group case/problem discussions (65%) (cf. Table 4.14). Before inclusion of these CPD products in the alumni management model, it is also important to consider the correlation that exists between those participants who are interested in being part of the alumni network and their specific needs in terms of CPD products. The research results indicated relationships between this group and the same educational products (cf. Table 4.24). Access to technology will, however, further influence inclusion of these CPD products in the alumni management model (cf. Table 4.4). Although access to mentors was only indicated by 59% of the respondents as a preferred educational product (cf. Table 4.14), 80% of the respondents indicated it as an interaction preference (cf. Figure 4.16) and therefore it will initially be included as an optional CPD product for GPs given the research result on the willingness to participate in the network (cf. par. 5.8.1.1.). However, it should be monitored as a potential CPD product for professional nurses in a second phase of implementation. There were also relations between those respondents who indicated a willingness to participate in the CPD alumni network and their need for these educational

products (cf. Table 4.24). Considering the number of respondents from a professional group and their willingness to participate, the preferences for educational products and the access to technology, the model to manage CPD for the alumni of a PHEI will initially focus on the following CPD products per target group (cf. Table 5.2):

TABLE 5:2: RECOMMENDED CPD PRODUCT/S PER TARGET GROUP

CPD product	Target group				
	All alumni	Alumni per province	GPs	Professional nurses	Managers
Alumni newsletter (cf. Appendix F)	√				
Geographical specific newsletter (cf. Appendix G)		√			
Training workshops	√				
One-day refresher seminars	√				
Organised group case/problem discussions			√		
Mentoring			√		
E-learning			√		
Distance learning	√	√	√	√	√
Self-assessment of practice against minimum performance standards			√		
Information updates (clinical) (cf. Appendix H)			√	√	√
Information updates (Management) (cf. Appendix I)					√

5.10 QUALITY ASSURANCE OF CPD

It can be concluded from the literature study that providers and receivers of CPD should be monitored to ensure minimum standards which are in line with the purpose of CPD to maintain and improve standards (RACGP 2001:13; WFME 2002:19). In this study the providers are PHEIs and the receivers are health professionals.

In conclusion of the literature study for quality assurance purposes all interventions as part of the CPD function of a PHEI should be monitored and evaluated on various levels. The first level includes monitoring and evaluating learners' satisfaction level through surveying learners' evaluation of educational events' design, methodology, comprehensiveness and relevance, correspondence between outcomes and the actual content, as well as learners' satisfaction in terms of content, educational strategy, cost and facilities (Cervero 1988:136, 139; St Clair 2003:266). On the first level the number of participants should also be recorded as well as participants' intention to implement newly gained knowledge (Cervero 1988:137; St Clair 2003:266).

On the second level of the quality assurance system actual learning should be evaluated through assessing skills, knowledge and attitude through formal assessment (Cervero 1988:141; St Clair 2003:266).

On the third level of the quality assurance system application of learning in practice should be evaluated after some time has lapsed through combinations of self-administered questionnaires, portfolios, written examinations, patient surveys, electronic simulation and peer evaluations. Managers, mentors, patients or peers should be involved in this level of assessment (Adriaansen *et al.* 2005:97; Brasel *et al.* 2004:9; Cervero 1988:142; Leach 2004a:859; Rose & Burkle 2006:212; St Clair 2003:267).

On the fourth level of the quality assurance system volunteers should be assessed by experts in the working environment against set benchmarks, for example in the clinical environment it should be accepted protocols and guidelines and in the management environment it could be a portfolio of documents as well as an interview with a panel of experts (Brasel *et al.* 2004:9; Cervero 1988:145; Leach 2004a:859; Rose & Burkle 2006:212; St Clair 2003:267).

Portfolios could be employed on both levels three and four because they have a dual function of facilitating learning and proving competence through critical self-analysis in the process of collating evidence in the demonstration of the attainment of measurable learning outcomes. These learning outcomes could be set by the individual in collaboration with the mentor. Portfolios are supportive of self-directed, learner-centred learning (Bond in Clyne 1995:147).

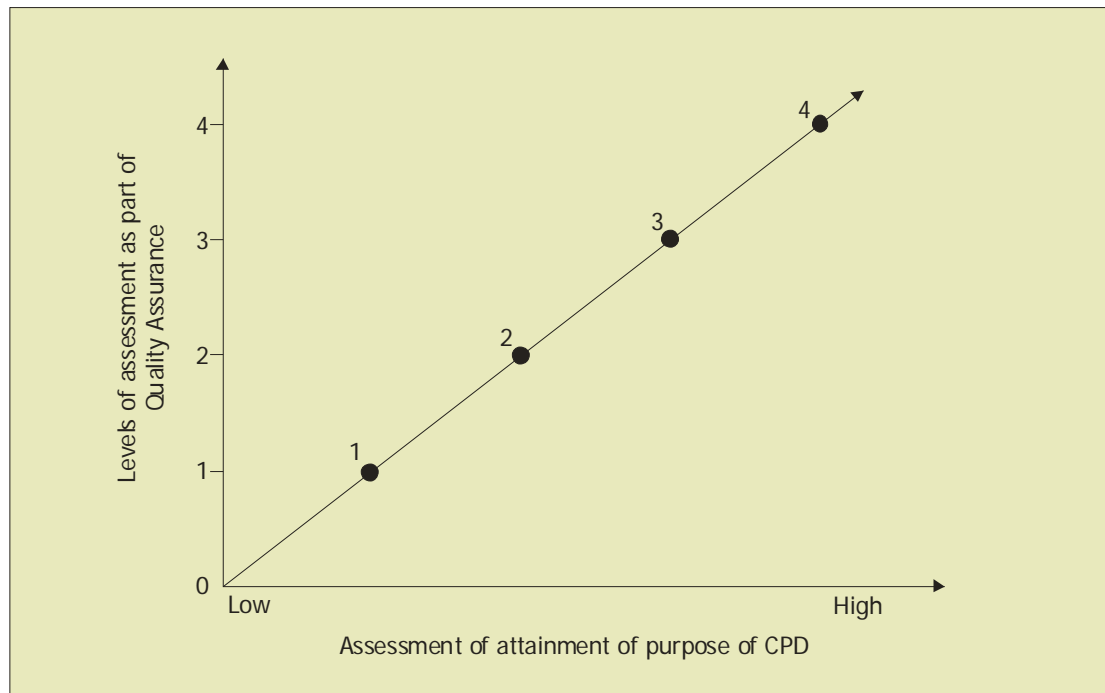
Assessors as part of the panel that will conduct assessment on the fourth level of the quality assurance system should be offered the opportunity to attend CPD events for assessors (Goroll *et al.* 2004:902; Silber *et al.* 2004:555).

Furthermore, all PHEIs in South Africa are registered with the DoE under the Higher Education Act, 1997 which entails that such institutions have to adhere to the quality assurance rules and regulations of the Higher Education Quality Committee (HEQC). The HEQC is responsible for the accreditation of HEIs as education and training providers and for the accreditation of higher education learning programmes by virtue of the provisions of the Higher Education Act, 1997 (RSA 1997) and the South African Qualifications Authority Act, 1995 (RSA 1995).

5.10.1 Conclusion on quality assurance of CPD

In order to implement a quality assurance process in line with the four levels as identified in the literature study participants must be willing to voluntarily participate in the process. It is not on the first (satisfaction) and the second (formative and summative assessment) levels that voluntary willingness to participate was investigated, because that was already done in all HEIs. It is, however, on the third (evaluation of application of learning in practice after a certain period) and the fourth level (assessment by experts in practice against set benchmarks) that voluntary willingness to participate is crucial for successful inclusion in the proposed model. In Figure 5.8 a comparison is drawn between the level of assessment as described here and the assessed level of attainment of the purpose of CPD as was concluded and consequently depicted in Figure 5.1 as "Higher quality patient care". There seem to be a direct relation between the levels of quality assurance and assessment of attainment of the purpose of CPD. It is only when there is transfer of skills, knowledge and attitude (improved competency) to the workplace when higher quality patient care will be attained. The comparison in Figure 5.8 is merely a visual representation of the relation between the levels of quality assurance as described here and the proposed levels of assessment of attainment of the purpose of CPD (cf. Table 5.3).

FIGURE 5.8: QUALITY ASSURANCE OF CPD: A COMPARISON BETWEEN THE LEVEL OF ASSESSMENT AND ATTAINMENT OF THE PURPOSE OF CPD



This comparison was made by the researcher, Castleman (2007), as part of the Ph.D. research project.

5.10.2 Research result on quality assurance of CPD

The outcome of the research was that most of the respondents (77%) felt that, to be evaluated by an expert in the alumni network against minimum performance standards, was important (cf. Figure 4.16). Slightly fewer respondents (70%) felt the same about it if it was done by peers. It is also interesting to note that 5% of the respondents felt that it was not important to be evaluated by experts, but slightly more (8%) respondents felt the same about peers.

Respondents were also asked whether they were willing to be accredited by an alumni network as part of a credentialling process. Parts of the credentialling process entail assessment of competence against set

benchmarks and the highest level of assessment also encompasses external assessment. Most of the respondents (71%) indicated that they were willing to be accredited by an alumni network (cf. Figure 4.18).

While most of the respondents felt that to be evaluated by experts was important (cf. Figure 4.16) and most were willing to be accredited by an alumni network (cf. Figure 4.18), respondents were less eager to actually volunteer active duties such as being a peer evaluator (55%) or an expert evaluator (47%) (cf. Figure 4.19). Still, few respondents were outright unwilling (between 16-22%). It should, however, be noted that specialist medical doctors were more willing to act as both expert evaluators (specialists 62%; GPs 32%) and peer evaluators (specialists 53%; GPs 43%) than general practitioners (cf. Table 4.21). Professional nurses, on the other hand, were less willing to act as expert evaluators (29%) but more willing than both specialists and GPs to act as peer evaluators (63%).

It should also be noted that those respondents who were willing to become members of the CPD alumni network had a slightly higher need (3.92) to be evaluated by peers in the alumni network against minimum performance standards than those who indicated not being willing to become members (3.55) (cf. Table 4.24). A slightly higher need (4.16) was expressed for evaluation by an expert in the alumni network against minimum performance standards by those who were willing to become members of the CPD network as opposed to those who were not willing (3.72).

A similar tendency for involvement was noted for those who were willing to join the network to act as expert evaluators (3.5) and as peer evaluators (3.68) as opposed to those who were not willing to join who indicated willingness to act in these two roles as expert evaluator (2.75) and as peer evaluator (2.93) respectively.

5.11 CREDENTIALLING

It was concluded in the literature research that the notion of assuring minimum standards in the profession and providing evidence in this regard is the result of amalgamation of professionalism and credentialling. This function is fulfilled by bodies and networks that reassess professionals' competence through various means, for example submitting proof of CPD, practice audits, board certification, maintenance of certification, the revalidation process, peer reviews, and accreditation systems (Hilton & Slotnick 2005:59; Kimatian 2006:210; Lewkonia 2001:426; Miller *et al.* 2004:770; Roberts & Konn 1991:53; Sharp *et al.* 2002:541; Sheldon *et al.* 2004:11; Smith 2006:48; St Clair 2003:72; *The Concise Oxford Dictionary* 1995:272). In this study the focus is on the concept of networks and the role thereof in reassessing alumni.

It was also noted in the literature study that those networks that reassess and provide evidence of competence, define the broad direction with goals and objectives on the strategic level. On the functional level the procedures are described together with roles and responsibilities. On the operational level specific guidelines, methods and tools are provided (Bruce *et al.* 2004:687; Gerster *et al.* 2003:22; McGrath 2004:640; Phillips 2003:374; Sheldon *et al.* 2004:10).

5.11.1 Conclusion on credentialling

It was concluded from the literature study that professionals could be accredited according to participation in a network to support attainment of the goals of CPD. The foundation of this accreditation framework is based on the assumptions that it is voluntary; that there are various ways of being accredited and demonstrating competencies; it is competency-based; and implementation is incremental.

Five levels of participation could be accredited from mere participation in a CPD event, namely successful completion of the CPD event, continuous successful completion of CPD events, self-assessment of competence in work environment against set benchmark such as clinical guidelines or protocols and, ultimately, external assessment of competence in work environment by an expert against set benchmarks such as clinical guidelines or protocols. Management accreditation could be done through a portfolio of documents (performance evaluations, an essay, responses simulations, a recommendation from a manager), as well as an interview with a panel of experts (Benner 1984:20-31; Cioffi *et al.* 2003:455; Griffin 2003:114; Irvine 2006:209; Malloch *et al.* 2000:380).

The accreditation of alumni and the quality assurance process (cf. Figure 5.8) have the same goal of supporting attainment of the purpose of CPD (cf. Figure 5.1). In Table 5.3 a comparison between the credentialling and quality assurance processes for alumni of a PHEI is drawn.

The intention is also to update all alumni with basic competencies in line with the strategic issues on national level such as identified in the Strategic Priorities for the National Health System, 2004-2009 (RSA DOH 2004:8-10).

The model to manage CPD for the alumni of PHEIs will on a strategic level give the broad direction of higher quality patient care. On a functional level roles and responsibilities of both the PHEI, alumni, mentors, facilitators and all other role-players will be formulated in guidelines. On an operational level tools will be developed to enable the procedures and process to operationalise the model.

TABLE 5.3: A COMPARISON BETWEEN THE CREDENTIALLING AND QUALITY ASSURANCE PROCESSES FOR ALUMNI OF A PHEI

Accreditation level	Evidence required	Tools	When to accredit	Correlation with quality assurance (QA)
1 Star Member	Participation in a CPD event	Proof of registration to a CPD intervention	On registration to the CPD intervention	QA level 1
2 Star Member	Successful completion of a CPD intervention equivalent to a single short course or non-formal qualification (SAQA 2007:1 of 1)	Summative assessment results	On receipt of the summative assessment results	QA levels 1 & 2
3 Star Member	Successful completion of CPD events equivalent to a formal qualification or at least three short courses aligned with areas of interest (SAQA 2007:1 of 1)	Summative assessment results	On receipt of summative assessment results	QA levels 1 & 2
4 Star Member	Self-assessment of competence three months after CPD intervention in work environment against set benchmark such as clinical guidelines or protocols	A portfolio of documents (performance evaluations, an essay, a recommendation from a manager or mentor, self-administered questionnaires, 360-degree evaluations by patients, peers and professional associates)	On receipt of self-assessment results	QA levels 1 & 3
5 Star Member	External assessment of competence in work environment by an expert against set benchmark such as clinical guidelines or protocols	External assessment by an expert or panel of experts in conjunction with the level four assessment tools	On receipt of external assessment results	QA levels 1 & 4

This comparison was made by the researcher, Castleman (2007), as part of the Ph.D. research project.

5.11.2 Research result on credentialling

Most of the respondents (71%) indicated that they were willing to be accredited by an alumni network and only 6% indicated that they were not willing to be accredited (cf. Figure 4.18). The credentialling process entails assessment of competence against set benchmarks and the highest level of assessment also encompasses external assessment.

Respondents to this study indicated that they realised the importance of a vast array of interactions that can be utilised in the credentialling process, namely to be evaluated by an expert against minimum performance standards (77%); to be evaluated by a peer against minimum performance standards (70%); and to be mentored by an expert in the alumni network (80%) (cf. Figure 4.16).

As previously discussed, some of those who were willing to participate in the network also indicated a willingness to take up roles as mentors, expert and peer evaluators. Although not as many, at least half of them were willing to actively participate (cf. Figure 4.19).

5.12 SUMMARY; SUSTAINABILITY AND DEMOGRAPHICS

Most of the respondents (78%) (cf. Figure 4.20) of this study expressed interest in becoming part of a CPD alumni network and of these potential members, most (69%) were willing to pay for membership to the alumni network (cf. Figure 4.21). It was further concluded from the research that the average maximum price to be paid was R108, while the average minimum was R30 (cf. Figure 4.22). The standard derivations are very large and therefore it is proposed that membership fees be linked within this range to products for members to select from.

Approximately half of the sample (51%) were professional nurses; 23% were general practitioners; 5% were medical specialists; and 14% consisted of dentists, pharmacists, occupational therapists, administrative staff, social workers and councillors (cf. Figure 4.5). Considering the gender distribution of the entire sample being 75% female and 25% male (cf. Figure 4.1) and the research result of 90% of the professional nurse respondents being female (cf. Figure 4.6), it can be concluded that the female respondents (25%) who were not willing to become members of an alumni network (cf. Figure 4.23) were most likely professional nurses. This correlates with the 74% professional nurses who were willing to become members of the alumni network (cf. Figure 4.25). Specialists were particularly willing to belong to an alumni network, while professional nurses (mostly females) were less likely to do so. Once willing to take part in the network, all groups were equally likely to pay or not pay for membership.

Coloureds and whites were less likely than blacks and Indians to take part in the network (cf. Figure 4.24).

There is no difference in terms of average age between the two groups (cf. Table 4.23).

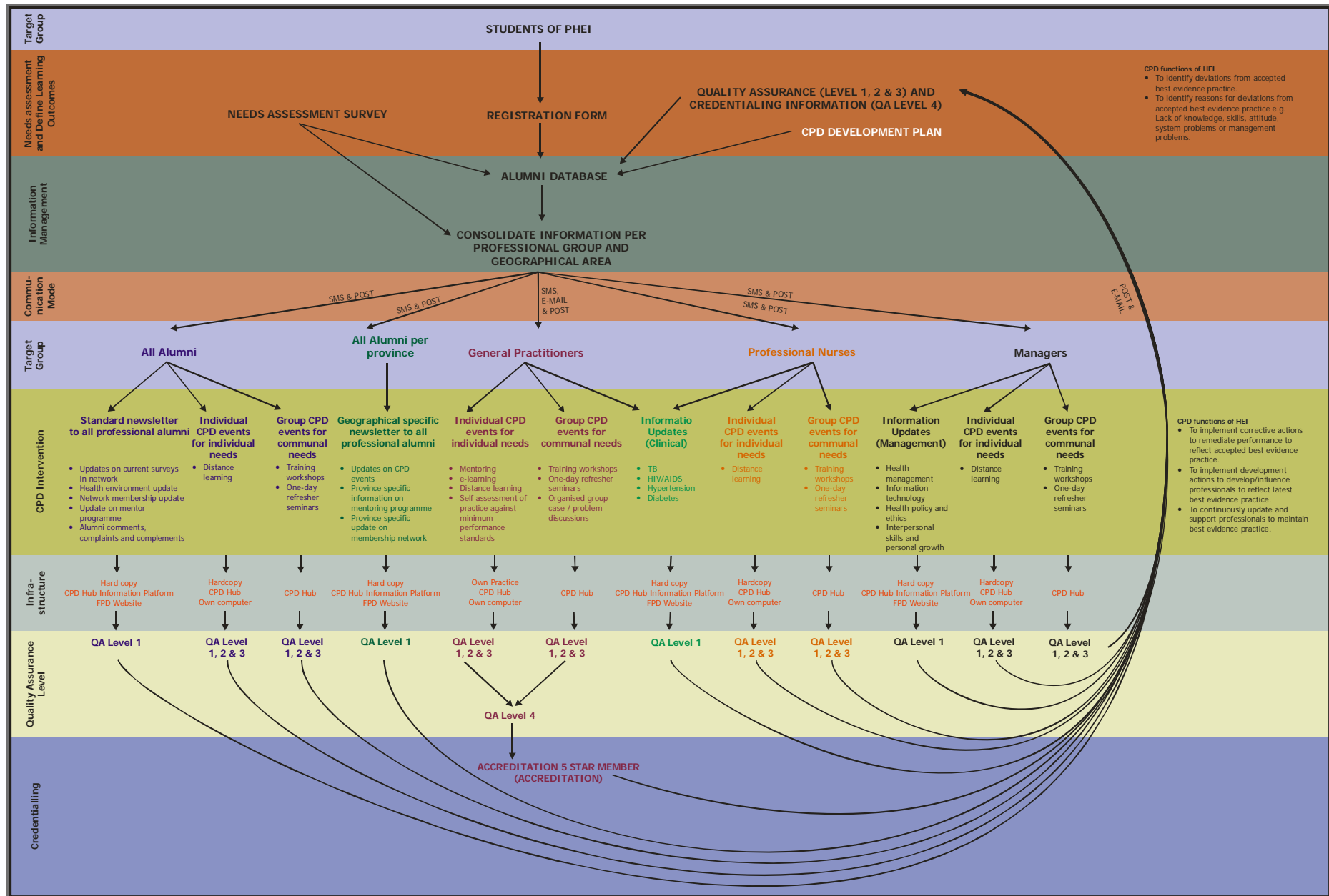
Those respondents who expressed interest in becoming part of a CPD alumni network indicated it was important to them to know who in their geographical area were members of this alumni network (4.15); to interact with members of the alumni network on regular intervals; to discuss practical/clinical/work-related issues (4.22); to be mentored by experts in the alumni network (4.33); and to be evaluated by experts in the alumni network against minimum performance standards, e.g. protocols or guidelines (4.16) (cf. Table 4.24).

The potential members of the alumni network indicated a need for training workshops (4.20); an alumni newsletter on the latest development in FPD (4.14); a summary of the latest development in their areas of interest (4.09); full journal articles in their areas of interest (4.01); and one-day refresher seminars (4.01) (cf. Table 4.25).

5.13 DISCUSSION OF MODEL

The model to manage CPD for the alumni of a PHEI (cf. Figure 5.9) is a triangulation of the literature study, the research results and the conclusions. Application of the model will ensure fulfilment of the CPD functions of a PHEI in its responsibility towards its alumni in a planned and coordinated manner. The model is supportive of CPD in a cyclic and continuous manner, applying the principles of adult learning and credentialling. Assessment is an integral part of the quality assurance on the various levels. It is based on a network principle in that it utilises existing infrastructure and expertise in a decentralised manner to make CPD convenient and relevant to learners.

FIGURE 5.9: THE MODEL TO MANAGE CPD FOR THE ALUMNI OF A PHEI



This model was compiled by the researcher, Castleman (2007), as part of the Ph.D. research project.

The PHEI manages and plans communication with alumni by post (newsletters) and cell phones (SMSs) and among members through the general and geographical specific newsletter and other CPD events (cf. Appendices F & G).

Information to plan, organise, implement and evaluate CPD is vital in the management of the function. Information should be gathered from needs assessment surveys (cf. Figure 5.4), registration forms, quality assurance feedback and the CPD development plans from alumni.

All students of the PHEI will have the opportunity to register with the alumni network. The registration form collects information on biographical detail; academic qualifications; management level; technology access; educational product preferences; communication preferences; willingness to engage as expert evaluators, peer evaluators and mentors; professional category; functional area; workplace demographics; patient profile; exact geographical location with reference to a CPD hub; content interest and expertise. This enables the alumni manager to plan and coordinate CPD interventions, as well as to communicate with alumni in a manner they prefer and have access to. All of this information is stored in a database with the function of selecting information as needed, for example per geographical area all GPs with a special interest in diabetes mellitus with a preference for small group discussions.

Standard quarterly CPD interventions will be alumni newsletters to all alumni with the purpose of maintaining the network; to use it as a vehicle to do surveys; to disseminate information on the mentoring programme; to update alumni on crucial issues that may impact on the health environment; disseminating information to support social interaction among members in the network; and creating a platform for alumni to share information. These alumni newsletters will be posted to all alumni, they will be available on the PHEI website, and they will also be available in all CPD hubs on the

information platforms in digital form.

Another standard quarterly CPD intervention for alumni will be geographical specific newsletters to all alumni in a specific province with the purpose of informing the alumni of that specific geographical area of all educational events planned for the area and to keep them up to date with developments in the mentoring programme for the area, for example new mentors enrolled in the programme. It will also keep alumni in the area informed of all new members registered in the area to maintain the alumni network. These geographical specific newsletters will be posted to all alumni, be available on the PHEI website, and be available in all CPD hubs on the information platforms in digital form.

General practitioners as a group will receive as standard individual CPD interventions mentoring programmes, e-learning, distance learning and self-assessment of practice against minimum performance standards opportunities. The infrastructure that will be utilised will be the alumnus's own computer, own practice environment and the CPD hubs. They will receive as standard group CPD interventions decentralised workshops, one-day refresher seminars and organised group case/problem discussions. The infrastructure that will be utilised will be the CPD hubs.

Both GPs and professional nurses will receive as standard quarterly CPD intervention Clinical Information Updates according to their specific interest and patient profile. They will be able to select from tuberculosis, HIV/AIDS, hypertension, and diabetes. These Clinical Information Updates will be posted to GPs and professional nurses, available on the PHEI website, and be available in all CPD hubs on the information platforms in digital form.

Professional nurses as a group will receive as standard individual CPD intervention distance learning. Traditional distance learning through manuals posted to alumni will be used, but for those who prefer digital copies it will be

available if they have access to computers and CAL will be available in the CPD hubs. They will receive as standard group CPD interventions decentralised workshops and one-day refresher seminars. The decentralised infrastructure of the CPD hubs will be utilised.

Managers will receive as standard quarterly CPD intervention Management Information Updates. These updates will focus on health management, information technology, health policy and ethics, interpersonal skills and personal growth. These Management Information Updates will be posted to all manager alumni, will be available on the PHEI website, and will be available in all CPD hubs on the information platforms in digital form.

Managers as a group will receive as standard individual CPD intervention distance learning. Traditional distance learning through manuals posted to alumni will be used, but for those who prefer digital copies, it will be available if they have access to computers and CAL will be available in the CPD hubs. They will receive as standard group CPD interventions, decentralised workshops and one-day refresher seminars. The decentralised infrastructure of the CPD hubs will be utilised.

All CPD interventions will at a minimum level be evaluated by alumni for client satisfaction on quality assurance level 1. All CPD interactions apart from the reading components (newsletters and updates) will be assessed for attainment of learning outcomes on completion of the CPD intervention through formal assessment, for example case study or multiple choice questions (level 2 quality assurance) and - after some time has lapsed - through various methods by self, peers, patients, managers and mentors (level 3 quality assurance). GPs will have the opportunity to be assessed by experts against set benchmark such as clinical guidelines or protocols as part of level 4 quality assurance, which is the highest form of quality assurance in the model.

According to the level of assessment alumni will be accredited in the network on five levels with associated benefits to promote CPD and nurture a culture of lifelong learning with an emphasis on planned learning and improvement of practice.

5.14 RECOMMENDED IMPLEMENTATION PLAN FOR THE MODEL TO MANAGE CPD

The recommended implementation plan was developed as a generic template to be utilised by providers to customise according to their own situations (cf. Appendix J for the Template of the Implementation Plan of a model to manage CPD for the alumni of a PHEI). The notion was that the model can be implemented incrementally and the tasks are roughly ordered in a sequential order starting with the launch of the alumni programme, registering of alumni to the programme, and entering registrations to an alumni database to support the management of the alumni network.

The maintenance of the support structure within the network is also accommodated in the implementation plan with specific reference to the development and accreditation of assessors, facilitators, anchors and mentors. The implementation plan includes all the steps in the CPD process of needs assessment, defining learning outcomes, developing comprehensive study material and identifying applicable CPD interventions. The tasks to produce the quarterly CIU on the four priority clinical conditions as well as the MIU are included in the implementation plan as well as those necessary to produce the quarterly SAN and GSAN.

The tasks needed to maintain the communication network have also been included in the implementation plan.

The priority CPD interventions as were identified in the study by the respondents were also accommodated in the implementation plan to support

implementation by the PHEI. These CPD interventions include e-learning, distance CPD interventions, self-assessment of practice against minimum performance standards, organised small group discussions, one-day refresher workshops, and two- to three-day CPD workshops.

Integrated in the implementation plan is quality assurance on all the levels as well as assessment and accreditation of alumni to the network. Maintenance of institutional accreditation has also been accommodated in the implementation plan.

To ensure sustainability financial management and the signing of collaborative agreements are included in the implementation plan.

5.15 CONCLUSION

In this chapter through triangulation the conclusions on the literature study and the research results a model was developed to manage CPD for alumni of a PHEI in South Africa and, ultimately, to optimise health care in South Africa.

This was done through an approach of identifying the CPD process from best practices in the literature study and a focus on each step in that process. The functions of a PHEI were placed in context with the framework for the CPD process and subsequently the results on the research on preferences of alumni of a PHEI were brought into this context.

In the next chapter highlights and associate challenges will be provided in a summative manner, a final conclusion will be drawn, limitations of the study will be discussed, and recommendations will be made.

CHAPTER 6

CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

6.1 INTRODUCTION

In this chapter the main findings will be highlighted, conclusions will be made, and the limitations of the study will be discussed. The chapter will conclude by presenting the final recommendations based on the study for implementation and future research.

6.2 HIGHLIGHTS AND CHALLENGES OF THE MAIN FINDINGS

The researcher wishes to highlight the following main findings of the research:

- The majority of the respondents:
 - (77%) did not benefit through receiving educational products as alumni of any HEI (cf. paragraph 4.3.7);
 - (78%) were interested in becoming members of a CPD alumni network (cf. Figure 4.20);
 - who indicated interest in becoming members of the alumni network (69%) indicated that they were willing to pay a monthly subscription fee (cf. Figure 4.21);
 - preferred post (76%, n=595), SMSs (73%, n =537), e-mail (69%, n =444), and faxes (65%, n=445) as priority communication mediums (cf. Figure 4.15);
 - identified opportunities to discuss work-related issues (82%), mentoring (80%), and “to know” other members (79%) as preferred interactions in an alumni network (cf. Figure 4.16);
 - rated mentoring in an alumni network as important (80%) (cf. Figure 4.16), but only 59% indicated mentoring as needed (cf. Table 4.14);

- indicated willingness to be accredited by an alumni network (71%) (cf. paragraph 4.3.7.1);
- indicated a need for training workshops (79%), alumni newsletters (76%), a summary of the latest developments in areas of interest (79%), and one-day refresher seminars (76%) (cf. Table 4.14).
- Almost all the respondents had cell phones (males 97% and females 96%), but e-mail (female 43% and male 70%) and internet (females 37% and males 67%) were less accessible to female than to male respondents (cf. Table 4.3).
- Respondents represented every province in South Africa and are therefore geographically vastly distributed throughout South Africa. Respondents collectively selected 100 CPD hubs as a CPD hub closest to their workplaces (cf. Figures 4.12a and 4.12b).
- It should be noted that 71% (n=623) of the respondents indicated that they were managers and it will therefore be possible to match management-related needs and expectations with management-related skills, knowledge and expertise in a mentoring programme (cf. Figure 4.9).
- According to the results on the clinical interest areas of GPs and professional nurses, there are similarities between the five priority interest areas which are collectively HIV/AIDS, tuberculosis, dermatology, diabetes mellitus, STDs and paediatrics (cf. Table 4.16). HIV/AIDS, tuberculosis and diabetes mellitus correspond with the most prevalent conditions identified by respondents (cf. Table 4.11). These conditions are also in line with the health priorities of the DoH (RSA DoH 2004:13-14).

6.3 CONCLUSION OF THE STUDY

The researcher is of the opinion that PHEIs will be capacitated by the model developed and through implementation of the model to manage CPD for alumni of a PHEI, while the overall goal, aim and objectives of the study to facilitate CPD in South Africa will contribute to the optimisation of health care in South Africa.

The researcher is of the opinion that components of this contribution could also facilitate the management of CPD in public HEIs in South Africa. Furthermore, the researcher is also of the opinion that components of the contribution could be implemented internationally by HEIs. Therefore it can be declared that the overall goal, aim and objectives of the study were reached.

The research outcome, namely a model to manage CPD for alumni of a PHEI, was accomplished through a triangulation of the literature review, a questionnaire survey, and conclusions reached by the researcher. Scientific methods were followed in the research process and the researcher cognitively followed the methods as described in Chapter 3.

The researcher's implication is not that this model should be implemented in its original form, but the intention is that each HEI should customise the model according to its own unique situation and alumni needs and expectations. The process followed and components of the model, however, could be repeated without reinventing the wheel. The implementation plan could therefore be utilised as a useful guideline.

The researcher also reported on literature that influenced the composition of the model and by no means tried to report on all available literature on what content to include in CPD, adult learning preferences, CPD methods, quality assurance in CPD, accreditation of CPD, the use of technology in CPD, and the effectiveness of CPD.

6.4 LIMITATIONS OF THE STUDY

The researcher recognises the following limitations in the study:

- **Open-ended questions in the questionnaire.** Some questions were left open-ended for interpretation by respondents for example question 9. In this question respondents were asked to indicate their areas of interest as well as self-perceived areas of expertise. The areas of interest yielded results which were analysed with confidence but the latter question demonstrated to be a weakness in the questionnaire. Participants' self-perception of when they were experts in terms of years gave a statistically significant standard deviation and in future it is recommended that interval scales be employed. The section on academic qualification was completed so poorly that it was left out of the results and it is recommended that, in future, this question should be replaced with a closed question where participants can select the applicable qualification as per the National Qualifications Framework structure (SAQA 2007:1 of 1).
- **Limited literature on CPD models.** Another limitation of the study was the limited literature available on similar studies on alumni and models to manage CPD for alumni of HEIs. This limitation is beyond the control of the researcher and was attempted to be countered through utilising-related literature. This study therefore presented a challenge to the researcher, not having a model to compare with.
- **Public higher education institutions (HEIs).** An exclusion from the study which might be seen as a limitation is the focus of the study on PHEIs. During the protocol presentation the study was demarcated to the FPD, as there is no other PHEI focusing on CPD for health practitioners in South Africa and the researcher is employed by the FPD. Furthermore, the FPD provides CPD programmes to approximately 10 000 health practitioners annually. It should be recognised, however, that components of the model may be used by other HEIs and more PHEIs may be registered and accredited in the educational framework of South Africa.

There will therefore be a model to customise according to the specific needs of HEI's.

6.5 RECOMMENDATIONS

In order for the study to yield significant and valuable results, the researcher takes the liberty to recommend the following:

- To attain approval of the executive board of the FPD to implement the CPD model at the FPD as part of the approved business plan of the Academic Programme Department for 2008.
- To implement the model at the FPD according to the recommended implementation plan.
- To publish articles on the research results and model in accredited subject journals.
- To present research results at international and national conferences.
- To do further research on the impact of the implementation of the model on the attainment of the purpose of CPD.
- To monitor the uptake by alumni to all the various facets of the model to manage CPD.
- To do further research to customise the model to the needs for public HEIs.

6.6 CONCLUSIVE REMARK

To be a leader in providing CPD and contribute to the optimising of health in a country PHEIs should plan, organise and control the function in a continuous manner in line with best evidence. Implementation of the model to manage CPD for the alumni of a PHEI might be one of the ways to differentiate one PHEI from another in doing just that. The beneficiaries of the model are therefore the PHEIs, the alumni and, ultimately, the receivers of health care.

The words of Aristotle (384BC-322BC), Greek philosopher and scientist, student of Plato and teacher of Alexander the Great, may very aptly be applied here: "The way to achieve success is first to have a definite, clear, practical ideal - a goal, an objective. Second, have the necessary means to achieve your ends - wisdom, money, materials, and methods. Third, adjust all your means to that end" (Advice on management.com. 2007:1 of 1).

In essence the principles of the model are in line with the philosophy of great minds of the past which has withstood the test of time.

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APPENDIX A

Questionnaire and information letter

Tel: 012 481 2035
Fax: 012 481 2083
Cell: 072 171 8765
e-mail: elmiec@foundation.co.za

PO Box 74789
Lynnwood Ridge
0040

Instructions

Please note:

- Please circle or tick your response in the applicable block.
- Please use black or blue ink to complete the questionnaire.
- Some questions need only one response, whereas others need more than one.
- If you feel that a specific issue is not applicable to you, please circle the "Don't know" option or leave blank, but please do not write in or delete the block.
- All responses will be dealt with in the strictest confidentiality.
- Please return the questionnaires back as soon as possible to the anchor at this workshop.

Definitions

- **Alumni network:** Former students of an education institution grouped in a network of contacts.
- **Mentor:** To serve as a trusted counsellor, teacher or role model especially in occupational settings.
- **Peer:** A person who has equal standing with another or others, as in rank, class, or age.

1. Personal profile

Please complete	
Age	Years

Please circle your gender	
Male	1
Female	2

Please circle your population group (Population group is important for research purposes because of possible variances)	
Black	1
Indian	2
Coloured	3
White	4
Other (Please specify)	
1. _____	
2. _____	
3. _____	

Do you have access to the following? Please circle your answer.		
DSTV	Yes	No
Internet	Yes	No
TV 3	Yes	No
Computer	Yes	No
Cell phone	Yes	No
Email	Yes	No

2. Professional profile

Educational background. Please select the applicable options.		
Highest qualification obtained	Doctoral	1
	Master's	2
	Bachelors Degree	3
	Diploma	4
	Other: (Please complete if the above options were not applicable.)	
1. _____		
2. _____		
3. _____		
Professional Qualification	General Practitioner	1
	Medical Specialist	2
	Professional Nurse	3
	Enrolled Nurse	4
	Auxiliary Nurse	5
	Other (Please specify)	
1. _____		
2. _____		
3. _____		
Field/s of study	Health care	1
	Management	2
	Other: (Please specify)	
1. _____		
2. _____		
3. _____		

3. Employment background

Current industry type. Please select the applicable options.	
Public Sector	1
Private Sector	2
NGO	3
FBO	4
Other (Please specify)	
1. _____	
2. _____	
3. _____	

Managerial Level (Please select the applicable options.)		
Do you have management responsibilities?	Yes	No
Do you manage other managers?	Yes	No
How many people fall under your management?		
If you do manage others, how many of those have a management position?		

On what management level are you? Please select the applicable options.	
Executive (e.g. Report to Parliament, Owners, Shareholders or to Board of directors, etc.)	1
Senior (e.g. Report to CEO or to Secretary General, or to Rector or to Director General, etc.)	2
Middle (e.g. Report to Dean, or to Director, or to Head of Department, etc.)	3
Junior (e.g. Report to Head of Division, etc)	4
Not on a management level	5

1. Geographical profile

4(a) Public hospital / clinic

Which public hospital / clinic is the closest to you? (Please circle the clinic closest to your workplace.)

Gauteng			
Discoverers CHC	1	Levavi Mbatha Health Centre	37
1 Military Hospital (Pretoria)	2	Lillian Ngoyi CHC	38
Adelaide Tambo Clinic	3	Itireleng CHC	39
Bapsfontein Clinic	4	Mamelodi Hospital	40
Bekkersdal Clinic	5	Mandela Sisulu Clinic	41
Boikhutsong Clinic	6	Mandisa Shiceka Clinic	42
Bophelong Clinic	7	Medical Research Council	43
Carletonville Hospital	8	Middeldrift Clinic	44
Chris Hani Baragwanath Hospital	9	Motlhakeng Clinic	45
Coronation Hospital	10	Muldersdrift Clinic	46
Daveyton Main Clinic	11	Natalspruit Hospital	47
Department of Health	12	Nokuthela Ngwenya CHC	48
Diepkloof CHC	13	Northmead Clinic	49
Dr George Mukhari Main Hospital	14	Pholosong Hospital	50
Dr. Helga Kuhn Clinic	15	Pretoria Academic Hospital	51
Dr. Yusuf Dadoo Hospital	16	Pretoria North Clinic	52
Edenvale Hospital	17	Pretoria West Hospital	53
Empilisweni Clinic	18	Refilwe Clinic	54
Esangweni CHC	19	Sebokeng Hospital	55
Esselen Centre	20	Skinner Street Clinic	56
Far East Rand Hospital	21	Soshanguve Clinic 1	57
Germiston Hospital	22	Soshanguve Clinic 2	58
Heidelberg Hospital	23	Soshanguve Clinic 3	59
Helen Joseph Hospital	24	South Rand Hospital	60
Hillbrow CHC	25	Stanza Bopape Clinic	61
Holani Clinic	26	Stredford Clinic	62
Jabulane Dumane CHC	27	Tarnbo-Memorial Hospital	63
Johan Heyns	28	Tembisa Hospital	64
Johannesburg Hospital	29	Thusong Clinic	65
Jubilee Hospital	30	Trainer Training Client	66
Kalafong Hospital	31	Usizolwethu (Devon) Clinic	67
Khutsong Main Clinic	32	Weskoppies Hospital	68
Kliptown Clinic	33	Zithobeni	69
Kopanong Hospital	34	Zola CHC	70
Laudium CHC	35	Chiawelo CHC	71
Leratong Hospital	36		

North West			
Ganyesa Hospital	72	Potchefstroom Hospital	76
Gelukspan Hospital	73	Taung Hospital	77
George Stegmann	74	Ventersdorp Hospital	78
Kagiso Community Health Centre	75		

Mpumalanga			
Driefontein Clinic	79	Rob Ferreira Hospital	82
Highveld Hospital	80	Tonga Hospital	83
Phola Ntsikazi Health Centre	81	Zaaiplaas 12 hours Clinic	84

Free State			
Botshabelo Multi Purpose Community Centre (MPCC)	85	Namahadi Clinic	87
Meloding High School	86	Zamdela Clinic	88

Limpopo			
BoschKloof Clinic	89	Probeerin Clinic	92
Mahwelereng Clinic	90	Rebone Clinic	93
Polokwane Hospital	91		

Eastern Cape			
All Saints Hospital	94	Sada Community Health Centre	105
Bisho Hospital	95	Settlers Hospital	106
Cecilia Makiwane Hospital Complex	96	St Barnabas College	107
Dora Nginza Hospital	97	St Elizabeth Hospital	108
Frere Hospital	98	St Lucys Hospital	109
Frontier Hospital	99	St. Barnabas Hospital	110
Mary Theresa Hospital	100	St. Patricks Hospital	111
Midlands Hospital	101	Uitenhage Hospital	112
Mount Ayliff Hospital	102	Umtata General Hospital	113
Rietvlei Hospital	103	Umtata Health Centre 14 SAI BN	114
S S Gida Hospital	104		
Western Cape			
2 Military Hospital (Cape Town)	115	Grabouw Community Health Centre	118
Beaufort West Clinic	116	Oudtshoorn Hospital	119
Eben Donges Hospital	117	Paarl East Day Hospital	120
KZN			
Gamalakhe Clinic	121	Prince Cyril Zulu Communicable Disease Centre	124
Mtubatuba 121 SAI BN Sickbay (Phidisa)	122	Umlazi Clinic	125
Ndumo Clinic	123		
North Cape			
Boresetse High School	126	Kuruman Hospital	130
Dibeng Clinic	127	Montana Clinic	131
Galeshewe Day Hospital	128	Springbok Hospital (Dr Van Niekerk Hospital)	132
Kimberley Hospital Complex	129		

4 (b) Approximately how many kilometers are the clinic / public hospital selected by you in 4 (a) away from your workplace? (Please circle your option)

Fewer than 10 km	1	Between 10 and 40 km	2	More than 40 km	3
-------------------------	----------	-----------------------------	----------	------------------------	----------

5. What would your communication preferences be in an Alumni network?

Please indicate your preference in each of the following communication methods: (Please circle your option)					
Communication Method	Definitely Not Preferred	Not preferred	Neutral	Preferred	Highly Preferred
E-mail	1	2	3	4	5
SMS	1	2	3	4	5
Fax	1	2	3	4	5
Post	1	2	3	4	5
Web	1	2	3	4	5
Representatives	1	2	3	4	5
Other (Please specify)	1. _____ 2. _____ 3. _____				

6. Alumni network interaction

How important is each of the following to you? (Please circle your option)					
Interaction situation	Definitely Not Important	Not Important	Neutral	Important	Very Important
Knowing who in your geographical area are members of this alumni network.	1	2	3	4	5
Interact with members of the alumni network on regular intervals on a social basis.	1	2	3	4	5
Interact with members of the alumni network on regular intervals to discuss practical/clinical/work-related issues.	1	2	3	4	5
Be evaluated by a peer in the alumni network against minimum performance standards, e.g. protocols or guidelines.	1	2	3	4	5
Be mentored by an expert in the alumni network	1	2	3	4	5
Be evaluated by an expert in the alumni network against minimum performance standards, e.g. protocols or guidelines.	1	2	3	4	5
Please indicate your willingness to: (Please circle your option)					
Action	Definitely not willing	Not willing	Neutral	Willing	Very willing
Act as an expert evaluator in the alumni network.	1	2	3	4	5
Act as a peer evaluator in the alumni network.	1	2	3	4	5
Act as a mentor in the alumni network.	1	2	3	4	5

7. Accreditation by an alumni network.

This would entail levels of accreditation within the alumni network based on more than academic qualifications:

1 star member – Participant to a course

2 star member – Course graduate

3 star member – Proven / verified continuous learning

4 star member – Self assessment of clinical practice or business competence against set benchmark

5 star member – External assessment of clinical practice or business competence against set benchmark

Please indicate your willingness to: (Please circle your option)					
	Definitely not willing	Not willing	Neutral	Willing	Very willing
Be accredited by an alumni network	1	2	3	4	5

8. What educational products would you like to receive as a member of an alumni network?

Please indicate your need for each of the following educational products: (Please circle your option)					
Product	No need	Probably not needed	May be needed	Need	Definite need
A summary of the latest development in your areas of interest.	1	2	3	4	5
Full journal articles in your areas of interest.	1	2	3	4	5
Alumni newsletter on the latest development in FPD (courses, seminars, conferences, legislation updates in the health sector, social news, news on development in the network, events in the network etc.)	1	2	3	4	5
Distance learning	1	2	3	4	5
Access to Mentors (See definitions)	1	2	3	4	5
24 hour hotline with expert clinical advise	1	2	3	4	5
Access to Telemedicine (the use of information and communication technology to provide and support healthcare activities, when distance separates the participants)	1	2	3	4	5
Television broadcasting of educational programmes	1	2	3	4	5
Internet based conference attendance	1	2	3	4	5
Internet based educational programmes	1	2	3	4	5
Compact disk based educational programmes	1	2	3	4	5
Self assessment of your practice against minimum performance standards, e.g. protocols / guidelines	1	2	3	4	5
Organised group case / problem discussions	1	2	3	4	5
Training workshops	1	2	3	4	5
One-day refresher seminars	1	2	3	4	5
Evening expert talks	1	2	3	4	5
Journal clubs	1	2	3	4	5
Facilitated sessions	1	2	3	4	5
Other (Please specify)					
1. _____					
2. _____					
3. _____					

9. Areas of expertise and interest

9.1 Clinical area of expertise and interest

Please indicate your area of expertise (not more than three) and state why you are regarded as an expert in this/these field/s (experience and academic achievements/qualifications). Also indicate your areas of interest but no need to complete experience and academic achievement and qualification in areas of interest.				
Clinical Area	Interest Area	Expert area	Experience	Academic achievement and or qualification
Example: HIV/AIDS		√	Work in the field for 5 months.	Certificate in HIV/AIDS (FPD) or published x peer reviewed articles
Example: Allergy	√			
Allergic disorders				
Cardiovascular disorders (Medical)				
Cardiovascular disorders (Surgical)				
Clinical pharmacology				
Dental and oral disorders				
Dermatology				

Clinical Area (Cont.)	Interest Area	Expert area	Experience	Academic achievement and or qualification
Diabetes Mellitus				
Ear, nose and throat				
Endocrine disorders				
Gastrointestinal disorders				
Genetics				
Gerontology (Geriatrics/ Elderly)				
Gynecology				
Hematologic Disorders				
Hepatic and Biliary disorders				
Human immunodeficiency virus / Acquired immunodeficiency syndrome (HIV/AIDS)				
Intensive Care				
Malaria				
Musculoskeletal and connective tissue disorders				
Neurologic disorders				
Nutritional and Metabolic disorders				
Obstetrics				
Oncology				
Ophthalmologic disorders				
Orthopaedics				
Paediatrics				
Poisoning, venomous bites and stings				
Psychiatric disorders (for example depression, anxiety, psychosis, etc.)				
Pulmonary Disorders				
Renal and Urologic disorders				
Rheumatology				
Sexually transmitted diseases				
Infertility				
Sport medicine				
Substance abuse				
Trauma				
Tuberculosis (TB)				
Other (Please specify)				
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____

9.2 Health Management area of expertise and interest

Please indicate your area of expertise (not more than three) and state why you are regarded as an expert in this/these field/s (experience and academic achievements/qualifications). Also indicate your areas of interest but no need to complete experience and academic achievement and qualification in areas of interest .				
Health Management Area	Interest Area	Expert area	Experience	Academic achievement and or qualification
Strategic planning				
Financial Management				
Information Management				
Leadership				
Marketing and customer relations				
Human Resource Management				
Project Management				
Monitoring and Evaluation				
Other (Please specify)				
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____

9.3 Computer area of expertise and interest

Please indicate your area of expertise (not more than three) and state why you are regarded as an expert in this/these field/s (experience and academic achievements/qualifications). Also indicate your areas of interest but no need to complete experience and academic achievement and qualification in areas of interest .				
Computer Area	Interest Area	Expert area	Experience	Academic achievement and or qualification
Internet skills				
Desktop publishing				
Database management				
Word processing				
Worksheet creation				
Network management				
Software programming				
Firewall management				
Data recovery				
Other (Please specify)				
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____

9.4 Health policy area of expertise and interest

Please indicate your area of expertise (not more than three) and state why you are regarded as an expert in this/these field/s (experience and academic achievements/qualifications). Also indicate your areas of interest but no need to complete experience and academic achievement and qualification in areas of interest .				
Health Policy Area	Interest Area	Expert area	Experience	Academic achievement and or qualification
Managed Care				
Health Law and Regulations				
Public Private Partnership in Health				
National Health Policies				
Other (Please specify)				
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____

9.5 Ethical area of expertise and interest

Please indicate your area of expertise (not more than three) and state why you are regarded as an expert in this/these field/s (experience and academic achievements/qualifications). Also indicate your areas of interest but no need to complete experience and academic achievement and qualification in areas of interest .				
Ethical Area	Interest Area	Expert area	Experience	Academic achievement and or qualification
Perverse incentives				
Confidentiality				
Informed consent				
General ethical principles in health				
HIV/AIDS and ethics				
Other (Please specify)				
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____

9.6 Interpersonal area of expertise and interest

Please indicate your area of expertise (not more than three) and state why you are regarded as an expert in this/these field/s (experience and academic achievements/qualifications). Also indicate your areas of interest but no need to complete experience and academic achievement and qualification in areas of interest .				
Interpersonal Area	Interest Area	Expert area	Experience	Academic achievement and or qualification
Communication skills				
Debriefing				
Counselling				
Negotiation skills				
Conflict management				
Other (Please specify)				
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____

9.7 Personal growth area of expertise and interest

Please indicate your area of expertise (not more than three) and state why you are regarded as an expert in this/these field/s (experience and academic achievements/qualifications). Also indicate your areas of interest but no need to complete experience and academic achievement and qualification in areas of interest .				
Personal Growth Area	Interest Area	Expert area	Experience	Academic achievement and or qualification
Self-management				
Time management				
Stress management				
Other (Please specify)				
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____

10. Alumni network membership**10 (a) Current Alumni membership**

Are you currently an Alumni member of an education institution?	Yes	No
---	-----	----

Name of the Education Institution that you are an Alumni Member of: 1. _____ 2. _____ 3. _____

Proceed to 10(b)

Product	Please tick if you currently receive
A summary of the latest development in your areas of interest.	
Full journal articles in your areas of interest.	
Alumni newsletter on the latest development in the Higher Education Institution (courses, seminars, conferences, legislation updates in the health sector, social news, news on development in the network, events in the network etc.)	
Distance learning	
Access to Mentors (See definitions)	
24 hour hotline with expert clinical advise	
Access to Telemedicine (the use of information and communication technology to provide and support healthcare activities, when distance separates the participants)	
Television broadcasting of educational programmes	
Internet based conference attendance	
Internet based educational programmes	
Compact disk based educational programmes	
Self assessment of your practice against minimum performance standards, e.g. protocols / guidelines	
Organised group case / problem discussions	
Training workshops	
One-day refresher seminars	
Evening expert talks	
Journal clubs	
Facilitated sessions	

10 (b) Interest in becoming a member to a CPD Alumni network

Would you like to become part of a continuous professional development alumni network?	Yes	No
--	-----	----

10 (c) Willingness to contribute to membership

Would you be willing to pay for membership to an alumni network?	Yes	No
--	-----	----

What is the maximum you would pay monthly for being part of an alumni network?	
What is the minimum you think belonging to an alumni network is worth in monthly contributions?	

Proceed to 11

11. Patient profile**11 (a) Do you work in an environment where you have contact with patients?**

No	Please return questionnaire without completing question 11
Yes	Please complete questionnaire

Approximately what percentage of your patients is? (Please write the % in the blank space or leave blank if you do not know)	
45 years of age and younger	%
Older than 45 years of age	%

Approximately what percentage of your patients is? (Please write the % in the blank space or leave blank if you do not know)	
Male	%
Female	%

Approximately what percentage of your patients is? (Please write the % in the blank space or leave blank if you do not know)	
Black	%
Indian	%
Coloured	%
White	%
Other (Please specify)	
1.	_____
2.	_____
3.	_____

11 (b) Patient disease profile

Please select the 3 most prevalent conditions in your workplace. (Please circle your options)	
HIV/AIDS	1
Asthma	2
Diabetes	3
Diarrhea and vomiting, Gastroenteritis	4
Epilepsy	5
Hyperlipidaemia	6
Hypertension	7
Ischaemic heart disease	8
Malaria	9
Obesity	10
Obstetric	11
Peri-menopausal Disorders	12
Psychiatric disorders (e.g. Depression, anxiety, psychosis etc.)	13
STDs	14
Substance abuse	15
TB	16
Trauma	17
Upper Respiratory Track Infections	18
Other (Please specify)	
1. _____	
2. _____	
3. _____	

Please select the 3 least prevalent conditions in your workplace. (Please circle your options)	
HIV/AIDS	1
Asthma	2
Diabetes	3
Diarrhea and vomiting, Gastroenteritis	4
Epilepsy	5
Hyperlipidaemia	6
Hypertension	7
Ischaemic heart disease	8
Malaria	9
Obesity	10
Obstetric	11
Peri-menopausal Disorders	12
Psychiatric disorders (e.g. Depression, anxiety, psychosis etc.)	13
STDs	14
Substance abuse	15
TB	16
Trauma	17
Upper Respiratory Track Infections	18
Other (Please specify)	
1. _____	
2. _____	
3. _____	

All answers will be treated confidentially.
Thank you very much for your kind cooperation!
Please return your questionnaire to the anchor at the workshop.

APPENDIX B

Consent form

CONSENT TO PARTICIPATE IN RESEARCH

You have been asked to participate in a research study. An information sheet, which is a written summary of the research have been given to you.

You may contact the anchor/facilitator at the workshop any time if you have questions about the research.

You may contact the Secretariat of the Ethics Committee of the Faculty of Health Sciences, UFS at telephone number (051) 4052812 if you have questions about your rights as a research subject.

Your participation in this research is voluntary, and there is no implication for non-participation.

I understand what my involvement in the study means and I voluntarily agree to participate.

Signature of Participant

APPENDIX C

Alumni registration form

ALUMNI REGISTRATION FORM

Title		Initials									
First Name											
Surname											
Male / Female				Professional Council nr (eg. HPCSA/ SANC)							
ID Number											
Name of workplace											
Contact Numbers	Work				Code		Number				
	Home				Code		Number				
	Fax				Code		Number				
	Cell						e-mail				
Postal Address											
Area				Town				Code			
Province				Country							
Physical Address											
Area				Town				Code			
Province				Country							
Race											
<input type="checkbox"/> Black		<input type="checkbox"/> Asian		<input type="checkbox"/> Coloured		<input type="checkbox"/> White					
Communication preference											
<input type="checkbox"/> Email		<input type="checkbox"/> SMS		<input type="checkbox"/> Representatives		<input type="checkbox"/> Post		<input type="checkbox"/> Web		<input type="checkbox"/> Fax	
Professional Qualification (Select one)											
<input type="checkbox"/> General Practitioner		<input type="checkbox"/> Medical Specialist		<input type="checkbox"/> Professional Nurse		<input type="checkbox"/> Enrolled Nurse					
<input type="checkbox"/> Auxiliary Nurse		<input type="checkbox"/> Other									
In which ONE functional area do you spend most of your working day?											
<input type="checkbox"/> Sales/Marketing		<input type="checkbox"/> Research		<input type="checkbox"/> Management							
<input type="checkbox"/> Education		<input type="checkbox"/> Clinical		<input type="checkbox"/> Admin/Support							
Workplace Demographics											
Select the ONE sector that best describes your main workplace				<input type="checkbox"/> NGO		<input type="checkbox"/> FBO (Faith based)					
				<input type="checkbox"/> Private sector		<input type="checkbox"/> Public sector					
Select your main area of work				<input type="checkbox"/> Urban area		<input type="checkbox"/> Rural area					
Would you like to become part of the FPD Alumni network											
<input type="checkbox"/> Yes		<input type="checkbox"/> No								* Yearly subscription fee: R XXX	
Willing to act as (Alumni role):											
<input type="checkbox"/> Expert evaluator		<input type="checkbox"/> Peer evaluator		<input type="checkbox"/> Mentor							
Highest qualification*											
<input type="checkbox"/> Post-Doctoral Research Degree (Post Dr)		<input type="checkbox"/> Doctorates (Dr)		<input type="checkbox"/> Master's Degree (M)		<input type="checkbox"/> Professional Qualification (Prof Qual)		<input type="checkbox"/> Honours Degree (Hon)			
<input type="checkbox"/> National First Degree (NFG)		<input type="checkbox"/> Higher Diploma (H Dip)		<input type="checkbox"/> National Diploma (N Dip)		<input type="checkbox"/> National Certificate (Cert)		<input type="checkbox"/> Short Course (SC)			
Indicate to which of the following you have access											
<input type="checkbox"/> DSTV		<input type="checkbox"/> TV 3		<input type="checkbox"/> Cell phone		<input type="checkbox"/> Internet		<input type="checkbox"/> Computer		<input type="checkbox"/> Email	
Managerial level											
<input type="checkbox"/> Executive		<input type="checkbox"/> Senior		<input type="checkbox"/> Middle		<input type="checkbox"/> Junior		<input type="checkbox"/> Not on a management level			
What education products would you like to receive?											
<input type="checkbox"/> Distance learning		<input type="checkbox"/> One-day refresher seminars		<input type="checkbox"/> Training workshops							
<input type="checkbox"/> Evening expert talks		<input type="checkbox"/> Facilitated sessions		<input type="checkbox"/> Access to mentors							
<input type="checkbox"/> Television broadcasting of educational programmes		<input type="checkbox"/> Organised group case / problem discussions		<input type="checkbox"/> Internet based educational programmes							
<input type="checkbox"/> Internet based conference attendance		<input type="checkbox"/> Self assessment of your practice against minimum performance standards									
Patient profile (if applicable)											
Most prevalent conditions				<input type="checkbox"/> HIV/AIDS		<input type="checkbox"/> TB					
				<input type="checkbox"/> Hypertension		<input type="checkbox"/> Diabetes					
				<input type="checkbox"/> Other							
Least prevalent conditions				<input type="checkbox"/> Malaria		<input type="checkbox"/> Peri-menopausal Disorders					
				<input type="checkbox"/> Hyperlipidaemia		<input type="checkbox"/> Ischaemic heart disease					
				<input type="checkbox"/> Other							

Which public hospital/ clinic is the closest to you	GAUTENG		
	<input type="checkbox"/> Discoverers CHC	<input type="checkbox"/> Hillbrow CHC	<input type="checkbox"/> Northmead Clinic
	<input type="checkbox"/> 1 Military Hospital (Pretoria)	<input type="checkbox"/> Holani Clinic	<input type="checkbox"/> Pholosong Hospital
	<input type="checkbox"/> Adelaide Tambo Clinic	<input type="checkbox"/> Jabulane Dumane CHC	<input type="checkbox"/> Pretoria Academic Hospital
	<input type="checkbox"/> Bapsfontein Clinic	<input type="checkbox"/> Johan Heyns	<input type="checkbox"/> Pretoria North Clinic
	<input type="checkbox"/> Bekkersdal Clinic	<input type="checkbox"/> Johannesburg Hospital	<input type="checkbox"/> Pretoria West Hospital
	<input type="checkbox"/> Boikhutsong Clinic	<input type="checkbox"/> Jubilee Hospital	<input type="checkbox"/> Refilwe Clinic
	<input type="checkbox"/> Bophelong Clinic	<input type="checkbox"/> Kalafong Hospital	<input type="checkbox"/> Sebokeng Hospital
	<input type="checkbox"/> Carietonville Hospital	<input type="checkbox"/> Khutsong Main Clinic	<input type="checkbox"/> Skinner Street Clinic
	<input type="checkbox"/> Chris Hanu Baragwanath Hospital	<input type="checkbox"/> Kliptown Clinic	<input type="checkbox"/> Soshanguve Clinic 1
	<input type="checkbox"/> Coronation Hospital	<input type="checkbox"/> Kopanong Hospital	<input type="checkbox"/> Soshanguve Clinic 2
	<input type="checkbox"/> Daveyton Main Clinic	<input type="checkbox"/> Laudium CHC	<input type="checkbox"/> Soshanguve Clinic 3
	<input type="checkbox"/> Department of Health	<input type="checkbox"/> Leratong Hospital	<input type="checkbox"/> South Rand Hospital
	<input type="checkbox"/> Diepkloof CHC	<input type="checkbox"/> Levai Mbatha Health Centre	<input type="checkbox"/> Stanza Bopape Clinic
	<input type="checkbox"/> Dr George Mukhari Main Hospital	<input type="checkbox"/> Lillian Ngoyi CHC	<input type="checkbox"/> Stredford Clinic
	<input type="checkbox"/> Dr. Helga Kuhn Clinic	<input type="checkbox"/> Itireleng CHC	<input type="checkbox"/> Tambo-Memorial Hospital
	<input type="checkbox"/> Dr. Yusuf Dadoo Hospital	<input type="checkbox"/> Mamelodi Hospital	<input type="checkbox"/> Tembisa Hospital
	<input type="checkbox"/> Edenvale Hospital	<input type="checkbox"/> Mandela Sisulu Clinic	<input type="checkbox"/> Thusong Clinic
	<input type="checkbox"/> Empilisweni Clinic	<input type="checkbox"/> Mandisa Shiceka Clinic	<input type="checkbox"/> Trainer Training Client
	<input type="checkbox"/> Esangweni CHC	<input type="checkbox"/> Medical Research Council	<input type="checkbox"/> Usizolwethu (Devon) Clinic
	<input type="checkbox"/> Esselen Centre	<input type="checkbox"/> Middeldrift Clinic	<input type="checkbox"/> Weskoppies Hospital
	<input type="checkbox"/> Far East Rand Hospital	<input type="checkbox"/> Motlhakeng Clinic	<input type="checkbox"/> Zithobeni
	<input type="checkbox"/> Germiston Hospital	<input type="checkbox"/> Muldersdrift Clinic	<input type="checkbox"/> Zola CHC
	<input type="checkbox"/> Heidelberg Hospital	<input type="checkbox"/> Natalspruit Hospital	<input type="checkbox"/> Chiawelo CHC
	<input type="checkbox"/> Helen Joseph Hospital	<input type="checkbox"/> Nokuthela Ngwenya CHC	
	NORTH WEST		
	<input type="checkbox"/> Ganyesa Hospital	<input type="checkbox"/> Kagiso Community Health Centre	<input type="checkbox"/> Ventersdorp Hospital
	<input type="checkbox"/> Gelukspan Hospital	<input type="checkbox"/> Potchefstroom Hospital	
	<input type="checkbox"/> George Stegmann	<input type="checkbox"/> Taung, Hospital	
	MPUMALANGA		
	<input type="checkbox"/> Driefontein Clinic	<input type="checkbox"/> Phola Ntsikazi Health Centre	<input type="checkbox"/> Tonga Hospital
	<input type="checkbox"/> Highveld Hospital	<input type="checkbox"/> Rob Ferreira Hospital	<input type="checkbox"/> Zaaiplaas 12 hours Clinic
	FREE STATE		
	<input type="checkbox"/> Botshabelo Multi Purpose Community Centre (MPCC)	<input type="checkbox"/> Namahadi Clinic	<input type="checkbox"/> Zamdela Clinic
	<input type="checkbox"/> Meloding High School		
	LIMPOPO		
	<input type="checkbox"/> Bosch Kloof Clinic	<input type="checkbox"/> Polokwane Hospital	<input type="checkbox"/> Rebone Clinic
	<input type="checkbox"/> Mahwelereng Clinic	<input type="checkbox"/> Probeerin Clinic	
	WESTERN CAPE		
	<input type="checkbox"/> 2 Military Hospital (Cape Town)	<input type="checkbox"/> Eben Donges Hospital	<input type="checkbox"/> Oudtshoorn Hospital
	<input type="checkbox"/> Beaufort West Clinic	<input type="checkbox"/> Grabouw Community Health Centre	<input type="checkbox"/> Paarl East Day Hospital
	EASTERN CAPE		
<input type="checkbox"/> All Saints Hospital	<input type="checkbox"/> Midlands Hospital	<input type="checkbox"/> St Elizabeth Hospital	
<input type="checkbox"/> Bisho Hospital	<input type="checkbox"/> Mount Ayliff Hospital	<input type="checkbox"/> St Lucys Hospital	
<input type="checkbox"/> Cecilia Makiwane Hospital Complex	<input type="checkbox"/> Rietvlei Hospital	<input type="checkbox"/> St. Barnabas Hospital	
<input type="checkbox"/> Dora Nginza Hospital	<input type="checkbox"/> S S Gida Hospital	<input type="checkbox"/> St. Patricks Hospital	
<input type="checkbox"/> Frere Hospital	<input type="checkbox"/> Sada Community Health Centre	<input type="checkbox"/> Uitenhage Hospital	
<input type="checkbox"/> Frontier Hospital	<input type="checkbox"/> Settlers Hospital	<input type="checkbox"/> Umtata General Hospital	
<input type="checkbox"/> Mary Theresa Hospital	<input type="checkbox"/> St. Barnabas College	<input type="checkbox"/> Umtata Health Centre 14 SAI BN	
KZN			
<input type="checkbox"/> Gamalakhe Clinic	<input type="checkbox"/> Ndumo Clinic	<input type="checkbox"/> Umlazi Clinic	
<input type="checkbox"/> Mtubatuba 121 SAI BN Sickbay (Phidisa)	<input type="checkbox"/> Prince Cyril Zulu Communicable Disease Centre		
NORTHERN CAPE			
<input type="checkbox"/> Boresetse High School	<input type="checkbox"/> Kimberley Hospital Complex	<input type="checkbox"/> Springbok Hospital (Dr Van Niekerk Hospital)	
<input type="checkbox"/> Dibeng Clinic	<input type="checkbox"/> Kuruman Hospital		
<input type="checkbox"/> Galeshewe Day Hospital	<input type="checkbox"/> Montana Clinic		
Distance from public hospital/clinic	<input type="checkbox"/> Fewer than 10 km	<input type="checkbox"/> Between 10 and 40 km	
		<input type="checkbox"/> More than 40 km	

	Interest	Expertise						
		Year of pract expertise	Qualification in specific field i.e. short course, degree, post graduate qualification (*See qualification specified in Highest Qualification)					
Clinical area of expertise and interest	HIV/AIDS		Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
	TB		Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
	Hypertension		Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
	Diabetes		Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
	Other		Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
Health management area of expertise and interest			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
	Other		Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
	Computer area of expertise and interest			Post Dr	N Dip	M	NFG	Hon
				Prof Qual	H Dip	Dr	Cert	SC
			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
Other			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
Health policy area of expertise and interest				Post Dr	N Dip	M	NFG	Hon
				Prof Qual	H Dip	Dr	Cert	SC
			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
	Other		Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
	Ethical area of expertise and interest			Post Dr	N Dip	M	NFG	Hon
				Prof Qual	H Dip	Dr	Cert	SC
			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
Other			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
Interpersonal area of expertise and interest				Post Dr	N Dip	M	NFG	Hon
				Prof Qual	H Dip	Dr	Cert	SC
			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
	Other		Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
	Personal growth area of expertise and interest			Post Dr	N Dip	M	NFG	Hon
				Prof Qual	H Dip	Dr	Cert	SC
			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	
Other			Post Dr	N Dip	M	NFG	Hon	
			Prof Qual	H Dip	Dr	Cert	SC	

PAYMENT DETAIL															
The monthly network fees are as R50.00. Cheques must be made payable to Foundation for Professional Development. Only Master / Visa credit cards are accepted. Fax proof of payment with registration form.															
Cheque: _____							Credit card: _____								
Credit card number															
Last 3 digits at back of card					Expiry Date				Master / Visa Card						
If payment is done by credit card budget account, mark period in months							6 months			12 months			18 months		
Surname and initials							Card holder's signature								
Registration forms received by fax will only be accepted if payment is done by credit card or if the fee is paid into the FPD bank account: Nedbank branch, Commercial, Pretoria. Account number: 1497 046 238 Branch code: 14 97 45 Please remember to fax us the deposit slip!							Post the registration form together with your payment to: PO Box 74789, Lynnwood Ridge 0040 or fax to: (012) 481-2083. Tel: (012) 481-2193								

APPENDIX D

Alumni database form

Personal Details

Student Number	[Redacted]	Student Name	[Redacted]		
ID Number	[Redacted]	Physical Address	[Redacted]	Tel (Work)	[Redacted]
Last Name	[Redacted]	Address 2	[Redacted]	Home	[Redacted]
First Name	[Redacted]	Area	[Redacted]	Cell	[Redacted]
Initials	[Redacted]	Town	[Redacted]	Fax	[Redacted]
Title	[Redacted] ▼	Province	[Redacted] ▼	Email	[Redacted]
Gender	[Redacted] ▼	Country	[Redacted]	Technology Access	[Redacted] ▼
Race	[Redacted] ▼	Code	[Redacted]	Communication Preference	[Redacted] ▼
Highest Qualification	[Redacted] ▼	Postal Address	[Redacted]	Dietary Needs	[Redacted] ▼
Professional Qualification	[Redacted] ▼	Address 2	[Redacted]	Management Level	[Redacted] ▼
Functional Area	[Redacted] ▼	Area	[Redacted]	CPD Hub	[Redacted] ▼
Workplace Sector	[Redacted] ▼	Town	[Redacted]	Distance from Hub	[Redacted] ▼
Name of Workplace	[Redacted]	Province	[Redacted] ▼	Alumni Role	[Redacted] ▼
Council ID	[Redacted]	Country	[Redacted]	Patient Profile (Most Prevalent)	[Redacted] ▼
Council No	[Redacted]	Code	[Redacted]	Patient Profile (Least Prevalent)	[Redacted] ▼
Educational Product 1	[Redacted] ▼	Educational Product 2	[Redacted] ▼	Educational Product 3	[Redacted] ▼

Expert / Interest Area

Clinical area of expertise and interest	HIV/AIDS	Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
	TB	Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
	Hypertension	Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
	Diabetes	Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
	Other	Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
Health management area of expertise and interest		Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
	Other	Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
Computer area of expertise and interest		Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
	Other	Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
Health policy area of expertise and interest		Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
	Other	Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
Ethical area of expertise and interest		Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
	Other	Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
Interpersonal area of expertise and interest		Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
	Other	Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
Personal growth area of expertise and interest		Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾
	Other	Expert/Interest ▾	Year of pract expertise	Qualification in specific field ▾

APPENDIX E

CPD development plan

APPENDIX F

Alumni newsletter

NEWSLETTER

FOR HEALTH CARE ALUMNI NETWORK

Volume 1, Issue 1,
January 2008

HEALTH CARE

ALUMNI

NETWORK

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2 SURVEYS

3 **Health environment update**

3 ALUMNI NETWORK UPDATE

4 **Mentor programme**

4 ALUMNI COMMENTS,
COMPLAINTS & COMPLIMENTS



EDITORIAL



SURVEYS



HEALTH ENVIRONMENT UPDATE



ALUMNI NETWORK UPDATE



4

MENTORING PROGRAMME

COMMENTS, COMPLAINTS & COMPLIMENTS



APPENDIX G

Geographical specific newsletter

PROVINCIAL NEWSLETTER

FOR HEALTH CARE ALUMNI NETWORK

Volume 1, Issue 1,
January 2008

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APPENDIX H

Clinical CPD update

CPD UPDATE

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HIV/AIDS

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CLARIFY CONCEPTS & TERMS

CURRENT CHALLENGES AND PROBLEMS



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MANAGEMENT CPD UPDATE

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CURRENT CHALLENGES & PROBLEMS

Best evidence practice

OUTCOMES OF LATEST RESEARCH

HEALTH POLICIES & ETHICS

Clarify terms & concepts

CURRENT CHALLENGES & PROBLEMS

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INTERPERSONAL SKILLS & PERSONAL GROWTH

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CASE STUDY



APPENDIX J

Template of the implementation plan

IMPLEMENTATION PLAN OF A MODEL TO MANAGE CPD FOR THE ALUMNI OF A PHEI

Nr	Task	Activity	Duration	Start	End	Responsibility
1.	Launch alumni programme annually					
1.1		Develop alumni information brochure				
1.2		Design and lay-out of alumni brochure				
1.3		Print alumni brochures				
1.4		Develop two-day launch programme				
1.5		Book venues per province for launch				
1.6		Book Alumni Manager to deliver opening address in each province				
1.7		Book cardiovascular disease expert as facilitator for launch in each province				
1.8		Book diabetes mellitus expert as facilitator for launch in each province				
1.9		Book TB expert as facilitator for launch in each province				
1.10		Book HIV/AIDS expert as facilitator for launch in each province				
1.11		Book mentoring expert as facilitator for launch in each province				
1.12		Print launch programme				
1.13		Invite alumni to launch (Fax, e-mail, SMSs, mail)				
1.14		Register participants for the launch				
1.15		Book anchor for launch				
1.16		Send SMS reminders to alumni				
1.17		Launch in Eastern Cape				
1.18		Launch in Free State				

1.19		Launch in Gauteng				
1.20		Launch in KwaZulu-Natal				
1.21		Launch in Limpopo				
1.22		Launch in Mphumalanga				
1.23		Launch in North West				
1.24		Launch in Northern Province				
1.25		Launch in Western Cape				
1.26		Implement quality assurance level 1 at each launch				
2.	Register alumni to alumni programme					
2.1		At launch in every province				
2.2		At every educational event				
2.3		At random				
3.	Update alumni database					
3.1		At launch in every province				
3.2		At every educational event				
3.3		At random				
4.	Development of assessors annually					
4.1		Identify assessor CPD needs				
4.2		Develop/update assessor study material				
4.3		Invite assessors to assessor CPD intervention				
4.4		Send SMS reminders to assessors				
4.5		Implement assessor CPD intervention				
4.6		Implement quality assurance levels 1 to 4				

4.7		Accredit assessors				
5.	Development of facilitators annually					
5.1		Identify facilitators' CPD needs				
5.2		Develop/update facilitators' study material				
5.3		Implement facilitators' CPD intervention				
5.4		Invite facilitators to facilitators' CPD intervention				
5.5		Send SMS reminders to facilitators				
5.6		Implement quality assurance levels 1 to 4				
5.7		Accredit facilitators				
6.	Development of dedicated operational person from the PHEI annually (anchors)					
6.1		Identify anchors' CPD needs				
6.2		Develop/update anchors' study material				
6.3		Implement anchors' CPD intervention				
6.4		Invite anchors to anchors' CPD intervention				
6.5		Send SMS reminders to anchors				
6.6		Implement quality assurance levels 1 to 4				
6.7		Accredit anchors				
7.	Development of mentors annually					
7.1		Identify mentors' CPD needs				
7.2		Develop/update mentors' study material				
7.3		Implement mentors CPD' intervention				

7.4		Invite mentors to mentors' CPD intervention				
7.5		Send SMS reminders to mentors				
7.6		Implement quality assurance levels 1 to 4				
7.7		Accredit mentors				
8.	Determine the CPD needs of alumni annually					
8.1		Analyse national health strategies				
8.2		Analyse various organisational strategies				
8.3		Develop the needs assessment questionnaire for alumni				
8.4		Develop alumni needs assessment protocol				
8.5		Obtain approval from ethics committee				
8.6		Implement alumni needs assessment survey				
8.7		Analyse alumni needs assessment survey results				
8.8		Identify priority needs of target groups as per needs assessment survey analysis				
8.9		Implement consumer survey				
8.10		Develop consumer survey questionnaire				
8.11		Develop consumer survey protocol				
8.12		Obtain approval from ethics committee				
8.13		Implement consumer survey				
8.14		Analyse consumer survey results				
8.15		Identify priority needs of target groups as per consumer survey analysis				
8.16		Consolidate information from registration forms				
8.17		Consolidate Information from quality assurance levels 1, 2, 3 and 4				
8.18		Consolidate information on gap assessments as per mentoring programme feedback and				

		credentialling information				
8.19		Consolidate information from CPD development plans				
9.	Define learning outcomes					
9.1		Define learning outcomes per target group per geographical area to satisfy identified needs of all stakeholders on all levels				
10.	Develop/update study material for CPD interventions					
10.1		Develop brief to expert authors				
10.2		Contract expert authors				
10.3		Developing of material				
10.4		Develop brief to expert editor				
10.5		Develop brief to graphic designers				
10.6		Develop brief to expert peer reviewer				
10.7		Lay-out and design of study material				
10.8		Edit study material				
10.9		Peer review study material				
11.	Quarterly tuberculosis Clinical Information Updates (CIU) for 2008					
11.1		Develop brief to authors				

11.2		Contract authors				
11.3		Developing of material				
11.4		Develop brief to editor				
11.5		Develop brief to graphic designers				
11.6		Develop brief to peer reviewer				
11.7		Lay-out and design of tuberculosis CIU				
11.8		Edit TB CIU				
11.9		Peer review TB CIU				
11.10		Print TB CIU				
11.11		Post CIU				
11.12		Send SMS reminders to alumni				
11.13		Place on PHEI website				
11.14		Place on CPD Hub Information Platform				
12.	Quarterly HIV/AIDS CIU for 2008					
12.1		Develop brief to authors				
12.2		Contract authors				
12.3		Developing of material				
12.4		Develop brief to editor				
12.5		Develop brief to graphic designers				
12.6		Develop brief to peer reviewer				
12.7		Lay-out and design of HIV/AIDS CIU				
12.8		Edit HIV/AIDS CIU				
12.9		Peer review HIV/AIDS CIU				
12.10		Print HIV/AIDS CIU				
12.11		Post CIU				
12.12		Send SMS reminders to alumni				
12.13		Place on PHEI website				

12.14		Place on CPD Hub Information Platform				
13.	Quarterly Hypertension CIU for 2008					
13.1		Develop brief to authors				
13.2		Contract authors				
13.3		Developing of material				
13.4		Develop brief to editor				
13.5		Develop brief to graphic designers				
13.6		Develop brief to peer reviewer				
13.7		Lay-out and design of Hypertension CIU				
13.8		Edit Hypertension CIU				
13.9		Peer review Hypertension CIU				
13.10		Print Hypertension CIU				
13.11		Post CIU				
13.12		Send SMS reminders to alumni				
13.13		Place on PHEI website				
13.14		Place on CPD Hub Information Platform				
14.	Quarterly Diabetes CIU for 2008					
14.1		Develop brief to authors				
14.2		Contract authors				
14.3		Developing of material				
14.4		Develop brief to editor				
14.5		Develop brief to graphic designers				
14.6		Develop brief to peer reviewer				
14.7		Lay-out and design of Diabetes CIU				
14.8		Edit Diabetes CIU				
14.9		Peer review Diabetes CIU				

14.10		Print Diabetes CIU				
14.11		Post CIU				
14.12		Send SMS reminders to alumni				
14.13		Place on PHEI website				
14.14		Place on CPD Hub Information Platform				
15.	Quarterly Management Information Update (MIU) for 2008					
15.1		Develop brief to authors (health management, information technology, health policy and ethics, interpersonal skills and personal growth health)				
15.2		Contract authors (health management, information technology, health policy and ethics, interpersonal skills and personal growth health)				
15.3		Developing of material				
15.4		Develop brief to editor				
15.5		Develop brief to graphic designer				
15.6		Develop brief to peer reviewer				
15.7		Lay-out and design of MIU				
15.8		Edit MIU				
15.9		Peer review MIU				
15.10		Print MIU				
15.11		Post MIU				
15.12		Send SMS reminders to alumni				
15.13		Place on PHEI website				
15.14		Place on CPD Hub Information Platform				

16.	Quarterly Standard Alumni Newsletter (SAN)					
16.1		Collect information on current surveys in alumni programme, status of mentoring programme, crucial issues that may impact on them or the health environment in which they function, to support social interaction between members in the network and from members in the network				
16.2		Developing of the SAN				
16.3		Editing of the SAN				
16.4		Lay-out and design of the SAN				
16.5		Print SAN				
16.6		Post SAN				
16.7		Send SMS reminders to alumni				
16.8		Place on PHEI website				
16.9		Place on CPD Hub Information Platform				
17.	Quarterly Geographical specific Alumni newsletter (GSAN)					
17.1		Collect information on educational events planned for the area, developments in the mentoring programme for the area, for example new mentors enrolled in the programme, all new members registered in the area to maintain the alumni network				

17.2		Developing of the GSAN				
17.3		Editing of the GSAN				
17.4		Lay-out and design of the GSAN				
17.5		Print GSAN				
17.6		Post CIU				
17.7		Send SMS reminders to alumni				
17.8		Place on PHEI website				
17.9		Place on CPD Hub Information Platform				
18.	Maintain communication network					
18.1		Send SMS reminders to alumni				
18.2		Send e-mails to alumni with special interest				
19.	Implement e-learning as a CPD intervention					
19.1		Convert developed study material to suitable e-learning format				
19.2		Develop study letters to learners				
19.3		Develop assessors' guide for learners				
19.4		Develop formative assessment tools for learners (QA level 2)				
19.5		Accredited 2-Star members				
19.6		Develop summative assessment tools for learners (QA level 2)				
19.7		Accredited 3-Star members				
19.8		Develop satisfaction survey questionnaire for learners (QA level 1)				
19.9		Accredited 1-Star members				

19.10		Develop assessment tools for self-assessment by learners after three months of completion of CPD intervention for application of learning in practice (QA level 3)				
19.11		Accredited 4-Star members				
19.12		Develop assessment tools for assessment by experts in practice on completion of CPD intervention for application of learning in practice (QA level 4)				
19.13		Accredited 5-Star members				
20	Implement distance learning CPD interventions					
20.1		Convert developed study material to suitable distance learning CPD format				
20.2		Develop study letters to learners				
20.3		Develop assessors' guide for learners				
20.4		Develop formative assessment tools for learners (QA level 2)				
20.5		Accredited 2-Star members				
20.6		Develop summative assessment tools for learners (QA level 2)				
20.7		Accredited 3-Star members				
20.8		Develop satisfaction survey questionnaire for learners (QA level 1)				
20.9		Develop assessment tools for self-assessment by learners after three months of completion of CPD intervention for application of learning in practice (QA level 3)				

20.10		Accredited 4-Star members				
20.11		Develop assessment tools for assessment by experts in practice on completion of CPD intervention for application of learning in practice (QA level 4)				
20.12		Accredited 5-Star members				
21.	Implement CPD interventions of self assessment of practice against minimum performance standards opportunities					
21.1		Develop invitation letters to learners				
21.2		Develop assessors' guide for learners				
21.3		Identify benchmarks to utilise as minimum performance standards for professional nurses in various settings of care				
21.4		Identify benchmarks to utilise as minimum performance standards for general practitioners in various settings of care				
21.5		Identify benchmarks to utilise as minimum performance standards for managers in various settings of health care				
21.6		Develop assessment tools for self assessment by health practitioners (QA level 3)				
21.7		Accredited 4-Star members				
21.8		Develop satisfaction survey questionnaire for				

		learners (QA level 1)				
22.	Implement 2- to 3-day workshops as CPD intervention quarterly					
22.1		Identify workshop dates				
22.2		Identify venues at accredited CPD Hubs or close to accredited CPD Hubs				
22.3		Identify expert faculty in the geographical area				
22.4		Develop briefing documents to faculty with learning outcomes				
22.5		Invite alumni with special interest through SMSs				
22.6		Invite alumni with special interest through website				
22.7		Invite alumni with special interest through e-mails				
22.8		Place information in GSAN				
22.9		Place information in SAN				
22.10		Register alumni who replied as participants				
22.11		Book and brief (verbally and in writing) faculty				
22.12		Book venue				
22.13		Develop workshop summative evaluation tools				
22.14		Provide master copy of study material to printer				
22.15		Order study material for faculty, students and assessor				
22.16		Distribute study material				
22.17		Book dedicated anchor for the CPD Hub				
22.18		Brief anchor on logistics, assessment and topic				

		details				
22.19		Generate attendance certificates				
22.20		Distribute attendance certificate				
22.21		Accredited 1-Star members				
20.4		Develop formative assessment tools for learners (QA level 2)				
20.5		Accredited 2-Star members				
20.6		Develop summative assessment tools for learners (QA level 2)				
20.7		Accredited 3-Star members				
20.8		Develop satisfaction survey questionnaire for learners (QA level 1)				
20.9		Develop assessment tools for self-assessment by learners after three months of completion of CPD intervention for application of learning in practice (QA level 3)				
20.10		Accredited 4-Star members				
20.11		Develop assessment tools for assessment by experts in practice on completion of CPD intervention for application of learning in practice (QA level 4)				
20.12		Accredited 5-Star members				
23	Implement Summative Assessment as part of every CPD intervention					
23.1		Book assessor				
23.2		Develop an assessors' guide				

23.3		Brief assessor (verbally and in writing)				
23.4		Receiving completed summative assessment from alumni				
23.5		Record receipt of assessment in database				
23.6		Send completed summative assessment to assessor				
23.7		Receiving marked summative assessment back from assessor				
23.8		Enter marks in database				
23.9		Accredit alumni according to assessment results on QA levels 2 or 3 or 4				
23.10		Generate CPD certificates				
23.11		Distribute CPD certificates				
23.12		Accredited 2/3-Star members				
24	Implement one-day refresher seminars as CPD intervention quarterly					
24.1		Identify one-day refresher seminars dates				
24.2		Identify venues at accredited CPD Hubs or close to accredited CPD Hubs				
24.3		Identify expert faculty in the geographical area				
24.4		Develop briefing documents to faculty with learning outcomes				
24.5		Invite alumni with special interest through SMSs				
24.6		Invite alumni with special interest through website				
24.7		Invite alumni with special interest through e-				

		mails				
24.8		Place information in GSAN				
24.9		Place information in SAN				
24.10		Register alumni who replied as participants				
24.11		Book and brief (verbally and in writing) faculty				
24.12		Book venue				
24.13		Develop workshop summative evaluation tools				
24.14		Provide master copy of study material to printer				
24.15		Order study material for faculty, students and assessor				
24.16		Distribute study material				
24.17		Book dedicated anchor for the CPD Hub				
24.18		Brief anchor on logistics, assessment and topic details				
24.19		Generate attendance certificates				
24.20		Distribute attendance certificates				
20.4		Develop formative assessment tools for learners (QA level 2)				
20.5		Accredited 2 Star-members				
20.6		Develop summative assessment tools for learners (QA level 2)				
20.7		Accredited 3-Star members				
20.8		Develop satisfaction survey questionnaire for learners (QA level 1)				
24.21		Accredited 1-Star members				
25.	Implement CPD intervention of organised group case/problem					

	discussions monthly					
25.1		Identify small group discussion dates				
25.2		Identify venues at accredited CPD Hubs or close to accredited CPD Hubs				
25.3		Identify expert facilitator in the geographical area				
25.4		Develop briefing documents to facilitator with learning outcomes				
25.5		Invite alumni with special interest through SMSs				
25.6		Invite alumni with special interest through website				
25.7		Invite alumni with special interest through e-mails				
25.8		Place information in GSAN				
25.9		Place information in SAN				
25.10		Register alumni who replied as participants				
25.11		Book and brief (verbally and in writing) facilitator				
25.12		Book venue				
25.13		Book dedicated anchor for the CPD Hub				
25.14		Brief anchor on logistics and topic details				
20.8		Develop satisfaction survey questionnaire for learners (QA level 1)				
26.	Maintain infrastructure					
26.1		Accredit CPD Hubs				
26.2		Appoint anchors for each CPD Hub				
27.	Sign collaborative agreements with					

27.1		the accredited ARV clinics in order to utilise the infrastructure as CPD Hubs				
27.2		existing e-learning providers				
27.3		experts in the various geographical areas to facilitate workshops decentralised				
27.4		experts in the various geographical areas to act as expert evaluators				
27.5		experts in the various geographical areas to act as mentors				
27.6		peers to act as peer evaluators				
27.7		existing provider of a health channel on television				
28.	Financial Management					
28.1		Do annual budget for alumni programme				
28.2		Determine annual membership fee structure linked to alumni products for 2007-2008 to recover inset costs				
28.3		Revisited annual membership fee to calculate a 10% ROI from year 2				
28.4		Obtain sponsorship to sustain alumni network				
29.	Implement mentoring programme					
29.1		Compile and distribute guidelines with roles and responsibilities of mentors and mentees				
29.2		Compile list of accredited mentors per geographical area				
29.3		Compile list of accredited mentors per area of interest and expertise				
29.4		Distribute list of accredited mentors to alumni				

29.5		Collect signed agreements between mentors and mentees				
29.6		Collect completed CPD Development Plans				
29.7		Pay stipends to mentors				
29.8		Monitor and evaluate mentoring programmes				
29.9		Manage database on information on CPD needs assessment of mentees in mentoring programme according to CPD development plan				
20.8		Develop satisfaction survey questionnaire for learners (QA level 1)				
29.10		Manage database on information on summative assessment of mentees in mentoring programme according to CPD development plan				
30.	Implement quality assurance plan					
30.1		Design satisfaction survey questionnaire for level 1 quality assurance				
30.2		Submit Annual Report to Department of Education as a PHEI				