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INTEGRATION AND ASSESSMENT OF CRITICAL OUTCOMES IN A LEARNING PROGRAMME FOR FIRST-YEAR MEDICAL STUDENTS

by

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THESIS

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Professor H.J. van der Spuy

November 2002

I declare that this thesis hereby submitted by me for the Ph.D. Degree at the University of the Free State is my own independent work and has not previously been submitted by me at another university / faculty. I furthermore cede copyright of the thesis in favour of the University of the Free State.

A.A. BEYLEFELD

18 - 03 - 2003

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To my mother and father

That I use "she" when I refer to a student, will be appreciated by women readers. I am sure that men readers will be able to delete the "s" with as little resentment as I have felt in adding it during all the years before 1994.
(Adapted from: Jean Rudduck, 1978)

Knowledge may become outdated, but the skills needed to acquire and use new knowledge will not.
(Drew, 1998)

Assessment is at the heart of learning. Assessment is for learning. Assessment is learning.
(Brown & Knight, 1994)

Change cannot be engineered; it is a non linear process that involves the introduction of new information, and increased sophistication in its use, into the constructions of the involved humans.
(Guba & Lincoln, 1989 [http://www.srds.ndirect.co.uk/4th.htm])

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CHAPTER ONE

GENERAL PERSPECTIVE AND ORIENTATION

The common denominator of highly qualified manpower [sic] will ... be the ability to think, learn and adapt. Personal transferable skills – problem solving, communication, teamwork – rather than technical skills defined with narrow occupational ranges, will come to form the stabilising characteristic of work. If higher education is to meet the needs of the economy and the individual it must seek actively to develop these generic core competencies that will in future define work.

(Slee, 1989:66)

1.1 INTRODUCTION

The nature of higher education has changed profoundly during the last few decades. Deteriorating economies, a diversification of student intake and the introduction of government-driven qualification frameworks have necessitated a changed conception of higher education. As highligted by Bennett, Dunne and Carré (2000), major external forces such as these brought the realisation that the key to greater economic success lies in a larger workforce with more advanced knowledge and skills. Apart from specialist knowledge, other attributes and skills that will enable graduates to "hit the ground running" once they take up employment, are now recognised as a means of contributing to revitalised economies (Fallows & Steven, 2000).

Consistent with the view that ... *higher education is a central element in the future competitiveness of the economy in the world market* ... (Bennett, Dunne & Carré, 2000:3), it is presently an accepted notion that providers of higher education should be accountable to taxpayers by demonstrating that they are preparing students to make the transition from education to the world of work and to fulfil their roles in society (cf.par. 2.2, Chapter Two).

When applied to medical education, current thinking about preparing students for the world of work implies the preparation of doctors who ... *have listening and*

problem-solving skills, an interest and confidence in [solutions to] psychosocial problems and a focus on the patient rather than the disease (WHO, 1996:1).

Reform in medical education is not a new concept. As asserted by Fowell et al. (2000), an international uneasiness about traditional curricula being out of step with modern health care requirements became discernible in medical education in the 19th century already. Particularly since the mid-1980s (Sefton, 1995), a diversity of examples of innovative curricular models have emerged from the USA (Kaufman, 1985), Great Britain (Engel, 1989), Canada (Des Marchais, 1991) and New Zealand (Schwartz, Heath & Egan, 1994). What these models have in common, first of all, is the aim of producing doctors who are better equipped to meet the needs of the community they will serve. This aim is perfectly in line with the current disquiet about higher education not sufficiently preparing graduates to address the needs of society.

Central to arguments in favour of change in medical education, is the long-standing concern that the ever-increasing factual load that is characteristic of medical curricula interferes with the acquisition of the intellectual skills and attitudes required for attending to society's changed health agenda. The latter is focused on community problems, health and illness, rather than a hospital-centred acute disease agenda (WHO, 1994). Melville and Johnston, in their book entitled *Cured to Death,* highlight this concern by saying that years of authoritarian training in medical school mould young idealistic students into rigid doctors who have lost much of their original ability to sympathise with patients and listen to their problems (Harden, Sowden & Dunn, 1984). The traditional process of medical education is furthermore portrayed as one which leaves much to be desired: ... *when the fledgling doctor emerges to confront the world of his [sic] patients the very process of becoming a physician will have rendered him [/her] incapable of dealing with the majority of problems that will face him [/her]* (*ibid.*:284).

However, preparing students to fulfil their role in society represents only one side of the coin. In an article on the social accountability of medical schools, the World Health Organisation (WHO, 1996) states that such schools also have a

responsibility toward students that should not be neglected. Medical schools are reminded that, on the basis of research and developments in the field of education, they are obliged to design learning programmes that will not stunt students' curiosity and intellectual growth. Instead of focusing on teaching content, the delivery of learning programmes should encourage problem-solving and lifelong learning.

Achievement of this goal requires a shift from the "instruction paradigm" to the "learning paradigm" (Barr & Tagg, 1995). Deduced from the characteristics of the learning paradigm, as described by various authors, and succinctly summarised by Wessels (2001), the following changes in educational practices need to take place if the goal is to dispense with of the traditional, instruction-based approach to teaching, learning and assessment:

- Instead of knowledge transmission from expert to novice, students need to acquire skills that will enable them to think independently in assimilating the rapidly growing body of information.
- Instead of rewarding reproductive learning styles, opportunities for the discovery (construction) and application of knowledge should be provided.
- Instead of traditional tests and examinations, assessment strategies such as assignments, allowing students to demonstrate their understanding and apply their competencies, should be developed.

This shift from an instruction-based to a learning-based approach constitutes another marked commonality in modern undergraduate medical curricula. At medical schools such as the University of Maastricht in the Netherlands, the University of Newcastle in Australia, the University of McMaster in Canada and the University of Gezira in the Sudan, curricular innovations were shaped around concepts such as integrated teaching, problem-based curricula and student-centred learning (Sefton, 1995; Harden, Sowden & Dunn, 1984).

In South Africa, commitment to innovative teaching and learning strategies was reflected in the *Cape Town Declaration* (1995) on the education and training of a "Doctor for Africa". Two years prior to this declaration, measures for countering

the imbalance between factual overload and clinical skills in traditional curricula were published by the General Medical Council (GMC, 1993) in the United Kingdom under the title *Tomorrow's Doctors*. Recommendations that were incorporated into this document included the following:

- a more integrated curriculum;
- a decrease in factual overload;
- a greater emphasis on active learning; and
- a shift towards more student-centred learning.

This broader, more holistic aim of undergraduate medical education, in turn, enhances the profile of assessment. It is clearly stated in *Tomorrow's Doctors* that ... *if the aims of curriculum revision are to be achieved, ... it is essential that assessment methods are also reconsidered* (Fowell et al., 2000:5).

From the above exposition of current thinking on higher education in general and medical education in particular, it can be deduced that the development of skills needed for active, independent learning in undergraduate curricula is a *fait accompli*. Furthermore, the acquisition of skills is presumed to be an **explicit** exercise. The reason for this is that the assumption that the skills needed by students to be successful in their study careers and in their professional lives thereafter are acquired through osmosis in traditional educational settings, has been shown to be erroneous (Cushing, Najberg, & Hajek, 1997) (cf.par. 2.2.1, Chapter Two).

An issue which is not yet free of controversy, is that of how best to incorporate the development of skills in undergraduate curricula (Fowell et al., 2000). What is evident, though, is that assessment should form part of the incorporation process (cf.Chapter Three). However, as Godfrey (cited in Hall, 2001:345) commented: *Even in innovative and forward looking medical schools across the world, much of the good intention is neutralised by the powerful steering effect of a traditional assessment system.*

1.2 ORIENTATION TO THE NEW PROGRAMME FOR PROFESSIONAL MEDICINE (M.B.,Ch.B.) AS A CONTEXT FOR SKILLS DEVELOPMENT

The start of the academic year 2000 marked the inception of a new, five-year curriculum for students enrolled at the UFS School of Medicine, situated in Bloemfontein, South Africa. Arguments supporting the move toward an innovative undergraduate curriculum were essentially the same as those that had given rise to criticism of traditional medical curricula at international level, as summarised by Harden, Sowden and Dunn (1984):

- The emphasis was on classical disciplines (e.g. anatomy, medical physiology, pharmacology, anatomical pathology and medical microbiology), with little or no integration between the specialities.
- Contact with patients only came later, after completion of the basic medical science course, and even then, mostly in a hospital setting.
- Lecturers were the key figures who imparted large volumes of basic scientific information to students through formal lectures.
- The learning of content tended to be more passive than active.
- The learning goals and objectives were unknown to students.
- All students passed through the same set of prescribed courses, with little opportunity to study any topic of their own choosing in greater depth.
- Feedback on discipline-based tests and examinations was seldom received.

Curriculum 2000, as the new programme is commonly referred to, introduced significant changes to the traditional pattern. An adapted version of Harden's SPICES model (Harden, Sowden & Dunn, 1984) was used as an analytical tool to decide where the UFS School of Medicine was situated on the continuum of change, and where it would like to be in order to meet current needs (Figure 1.1).

Assuming that a position at either extreme end of the continuum would be inappropriate, it was decided that the School would strive to retain what was good in the traditional curriculum, while endeavouring to move to a more innovative stance on the left in the new curriculum (cf.Report, Lecturer Training Course, 27-28 July, 2000).

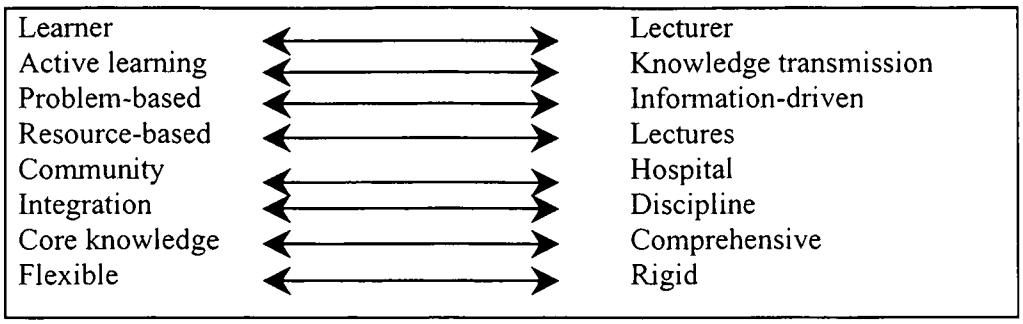


Figure 1.1 *Adapted version of Harden's SPICES model for curriculum change* (Harden, Sowden & Dunn, 1984)

1.2.1 Premises underlying Curriculum 2000

Whereas in the past, lecturers were primarily concerned with the delivery of knowledge by means of lectures, the modules comprising the first year (Phase I) of the new curriculum include a fair amount of small-group teaching and a number of special assignments. The learning content of various disciplines is organised to form multidisciplinary modules and students are exposed to varied learning experiences. Other outstanding features of the new Programme for Professional Medicine (M.B.,Ch.B.) are as follows:

- provision is made for students to learn not only in lecture halls and the skills laboratory, but also in the community;
- students have "protected", independent study time in the form of scheduled, directed learning periods.

The process of curriculum review started in 1996 and was characterised by extensive consultation abroad, a series of workshops and comprehensive reports to ensure a well-planned and staged approach. All along, the focus was on the kind of "product" that the UFS School of Medicine should produce in order to serve society well. In a document that was approved by a Faculty of Health Sciences meeting on 3 August 1999, it is stated that the graduate medical student should have the following qualities, all of which correlate with working conditions and expectations in the real world of employment:

- preparedness to learn and study for at least 40 hours per week;

- ability to avail themselves of learning resources;
- ability to learn independently;
- clear understanding of their role in the community;
- preparedness for a team approach to health care.

These qualities that the *products* of medical education are expected to have, also imply a *process* requiring them to acquire certain general skills such as self-management and organisation, communication, computer literacy, ability to function as a team member and culture-sensitivity. This requirement is in keeping with the view that the outcomes of higher education that really matter, in the long term, are intellectual and personal skills that help an individual to learn throughout his/her life and so become adaptable to the many changes of modern society (Bennett, Dunne & Carré, 2000).

The problem, however, is that urging the case for the development of general skills in undergraduate students is futile if conventional assessment methods, focusing on factual recall, remain unchanged.

1.2.2 Assessment as a pivotal area of curriculum change

The desirability of preparing students for lifelong learning by giving prominence to the development of general skills in the first year of the Programme for Professional Medicine (M.B.,Ch.B.) was never a matter of contention. What was problematic, though, was the question of how to decide on the nature of the skills that had to be developed (what?) and how to establish a structure within which to develop them (where?). Another area of concern was how to incorporate skills into the curriculum in such a way that students would see them as having an important place of priority in their learning (how?). Advice in the literature seemed ambitious: *These skills should be integrated within the curriculum and specified as learning outcomes to be achieved by students and to be taught to a specified standard* (Bradley, 2001:313).

In the design of Curriculum 2000 an outcomes-based approach was followed, which means that learning outcomes, assessment criteria and details of an

integrated assessment approach had to be defined. Staff involved in the design of Phase I of the curriculum devoted a great deal of time and effort to defining the expected knowledge outcomes in the core modules. Aspects that remained relatively unattended in this process, however, were (a) details on how general skills would be integrated with learning in the core modules, and (b) how the acquisition of skills would be assessed.

In their review of the evaluation of educational interventions in the United Kingdom and the United States of America, Wilkes and Bligh (1999) make a statement on curricular reform which is applicable to the current situation at the UFS School of Medicine and helps to put the research problem into perspective. According to these authors, the development of sound assessment tools often comes as an afterthought in curricular change, occurring when the teaching staff are already exhausted, and the students frustrated and confused. This observation is consistent with Boud's point of view, quoted by Yorke (1998:107): ... *[t]here is probably more bad practice and ignorance of significant issues in the area of assessment than in any other aspect of higher education.* As a result of this ignorance, assessment tends to suffer from the "bolting-on syndrome": it is not subjected to the same degree of scrutiny as are content and teaching and learning practices, and the contribution that it could make to curricular reform is often downplayed.

Staff involved in the implementation of Phase I of Curriculum 2000 currently find themselves in an implementation vacuum as far as the assessment of skills acquisition is concerned. Although new learning and teaching styles are used and propagated, as is evident from the increase in group assignments and community-based project work, conventional assessment methods still apply for the most part. On the one hand, it is acknowledged by some that summative tests and examinations are not sufficient to "measure" what is supposed to be the hallmark of Curriculum 2000, namely the combination of knowledge, skills, attitudes and values applicable within the context of a specific disciplinary area. On the other hand, there are many barriers to the use of assessment as a vehicle for developing general skills. These barriers include resistance to change and the sizable

commitment of lecturers' time and Faculty resources that a change in the method of assessment would require (Fowell et al., 2000).

This state of affairs is not unique, as is evident from an observation made by Fowell et al. (2000:5) in a comprehensive report on student assessment in undergraduate medical education in the United Kingdom: *While considerable effort is being put into changing the structure and style of learning, anecdotal evidence suggests that little is being done about changing methods of assessment, many of which are 'steeped in tradition.'* Similarly, curriculum reform in the United States of America, as reported by Mennin and Kalishman (1998), indicates that assessment change tends to lag behind curriculum change.

Not only staff, but also students are faced with a dilemma when it comes to the development and assessment of general skills. Upon entry into higher education, most students who come from classroom settings are used to teacher-dependent, and not student-centred learning. A major problem attached to student-centred teaching strategies such as group projects, is the assumption that students can work together effectively, which is one of the most important general skills required in an innovative approach to teaching, learning and assessment. However, in practice, it has been documented that students complain that during group projects the workload is distributed unevenly, that not all students participate or contribute equally and that results are not reflective of individuals' input. In this regard, Gibbs (1995) points out that students who have a reproductive conception of learning are likely to react strongly against student-centred teaching methods, open-ended tasks where students share responsibility and unconventional forms of assessment such as self- and peer assessment.

1.3 PROBLEM IDENTIFICATION

According to Fowell et al. (2000), unfamiliarity with new forms of assessment, and also lack of staff time and/or resources, feature as common barriers to the linking of skills development with assessment in the United Kingdom. In the same vein, Maxwell and Wilkerson (1990:514) emphasise that an innovative

curriculum is unlikely to elicit a positive response from those affected by it, without a substantial investment by the implementing school in the form of orientation and support of both staff and students.

Reflecting on the notions of these authors, I came to the following conclusions:

a) In the context of the UFS School of Medicine, the requirement of orientation and support would be of crucial importance when lecturers (some of whom may be sceptical of, and even hostile to, the ideas that underlie innovative curricula) and students (some of whom seriously lack the skills for academic success) are confronted with skills development and new forms of assessment during the course of the Programme for Professional Medicine (M.B.,Ch.B.).

b) Module MEA112, which forms part of the Programme for Professional Medicine (M.B.,Ch.B.) and focuses on the development of general skills, could serve as a "laboratory" where new assessment instruments and alternative strategies could be developed in conjunction with learning content. Within the context of this module, students could be supported by gradually being involved in the processes of co-, peer- and self-assessment. Staff providing tuition in core modules could benefit from cooperation with other staff members specialising in skills development, with a view to embedded development and assessment of critical outcomes.

c) A heuristic tool, generating criteria for the use of alternative assessment formats, could contribute towards taking the process of skills development in the Programme for Professional Medicine (M.B.,Ch.B.) forward, and perhaps accelerate the rate of change in assessment practices.

Against this background, the starting point for the research was formulated as follows:

It would be unwise of the UFS School of Medicine, currently weighed down by limited resources, to be content in the knowledge that it has responded to the government demand for skills development by "bolting on" a parallel-running

module on skills building to the first-year curriculum. True accountability would imply (a) a sophisticated understanding of the aims of skills development in the first year of the Programme for Professional Medicine (M.B.,Ch.B.) (b) research-based evidence that the particular skills-building model that the UFS School of Medicine has in use indeed facilitates the achievement of these aims, (c) incorporation of learners' views on their perceived skills-learning needs and the relevance of skills acquisition as an educational experience, and (d) improvement of the educational environment for staff by minimising the impact of skills development on their workload.

1.4 RESEARCH GOALS AND OBJECTIVES

The overall aim of this study was to describe, analyse and evaluate the design and implementation of a module on skills development in the Programme for Professional Medicine (M.B.,Ch.B.) with the immediate goal of improving my practice as a skills specialist.

In pursuing this aim, I had to reflect honestly and critically on the work that had been done in Module MEA112 during the past three years. In the process, answers to the following questions were sought:

- Why did the UFS School of Medicine choose to follow the route that it did as far as skills development is concerned?
- How did those responsible for implementing policy intentions go about doing so?
- What was done (with special reference to actual examples)?
- What was the outcome of the actions taken?
- What lessons were learned?

By answering these questions, I endeavoured to demonstrate the developmental process of my own understanding of skills development in an outcomes-based, undergraduate medical curriculum. This I did by:

- Studying the literature in order to gain a sound understanding of the rationale for the inclusion of critical cross-field outcomes in higher education curricula.
- Generating assessment results that are worthy of serving as evidence that the skills development model adopted by the UFS School of Medicine indeed facilitates the achievement of desired critical cross-field outcomes.
- Eliciting students' views on the relevance of the skills-building model in place, and using this information to inform modifications.
- Reporting on how insight, gained as a result of collaboration with subject experts, was translated into modifications, adjustments and directional changes deemed necessary in order to firmly entrench the development and assessment of general skills in the first year of the Programme for Professional Medicine (M.B.,Ch.B.).

1.5 RESEARCH APPROACH AND METHODOLOGY

An action research approach, the main features of which are reported in Chapter Five (*Research Approach and Design*), applied in this study. As emphasised by Bell (1987:6), action research is not a method or a technique, but an approach ... *which has proved to be particularly attractive to educators because of its practical, problem-solving emphasis, because practitioners carry out the research and because the research is directed towards greater understanding and improvement of practice over a period of time.*

Even though action research is ongoing and problem-solving in nature, the research reported here was planned, just like any other research, in a systematic way. Although methods and techniques for gathering data were not regarded as fixed entities before the research started, they were appropriately selected as the research progressed, depending on the nature of the information needed.

1.5.1 An action research approach

Action research has been defined in many different ways (Altrichter, Posch & Somekh, 1993; Zuber-Skerritt, 1991; Carr & Kemmis, 1986; Argyris & Schön,

1989; Cohen & Manion, 1994). Cohen and Manion's (1994:192) interpretation of action research served as an operational definition in this study:

> *[It is] essentially an on-the-spot procedure designed to deal with a concrete problem located in an immediate situation. This means that ideally, the step-by-step process is constantly monitored over varying periods of time and by a variety of mechanisms (questionnaires, diaries, interviews and case studies, for example) so that the ensuing feedback may be translated into modifications, adjustments, directional changes, redefinitions, as necessary, so as to bring about lasting benefit to the ongoing process itself rather than to some future occasion, as is the purpose of more traditionally oriented research. Unlike other methods, no attempt is made to identify one particular factor and study it in isolation, divorced from the context giving it meaning.*

1.5.2 Action research: A bottom-up approach to quality assurance

The fundamental goal of action research, namely improved practice, lies at the heart of self-evaluation, which, in turn, forms the basis of quality assurance. In medical education, the South African Qualifications Authority (*SAQA Bulletin*, 1997) and the Health Professions Council of South Africa (HPCSA, 1999) are responsible for laying down the broad principles and guidelines for quality assurance.

However, seeing that the guidelines provided by the Health Professions Council of South Africa with regard to the development of general skills are rather non-specific (*ibid.),* I used the self-evaluation criterion indicated in Table 1.1 as a framework for assuring quality at modular level (Van Rensburg, 2000). This criterion was first developed by the Commission d'evaluation de l'enseignement collegial in 1994 and adjusted by Hay and Strydom (1999:396) for the South African context.

The self-evaluation criterion referred to above is rather narrowly focused on the expectations and standards of the community, but could easily be expanded to include wider expectations and thus provide a quality assurance framework for the development and assessment of critical outcomes in general.

Table 1.1 *A self-evaluation criterion appropriate for benchmarking the implementation and assessment of critical outcomes* (Adapted from Hay & Strydom, 1999)

Self-evaluation criterion	Self-evaluative questions
The outcomes (objectives), content and methodology (learning activities) of the programme of study are consistent with the community's overall expectations and standards.	• When formulating the programme, did the higher education institution ensure that it helped develop knowledge and skills enabling graduates to assume their role in the community, for instance a critical mind, social skills, the ability to communicate, openness to diversity, and the ability to adapt? • Has the higher education institution evaluated student achievement in relation to the above and other more generic skills of the NQF? How was this evaluation carried out? • Has the higher education institution adapted its programme to make it more effective in this regard? Does it plan to do so?

I thus chose to follow an action research approach to fulfilling my role as leader of a module on general skills, based on the premise that reports and publications resulting from the research could form part of the UFS School of Medicine's ongoing responsibility to account for the effectiveness of the measures it has in place for achieving critical outcomes. Through participatory collection of evidence, evaluation of experience and feedback into a spiral of curriculum development, I endeavoured to improve the quality of skills development and assessment in the UFS School of Medicine. Bitzer (2000:102) refers to activities of this kind as ... *'bottom-up' endeavour[s] to provide the 'flesh' to broad principles and programmatic guidelines.*

1.5.3 Case study methodology in action research

A qualitative case study methodology was used. A brief summary is given in Table 1.2 of how the typical features of a case study methodology, as described by Merriam (1988:11-12), were applied in this study:

Table 1.2 *Essential properties of case study methodology and their application in this study* (Merriam, 1988)

Essential properties of case study methodology	Application of case study properties in this study
• It is particularistic, concentrating on a particular situation, event, programme or phenomenon.	Congruent with an action research approach, the researcher was interested in the examination of an instance in action. The instance in action was the teaching and assessment of general skills in the first year of the Programme for Professional Medicine (M.B.,Ch.B.).
• It is descriptive, generating rich information about the phenomenon being studied.	Looking at a particular case enabled the researcher to study the research population in detail and unravel the complexities of the situation under investigation. It also offered the opportunity to explain *why* certain results were obtained and not just what the results were (Yin, in Wimmer & Dominick, 1987:156).
• It is heuristic, extending understanding of what is known.	Since the research did not aim at developing a new theory, it drew on existing knowledge and theories.
• It is inductive, gathering contextualised data in the form of descriptions from which generalisations can be drawn.	Methods and techniques used for data collection were aimed at achieving insight, discovery and interpretation in context, rather than hypothesis testing.

Consistent with the latest trends in social research, a multi-method was used for gathering data (Denscombe, 1998). On the one hand, methods typically considered qualitative were used: individual and group interviews with key-informants, document and record review, open-ended questionnaires, audio transcriptions, observation notes and journal entries. On the other hand, given the widely acknowledged conception that qualitative and quantitative methods should be used complementarily to enhance the internal consistency (and therefore, the reliability) of research results, structured questionnaires rendering quantitative data were also used (Mills, 2000; Altrichter, Posch & Somekh, 1993). However, instead of reporting findings in numerical form only, prose and literary techniques were used to describe and analyse situations. Documentation of events and quotes served as evidence.

Given the interpretive nature of case study methodology, I was sensitive to the fact that the research questions and findings were influenced by my own, tacit knowledge. I was not a detached, objective observer interested in generalising and predicting on the basis of accurate measurement as is the case in experimental research (Merriam, 1988). Validity (credibility) rested on my ability to organise the materials within a plausible framework by searching for a logical pattern in

the multi-method results. Furthermore, my critical presence in the context where the action took place, as well as triangulation, ensured validity, and thus "scientific" work. In-method triangulation was achieved by combining dissimilar methods such as interviews and documentary evidence to cover the same unit of analysis. Triangulation of participants' perspectives was pursued by

- sharing understanding of observed situations with the people concerned;
- inviting role-players' views and criticisms; and
- confirming interpretations with those concerned.

Throughout the study I was aware of possible ethical issues that might ensue from the interpretation of problems and ideas. Potential conflicts of interest, invasion of privacy and revelation of confidential information were attended to by keeping the progress and development of the research visible and open to suggestions from the various role-players and stakeholders. Permission was obtained before making observations or examining documents and records. Participants' points of view were negotiated with them before I used such information in the research. All respondents were informed of my aims and their right to stay anonymous or refuse participation.

1.6 DEMARCATION OF THE STUDY

The research took place in the natural setting of the UFS School of Medicine, which is one of three schools comprising the Faculty of Health Sciences. The focus was on the first year of the Programme for Professional Medicine (M.B.,Ch.B.), as a single instance of action.

The study was directed at the different role-players and stakeholders in the first phase (year one) of Curriculum 2000. Participants whose opinions were elicited by means of questionnaires and/or interviews, comprised 90 first-year students in 2000, 134 in 2001 and 140 in 2002, as well as five module leaders. Another five academic staff members, including the researcher, formed the core project team.

1.7 DEFINITION OF KEY CONCEPTS

To ensure unambiguity and avoid confusion, certain terms that were used in this chapter and/or will be used recurrently in succeeding chapters, will now be discussed briefly. For the purpose of this study, these terms will refer to the definitions below, which reflect the researcher's understanding of these concepts:

1.7.1 Terms related to assessment

Assessment

Assessment, *evaluation*, *examination* and *testing* are used interchangeably in the literature to refer to the judgement of students' performance. While all these terms encompass the same basic concepts, *assessment* is preferred in the modern idiom. Clarke et al. (2000:160) explain: *'Test' was the word of choice for much of the 20th century. 'Assessment', however, is the favoured term of the 1990s, either when used alone or when modified by one of the adjectives 'authentic', 'alternative', or 'standards-based'.* The reason why the term "assessment" has replaced that of "testing", is that it refers to the quality measures used to determine the performance of a student (Wilkes & Bligh, 1999:1269), and not only to objectively marked responses set by an assessor.

Synthesised from the different semantic nuances attached to the concept of assessment (cf. Chapter Three, par. 3.2.1), the researcher opted to side with Brown, Bull and Pendlebury's (1997:8) comprehensive definition of assessment:

> *Assessment consists, essentially, of taking a sample of what students do, making inferences and estimating the worth of their actions. The sample may include the use of computers, writing essays, completing tests or checklists, solving problems and reporting their solutions, carrying out practical procedures, or recalling and reporting orally, or in writing, actions, thoughts and feelings. The behaviours sampled may be specific to a course or they may be more general. They may be related to explicit or implicit criteria. The sampling may be undertaken by the students themselves, their peers, their tutors or employers with whom they are working. On the basis of the sample that is taken, inferences are made about a person's achievements, potential,*

intelligence, aptitudes, attitudes, motivations and perhaps, personality and an estimate of worth in the form of grades, marks or recommendations is made.

Alternative / authentic / holistic assessment

In response to the call in higher education to move from the traditional testing culture to an assessment culture, a whole range of assessment methods are currently used in higher education, under the broad classification of *alternative assessment*, to replace or at least supplement conventional standardised tests and examinations. Characteristic features of alternative assessment include, *inter alia*, a move away from single test-scores towards descriptive assessment based on a whole range of outcomes, involving performance tasks which resemble real-world circumstances, the integration of teaching, learning and assessment, involvement of students and other role-players as active informed co-assessors, and a focus on both the process and the products of learning. Examples of alternative assessment tasks and activities include projects and investigations; writing assignments; authentic, real-world tasks; group assignments; case-based problem-solving tasks; open-book tests and examinations; portfolios; peer, self- and co-assessment (Sambell, McDowell & Brown, 1997). A great variety of terms are used to describe these alternative forms of assessment. Birenbaum (in Sambell, McDowell & Brown, 1997) lists the following: performance assessment, direct assessment, incidental assessment, informal assessment, balanced assessment, constructive assessment, curriculum-based assessment, curriculum-embedded assessment, and authentic assessment.

The latter term is discussed in more detail in Chapter Four. Suffice it to say here that authentic assessment is not understood to include each and every performance task that students are required to do. For the purposes of this study, the term *authentic assessment* is reserved for referring to holistic assessment, embedded in learning experiences that enable learners to demonstrate learning in the execution of real-world tasks. *Holistic assessment*, in turn, carries the following connotation: the assessment activity requires that a number of outcomes are combined in an integrated way; that students solve a problem and that students' knowledge, skills and values in relation to a particular topic are assessed (Gultig, 1997).

Continuous / terminal or end-assessment

Distinct from terminal or end-assessment based on a final examination or test only, continuous assessment is based on ... *[an] assessment pattern containing more than one assessment task with at least one, and usually more tasks due for submission during the semester* (Nightingale et al., 1996:268). Continuous assessment, however, does not mean more tests, but a wider variety of assessment tasks, administered throughout the learning programme (Gultig, 1997).

Criterion-referenced / norm-referenced assessment

Criterion-referenced assessment is usually contrasted to *norm-referenced assessment.* Norm-referenced assessment refers to a comparison of a student's performance with the performance of her peers in the form of the class average or the average performance of a similar group of students (Gultig, 1997). Criterion-referenced assessment, in turn, signifies *[a]ssessment of students' performance with reference to specified criteria for adequate or satisfactory performance* (Nightingale et al., 1996:268).

Formative / summative assessment

The term *formative assessment* is used to refer to graded or ungraded assessment with the primary purpose of encouraging student learning through feedback on performance (Nightingale et al., 1996). The results of formative assessment do not contribute towards a student's final results; and this type of assessment usually takes place while a product is still in the process of being developed. Feedback on what the student needs to do to remedy apparent weaknesses is given in order to help shape the product into its final form (Kotzé, 1999).

Summative assessment is the term used to refer to any assessment that contributes to the overall assessment of a student's learning achievements (Nightingale et al., 1996). Such an assessment usually occurs at the end of the educational process; it sums up what has been achieved and is used as a basis to decide whether the student has a sufficient grasp of the work to allow her to pass on to the next section.

It is important to note that formative assessment is not equivalent to continuous assessment, since continuous assessment can be formative or summative in nature.

Performance / product / process assessment

Schurr's (1999:6) definition of performance assessment is an accurate reflection of what the term *performance assessment* signifies in this study: *[A]n assessment of how well individuals can do something, as opposed to determining what they know about doing something.* When the performance culminates in a tangible product, the assessment thereof is referred to as *product assessment*; when the assessment focuses on how well students have mastered a process or set of inter-related skills, it is called *process assessment* (Hart, 1994).

Typical performance assessment tasks include live performances, individual or group projects, research reports, written assignments, essays, posters and exhibitions. Ideally, performance tasks should be broad enough to elicit complex thinking, planning and application of skills, yet narrow enough to permit measuring of the performance presented as evidence of the learning that has occurred.

Self- / peer assessment

In a fast-changing world driven by the needs of a global employment market, students need to be flexible, autonomous learners who are prepared to take responsibility for their own learning and continuous personal and professional development. In order to give effect to this goal, institutions of higher education have the responsibility to help students to understand assessment criteria and expected levels of attainment by creating opportunities for self-assessment and self-evaluation.

Self-assessment is described by Stefani (1998) as adding value to a learning experience by helping students reflect on their current attainment through:

- Identification and understanding of learning tasks as well as the criteria, goals and standards according to which a learning task or process will be measured.
- Development of an understanding of what is seen as deserving merit.

- Recognition and definition of further action that needs to be taken in respect of any learning task or process.

Self-assessment in this study refers to an assessment strategy aimed at helping students to focus on the metacognitive aspects of their learning and to become more effective at monitoring their own performance (Longhurst & Norton, 1997).

The process of self-assessment can be made even more meaningful through collaboration with peers, because, as indicated by Brown and Knight (1994), peer assessment and self-assessment reinforce each other. *Peer assessment* refers to an assessment strategy that requires students to assess, either alone or in groups, the work of other students. The assessment is preferably carried out with reference to criteria set by the teacher and the student group (Nightingale et al., 1996), and is useful for providing evaluative information in situations that are difficult for the lecturer/facilitator to observe, such as groupwork.

1.7.2 Terms related to outcomes-based teaching and learning

Outcomes-based education

In contrast to traditional curricula that were lecture-based and content-driven, outcomes-based teaching and learning (education) focuses on knowledge, skills, the process of learning and on the final outcome or result of the educational process. This implies that the curriculum is planned around clearly and publicly stated intended learning outcomes, consisting of relevant knowledge, skills and attitudes. The main concern of outcomes-based education is not the subject matter students need to learn, but rather the students' ability to demonstrate that they have achieved the intended outcomes, as well as the processes that were followed (Olivier, 1998).

Outcomes

In accordance with the definition used by the South African Department of Education (Van Rooyen & Lategan, 1998a:2) an outcome does not simply refer to learning content, but to a ... *culminating demonstration of the entire range of learning experiences and capabilities that underlie it, and it occurs in a*

performance context that directly influences what it is and how it is carried out. In simple terms, an outcome is understood to mean the end-result of a learning process or activity, which can be submitted for assessment in the form of a product or a live performance.

Critical (cross-field) / specific outcomes

Within the parameters of the broad definition of outcomes, a distinction can be made between *specific* and *critical outcomes*. Whereas specific outcomes refer to the specific knowledge and skills as they are displayed in a particular disciplinary content (Olivier, 1998), critical outcomes refer to core performance abilities that are not restricted to particular disciplines or learning areas (Jacobs, Gawe & Vakalisa, 2000). Critical outcomes embody the cross-curricular and generic knowledge, skills and attitudes that people use throughout their study and professional careers.

Fundamental / core learning

In SAQA documentation it is stipulated that all qualifications comprise three learning categories, namely fundamental, core and elective learning. The latter type of learning is not referred to in this thesis. The other two types of learning are defined in the NAP (RSA DoE, 2001:40-41) as follows:

Fundamental learning is learning ... *which forms the grounding or basis needed to undertake the education, training or further learning required in the obtaining of a qualification.* Core learning is defined as ... *that compulsory learning required in situations contextually relevant to the particular qualification.*

1.7.3 Miscellaneous terms

General skills

The increased interest in skills as an outcome of higher education is rooted in the Great Debate about the purposes of education which was set in motion throughout the world because of a growing concern about graduate unemployment and the contribution that individuals can make towards a nation's economy. Claims that the education that was being provided was irrelevant to the needs of society led to the adoption of a skills approach to education in the late 1960s with a view to

preparing students to cope with change. Drew (1998:9) succinctly formulates the justification for the changed approach: *Rapid change in knowledge, technology and society results in a need for adaptable people who will continue to learn throughout life ... Knowledge may become outdated, but the skills needed to acquire and use new knowledge will not.*

A great variety of terms such as *capabilities*, *competencies*, *personal transferable skills*, *literacies* and *critical cross-field outcomes* are used in the literature to refer to the characteristics considered essential for academic and work-related success. The concept of skills will be explained more fully in Chapter Two.

It is important to note here that in an effort to circumvent the terminological confusion, the UFS School of Medicine has decided to use the term *general skills* to refer to the personal qualities which are deemed necessary for coping as a student in an outcomes-based curriculum and which are compatible with the skills regarded as useful in the world of work.

Integration

The dictionary definition of integration is *inclusion or bringing in* (RDD, 1987:224). This definition holds insofar as the module on general skills was "brought into" the new medical learning programme for first-year students. More formally, integration can be described as ... *embodying ... key skills as an integral part of a course of study or qualification so that successful completion of the course indicates successful demonstration of the skills, with no separate endorsement [for the purposes of accreditation]* (CDELL, 2000:2).

Learner

In the new educational dispensation, learners are thought of as "intelligent novices", that is, students who are capable of learning in many domains and not only in the cognitive domain. When a student embarks on a learning task as a novice learner, she may not have the background knowledge that is needed in that specific field, but she should have the expertise to obtain the knowledge that will help her to progress from a novice to an expert learner.

Since consistent substitution of the traditional term *student* with *learner* is not always possible, the words *student* and *learner* will be used interchangeably in this study to refer to the concept of a young adult person, enrolled for tertiary study and capable of mastering the knowledge, skills and attitudes required for academic progress.

Learning programme

In outcomes-based education, *learning programme* has a dual meaning. It can refer to a document issued by the Department of Education containing guidelines on teaching, learning, assessment and other issues related to the implementation of an outcomes-based curriculum. Formerly, such a document was referred to as a syllabus. On the other hand, a learning programme also refers to what used to be known as a study course, and thus to the actual teaching, learning and assessment which take place while the programme is being put into action (Jacobs, Gawe & Vakalisa, 2000).

In this study, both these meanings are implied and the reader should be guided by the context in which the term *learning programme* is used.

Module

The word *module* refers to a clearly defined theme or subject presented in the form of 12 to 14 contact sessions. Eleven such modules (one fundamental and ten core modules) comprise Phase Iof the Programme for Professional Medicine (M.B.,Ch.B.).

Phase I

Phase I is the term used to refer to the first year of the Programme for Professional Medicine (M.B.,Ch.B.) taught at the University of the Free State. This phase runs for one year, and is divided into two semesters.

Themes addressed in an integrated fashion in Phase I are *General Skills, The Cell, The Human Body, The Doctor* and *the Community.* For the experience of early clinical contact, several assignments and visits to the community were designed in

collaboration with the School of Nursing, the Director: Skills Laboratory and the Deputy Director: Student Affairs of the Faculty of Health Sciences.

Each module dealing with a topic in an integrated, interdisciplinary way is the responsibility of a single module leader who co-ordinates the work of a small team of staff drawn from various disciplines. The module leader acts as the convenor of evaluation and collaborates with the Board of Examiners. After successfully completing Phase I, the student proceeds to Phase II of the medical course. Phase II is followed by Phase III (clinical years).

1.8 CHAPTER OUTLINE

In reporting the research, the following structure was followed:

- In Chapter One the context of higher education in general, and medical education in particular, is outlined. A parallel is drawn between international trends and what is happening locally, with special reference to the context of the School of Medicine of the University of the Free State.

- Following the general orientation outlined in Chapter One, Chapter Two introduces the concept of general skills. Controversies surrounding the inclusion of general skills in higher education learning programmes are discussed and the relationship between outcomes-based education and skills teaching is explored.

- Chapter Three contains a selective review of what is known about the impact of assessment on the way students learn and how it affects the acquisition of skills. The need to shift from traditional assessment to alternative assessment is discussed, against the backdrop of philosophical beliefs and theoretical assumptions underlying traditional and alternative approaches to assessment.

- Chapter Four examines the practical implications of the design and implementation of assessment that reflects the goals of an innovative, outcomes-based curriculum. The focus is on the essential components of standard-revealing assessment and the principles of sound assessment. Ultimately, the portfolio as an example of alternative assessment is explored.

- Chapter Five describes the research approach and design. The philosophical paradigms underpinning the research and methodological assumptions are made explicit and the work of prominent researchers in the area of action research is examined.

- Chapter Six focuses on the methodology of the research approach that was followed. It is autobiographic in nature and explores the decision-making process inherent in action research.

- Chapters Seven to Nine describe the process of analysing the large volume of data gathered during the course of three years of teaching general skills to first-year medical students. These chapters aim at explanation-building by presenting and discussing the data that were gathered. The findings about specific aspects of the teaching and acquisition of skills are presented. These chapters also give an account of how progressive developments noted in each successive cycle of reflection were implemented.

- In Chapter Ten the main conclusions of the study are summarised, discussed and interpreted. Recommendations are made for the purpose of informing future policy and practices and to stimulate further research.

CHAPTER TWO

THE DEVELOPMENT OF GENERAL SKILLS IN HIGHER EDUCATION

Knowledge, in most study areas, goes out of date rapidly, and tends to fade from memory if it is not refreshed by use. It is the intellectual and personal skills graduates develop, and the ability to find, organise, and communicate the information they need, which they take into employment and their future lives. This fact is one of the main justifications for a radical reappraisal of the learning environments provided for students in higher education.

(Entwistle, 1993: 16)

2.1 INTRODUCTION

The newly emerging definition of quality in higher education refers to curricula and modes of teaching and learning that (a) accommodate a larger and more diverse student population, and (b) equip learners with the knowledge, skills and attitudes enabling them to succeed in their studies and future working lives (Bennett, Dunne & Carré, 2000). This definition of quality education originated from pressure on the world's resources, highlighting the need for skilled, employable graduates and the need for relevance and efficiency in all aspects of human endeavour (Archampong, 1990). Consistent with this school of thought, the international world, and also the South African government, increasingly place demands on institutions of higher education to contribute positively towards educating and training graduates who are skilled in higher-order thinking and have basic competencies in general skills such as computing, communicating and working in groups. Implementing this goal of developing skilled graduates while catering for a diverse intake, is presently one of the major challenges in higher education.

In this chapter these imperatives for change are interpreted and synthesised against the background of arguments both for and against the inclusion of skills development in higher education programmes. Ultimately, the indispensability of skills development in an outcomes-based model of education is discussed.

2.2 ARGUMENTS UNDERPINNING THE INCLUSION OF GENERAL SKILLS IN HIGHER EDUCATION PROGRAMMES

The responsibility of higher education to prepare graduates for employment has always been recognised. In fact, as Solmon (1978:1) points out, ... *an important historical raison d'etre of many postsecondary institutions* [including medical schools] *has been to prepare students for employment.*

However, the growing public emphasis on the inclusion of general skills in higher education programmes is interpreted by some as indicative of ... *a crisis in the purposes of higher education* (Bennett, Dunne & Carré, 2000; cf. also Drew, 1998; Griffin, 1997; Scott, 1997). Arguments such as the following highlight the nature of this crisis:

> *But those of us who are old-fashioned academics (as I am) are aware of the problem of rigour. These are very elementary skills. Why should higher education offer remedial education, doing the job that the schools should have done? Communication skills, team-work and so on - can't we leave all that to the schools?* (Ball & Eggins, 1989:48).

On the other side of the equation, arguments in favour of the idea that the relationship between higher education and work should be more than a casual one, emphasise (a) that it is the duty of more advanced levels of education to remedy the deficiencies of the earlier stages, when they appear, and (b) that these skills can be acquired at elementary as well as highly sophisticated levels (Solmon, 1978).

The fact of the matter is that financial cuts from government and public demand for wider access, the world over, have forced the elite higher education system to reconsider its narrow notions of quality. Its focus on the maintenance of rigid traditions of studentship and scholarship (i.e. high-quality input) has to make way for one in which meeting the needs of both a changing clientele and a changing world (i.e. quality outputs) is deemed to be equally important (Tolley, 1990).

2.2.1 Skills development for the purpose of increased employability

For decades, the role of higher education in the development of citizens who would be able to make a contribution to the national economy has been widely recognised and acknowledged (Bradshaw, 1992; Solmon, 1978). Students were considered successful in their learning and ready for this contribution once they were capable of independent, critical thinking, which involved skills and activities as listed in Table 2.1.

Table 2.1 *Skills and activities associated with independent critical thinking* (Entwistle & Percy, in Entwistle, 1993)

• Adopting a distinctive way of thinking about concepts, evidence and theories.
• Taking a distanced, critical stance towards subject matter, assumptions and explanations.
• Tackling issues systematically, logically and effectively.
• Examining the adequacy of evidence and checking alternative interpretations of it.
• Demonstrating a thorough understanding of complex, abstract concepts within the discipline.
• Writing clearly and cogently, following appropriate academic styles and conventions.
• Being able to set and solve problems by applying concepts and techniques appropriately.

In more recent times, the work of educational researchers such as Marton and Säljö (1997), Entwistle (1996), Ramsden (1992), and Rowntree (1987), to name but a few, brought about a major shift in conceptions of learning. First of all, it was recognised that there was a need to re-examine old beliefs about the role of teachers in student learning.

Extensive research on teaching and learning revealed that methods such as small-group discussions and learning by doing, discovering or acting are more effective for the development of higher-order thinking skills than lecturing (for an extended discussion of learning, the reader is referred to Falchikov, 1996; Entwistle, 1996; Biggs, 1987; Kolb, 1984). Based on these findings, the rhetoric of active learning and a more student-centred learning ethos, as opposed to passive, lecturer-centred teaching, was born.

A few years later, another major shift became noticeable in educational thinking: there was a recognition amongst academics and educational planners that the purpose of higher education should be more than the development of expert

knowledge and complex thinking (Harvard, Hughes & Clarke, 1998). Throughout the world an outcry arose for higher education to adapt curricula to meet contemporary needs of employers; to supplement subject knowledge with operational competencies and to enhance a range of transferable skills (*ibid.*). What the fast-changing, external world of work required, was ... *flexibility, adaptability and lifelong learning qualities in graduates rather than content specialists* (Stefani, 1998:342). Tolley (1990:151) depicts the perceived gap between the abstraction of higher education and the real world as follows:

> ... *[O]utside the artificial learning environment that constitutes so much of higher education, we learn by doing, by working with and reacting to other people in the joint achievement of tasks, by having to choose from a number of possible solutions to problems, all or none of which may be right. ... Once out of higher education it is the application, not the reproduction, of knowledge and skills that matters.*

Narrowing this gap, argues Tolley (1990), implies addressing the purpose of higher education in terms of five issues, namely skills shortages, professionalism, personal, transferable skills, enterprise and a progression from teaching to learning. Table 2.2 represents a concise summary of his viewpoints on these issues.

Perceptions such as these, implying that higher education is insufficiently preparing graduates for modern labour market demands, constituted the thrust behind major educational reforms to change the culture of higher education.

Table 2.2 *Issues that need to be addressed if higher education is to meet the needs of both a changing clientele and a changing world* (Tolley, 1990)

Aspects influencing graduates' preparedness for the world of work	Rationale for change in the process and content of higher education curricula
Skills shortages	Specific, specialist skills have always enjoyed high priority. It is acknowledged that increasingly high levels of specialist skills are necessary to meet the demands of new technologies and of global competition. However, the nature of skill itself is changing. In future the ability to cope with rapid change will be a necessary concomitant of any specialist skill. Without this combination, overall competence, and therefore personal effectiveness and a sound economy, cannot be achieved.
Professionalism	In the past the processes of professional formation and development had little to do with the essentials of undergraduate education. Professionalism was the responsibility of post-graduate teaching and the professions themselves; it was something that had to grow out of work experience. Currently it is realised that subject knowledge and intellectual ability of themselves do not guarantee sound judgement, the proper exercise of responsibility or the ability to work as a member of a team. There is only benefit to be derived, for both employers and employees, if preparation for professional behaviour features in the aims and outcomes of all higher education courses.
Personal, transferable skills	Performance in examinations that test students' ability to master subject content has dominated the higher education scene for many years. It is no longer enough. What employers are looking for, is generic skills that go beyond and underwrite subject knowledge and skills. In order to serve society well, the higher education system should equip students with the ability to communicate, to solve problems, to make decisions, to cooperate with others and to adapt to change.
Enterprise	In the past, higher education has concerned itself more with knowing than with doing. As a result, enterprise, which refers to the ability to take and implement decisions to achieve objectives (and live with the consequences of those decisions) has been largely a foreign and unwelcome concept in higher education. Instead, tasks were set for students; there was only one "right" way to achieve them; there was little opportunity for teamwork and risk-taking; tasks were concerned with abstractions rather than the real world. Really preparing students for employment, though, would require education *about* enterprise, implying that an economic awareness be instilled in students; education *for* enterprise, referring to the introduction of the undergraduate to the skills necessary for some aspects of management; education *through* enterprise, which means that the student is given ample opportunities for projects in environments outside the lecture hall.
Progression from teaching to learning	Higher education has become known for giving emphasis to the acquisition of knowledge and skills to pass examinations. Teaching controlled the curriculum and its delivery, not learning. However, once employed, graduates are destined for a productive life of practical action. What should be encouraged, therefore, are their *competence* in the practice of skills and the use of knowledge; their *coping skills* for coping better with their own lives and the problems that confront them and society; their *creative abilities* for making and designing things; and especially their *ability to cooperate* with other people in the process.

2.2.2 A literature perspective on international developments in the area of skills development

The literature on the relationship between employment and higher education is prodigious. In Britain, there was the Robbins report in 1963 (Bennett, Dunne & Carré, 2000) which stated that the development of skills should be more explicitly undertaken. This view was endorsed by the British University Grants Committee, the National Advisory Body, the Council for National Academic Awards and the Government. A statement issued by the Head of Education Policy at the Confederation of British Industry in 1989 reflects the view held by authoritative educational bodies and employers' organisations (Bennett, Dunne & Carré, 2000:5):

> *The common denominator of highly qualified manpower will ... be the ability to think, learn and adapt. Personal transferable skills – problem solving, communication, teamwork – rather than technical skills defined with narrow occupational ranges, will come to form the stabilising characteristic of work. If higher education is to meet the needs of the economy and the individual it must seek actively to develop these generic core competencies that will in future define work.*

More recently, the Higher Education and Employment Division of the UK Department of Education and Employment confirmed these expectations by stating in a Briefing Paper (Fallows & Steven, 2000:6-7) that

> *... studies of employer needs have repeatedly stressed the priority which they give to 'personal transferable skills'. When they recruit graduates they are typically seeking individuals not only with specific skills and knowledge, but with the ability to be proactive, to see and respond to problems creatively and autonomously, and all the predicted trends in the world of employment suggest that these pressures will increase.*

The UK experience is not unique and similar observations can be made across the globe. As Fallows and Steven (2000) point out, it seems as if the idea has taken root across the world that there need not be a conflict between the development of skills for employment and the development of skills for learning. Table 2.3 provides a rough indication of international developments that provided impetus to the skills approach:

Table 2.3 *Literature overview of international initiatives encouraging skills development* in *higher education* (CDELL, 2000 [Available on the Internet:]; Drew, 1998; Brown, Bull & Pendlebury, 1997)

Country	Report/document advocating the development of skills	Term used to refer to the concept of preparation for independent learning and employment
United Kingdom	Enterprise in Higher Education Initiative, 1989 Dearing Report, 1997	Transferable skills Key skills
United States of America	United States Department of Labor of the Secretary's Commission on Achieving Necessary Skills Report, 1991	Necessary skills
Australia	Federal Department of Employment, Education, Training and Youth Affairs Finn Report, 1991	Key competencies
New Zealand	Tomorrow's Skills: Report of the New Zealand's Planning Council, 1990 New Zealand's Ministry of Education Curriculum Framework, 1993	Generic skills Essential skills
Europe	European Ministers of Education, Sorbonne Declaration, 1998 Bologna Declaration, 1999	Lifelong learning strategies

2.2.3 The South African context

Similar thinking about the interface between education and employability underpins the South African mission in respect of education and training, as formulated in the White Paper on Education and Training (RSA DoE, 1995:6).

> *... [S]uccessful modern economies and societies require the elimination of artificial hierarchies in social organisation, in the organisation and management of work, and in the way learning is organised. They require citizens with a strong foundation in general education, the desire and ability to continue to learn, to adapt and to develop new knowledge, skills, and technologies, to move flexibly between occupations, to take responsibility for personal performance, to set and achieve high standards, and to work co-operatively.*

The emphasis on performance which is evident in this statement was carried over into the SAQA[1] Act of 1995, which has the following as one of its guidelines (Andrew, 1999:29): *To provide a learning environment with the proper integration of academic abilities and workplace skills, in order to produce*

[1] SAQA is the acronym for the South African Qualifications Authority. It is a board appointed by the government for the purpose of regulating the standards of educational outcomes in South Africa. It is also responsible for the design and monitoring of the National Qualifications Framework (NQF) (Jacobs, Gawe & Vakalisa, 2000).

qualifications which not only meet needs, but have appropriate intellectual content - thus removing the artificial distinctions between academic and vocational training.

The SAQA Act of 1995, in turn, led to the establishment of the South African National Qualifications Framework (NQF)[2], the objectives of which are to:

- *create an integrated national framework of learning achievements*
- *facilitate access to, and mobility and progression within, education, training, and career paths*
- *enhance the quality of education and training*
- *accelerate the redress of past unfair discrimination in education, training and employment opportunities and thereby*
- *contribute to the full personal development of each learner and the social and economic development of the nation at large* (Isaacs, 1999:21).

As was the case elsewhere in the world, the South African higher education sector in the past did not pay formal attention to the last objective, encompassing the development of general skills, referred to as critical cross-field outcomes in SAQA documentation. The assumption was that either students would enter higher education institutions having developed these skills already, or that their development would be a by-product of the education process.

At present, the immense human resource requirements of the South African society and economy have put the development of critical cross-field skills prominently on the higher education agenda. The development of skills necessary for academic success in changed, more demanding learner-centred curricula has become crucial. In the SAQA Bulletin (1997:6-7) a set of general skills was identified as a requirement if the knowledge and understanding of a particular subject field are to be used appropriately and effectively at work, and in collaboration with others (cf. **Appendix 2A**).

[2] The National Qualifications Framework (NQF) is a structure that systematises the link between school education, education and traininng received in other education institutions, higher education and the world of vocational training and employment (Jacobs, Gawe & Vakalisa, 2000).

A second, equally important rationale for including the development of skills in higher education curricula in South Africa, is the need for helping students with academic backlogs to become independent, autonomous learners. Widened access provided to previously disadvantaged groups has caused previous assumptions about students' prior learning, their motivations, linguistic competence and learning skills to become invalidated (Scott, 1995).

In the years before 1994, a special group of students, the so-called "academically-at-risk" learners, received special attention through various forms of "add-on" educational interventions. Examples of academic **support** included extra tutorial sessions, supplementary instruction, separate language-based courses, introductory courses, extended first-year courses, foundation programmes, etc. Currently, academic **development** initiatives are increasingly replacing separate academic support interventions. The goal of academic development is the explicit fostering of students' cognitive, linguistic and conceptual skills within the context of mainstream teaching and learning, based on the assumption that **all learners** can benefit from such an educational intervention. Amos (1999:177) offers the following argument in defence of redressing previous inequalities through access for students who have the ability, but not necessarily the academic skills, to benefit from higher education: *These students ... do not necessarily lack the inherent abstract cognitive capability necessary for academic success. Rather, they have not yet learnt to mobilise the particular cognitive processes, termed academic literacy, that are required to deal successfully with the problems typical of the higher education context.*

Against this background, it has become the responsibility of higher education providers in South Africa to ensure that their curricula have added value, implying not only knowledge transmission, but also learning opportunities and experiences that allow students to practise and apply key skills (RSA DoE, 1997). Such curricula are intended to produce, as an outcome, a student who is capable of deep learning: that is, someone who can learn with understanding; someone who can not only reproduce knowledge and skills, but also apply such knowledge and

skills in solving problems, achieving goals and working with other people (Christensen, Massey & Isaacs, 1991).

2.2.4 The relevance of general skills teaching in a medical context

In the world of medicine, it was the growing awareness of the importance of professional attitudes in medicine that led to increased attention being focused on the development of general skills such as oral and written communication, numeracy, information literacy, managing own learning, problem-solving and working with others.

In response to reports directing medical education, such as *Physicians for the 21st Century,* published by the Association of American Medical Colleges in 1984 (Ten Cate & De Haes, 2000), the development of skills that are generic and general in nature gained prominence. The "ideal" doctor was no longer seen as someone who has ... *acquired a huge memory file and a variable ability to retrieve relevant information* ... (Hicks, in Kopelman, 1997:19), but as ... *a competent and caring individual who remains aware of the advances and benefits of modern medicine but who recognizes the fundamental importance of applying clinical skills and the need for continuous learning* (*ibid.*:17). The relevance of general skills teaching in the clinical years is evident from statements such as the following, quoted from Kopelman (*ibid.*):

> *By the end of 5 years of undergraduate training ... [the unique blend of intellectual abilities and personal attributes] ... must be blended into a complex pattern of skills which embrace communication with patients, peer groups and colleagues in a comprehensive and coherent manner. Such skills must be transferable and applicable to different situations. The acquisition of these skills is intimately associated with the skills of learning* (p.17).

> *By the time of graduation students should understand the meaning of symptoms and be able to place them in an appropriate social context, have the ability to discover physical signs which support the history, be able to identify professional and ethical values, develop a managerial plan and be capable of offering sensible advice to patients and their relatives. Quite some achievement for a 23-year old.* ***What are not well addressed in many curricula are the skills of time management, prioritization, administration, presentation, teamworking and the recognition of self-limitations - skills which may be critical for the pre-registration year*** [emphasis added] (p.18).

> *Nevertheless, we must guard against too early specialization resulting in too specialized knowledge, skills and competencies. The generic and general nature of medical skills cannot be emphasized too firmly* (p.19).

At undergraduate level, the concern that traditional curricula reduced students to passive absorbers of medical and scientific facts in an ... *atmosphere of rigid intellectual hierarchy* ... (Kopelman, 1997:19), culminated in the publication of *Tomorrow's Doctors* by the General Medical Council in 1993 (Fowell et al., 2000). This directive document prompted the review of medical undergraduate curricula all over the world, reflecting a renewed interest in the development of doctors (a) who recognise the long-term nature of general skills such as managing their own learning, thus enabling them to continue learning throughout their professional lives *(ibid.);* (b) who have specific skills in self- and peer assessment, which are recognised as ... *prerequisites for the success of every doctor in maintaining professional competence* (*ibid.*: 13); and (c) who have acquired group skills, including the ability to communicate effectively, prioritise tasks, manage time and exercise interpersonal skills, all of which are important aspects of holistic health care (Crosby, 1996).

The question may arise whether the development of general skills will remain important in the years to come, given the ... *long standing assumptions by institutions about these skills'* [such as communication] *relative unimportance or insusceptibility to measurement* (Jolly, 1997:22). The answer, it seems, lies in the final goal of medical education, namely competence. Competence, argues Pangaro (2000:479), is a ... *synthesis of all the attributes necessary to do the task for which one is being trained. Competence ... is the ability to give to a specific situation all that properly belongs to the situation.*

In order to see how the "situation" has changed, one only needs to look at changed expectations as far as doctors' communication skills are concerned. In its Medical School Objectives Project, the Association of American Medical Colleges (AAMC, 1999) points out that the conception of communication as "bedside manner" or "history taking" is giving way to more formalised instruction and a reconceptualisation of communication as a fundamental clinical skill. Better-integrated care in a more demanding world also requires communication with

physicians and other members of the *healthcare* team, as well as public speaking, information management and telemedicine. While it is acknowledged that medical communication skills are context-dependent, the report states that several basic communication concepts (e.g. direct and indirect messages, types and functions of non-verbal communication, appreciation of effective communication) provide the essential background and vocabulary for thinking about and practising these skills.

Requirements such as these in the clinical years justify the existence and growing importance of general skills teaching in undergraduate curricula, with a view to what Ten Cate and De Haes (2000) describe as a feed-forward effect.

2.2.5 The role of assessment in the development of general skills

Another aspect of the design and delivery of higher education curricula that is central to meeting the pressure upon higher education institutions with regard to skills development, is the assessment of student learning.

The debate on explicit skills development in higher education learning programmes no longer focuses only on whether it should take place, and if so how and where, but also on **how** these skills might be **assessed**. This is perfectly logical, for, as Ronald Barnett, quoted by Pearce (1992), points out: *A practice can only be tolerated in higher education provided that it is susceptible to examination, evaluation and if necessary repudiation.*

Assessment is a recognised mechanism for preserving academic rigour. In the literature it is often described as the single most important influence on student learning (cf. Biggs, 1993; Ramsden, 1992; Boud, 1990). Similarly, assessment of skills acquisition may help students ... *appreciate the importance of the process of learning as distinct from the content* (Pearce, 1992:205). Brown and Knight (1994:12) share this view when they observe that ... *assessment reform is necessary if universities are to ensure and to show that graduates have achievements of the sort wanted by government, employers, funding bodies, tax-payers, and by the students themselves* ... . Gravett (1996:76) adds to this point

by arguing that because students tend to work according to the assessment expectations that are laid upon them, ... *this tendency can be used positively to direct student learning towards intended outcomes, by ensuring that such outcomes are reflected in assessment tasks.* This view also resonates in the work of Stefani (1998) who maintains that students must be empowered to take an active role in striving towards achieving learning goals through the context of assessment. Two essential steps in such a process of empowerment are:

- The use of a range of assessment and feedback procedures which in themselves form learning episodes and enable learners to relate aspects of poor performance to specific remedial activities.
- A high emphasis on supporting students in the development of a clear understanding of the concept of assessment and expected levels of attainment.

On the basis of these arguments, it seems reasonable to conclude that conventional assessment methods are no longer valid[3]. In considering the requirements of reliability, validity and convenience that assessment must satisfy in order to be of value, Tolley (1990:152) has the following to say about the unseen written paper which still dominates the assessment scene:

> *Conventional examinations are tests of individual ability to write, to reproduce facts, to present a critical analysis, to demonstrate in writing knowledge and understanding and to perform under the pressure of time in an artificial environment. They do not test a whole host of abilities and skills that are absolutely essential to the application of knowledge and to getting things done. ... The wider ground of personal, transferable skills ... remains unexplored.*

With these views on "graduateness"[4] and the assessment thereof as a backdrop, two important deductions were made by the researcher, namely (a) that the importance of general skills as critical learning outcomes should not be downplayed in curriculum development, and (b) that those aspects of student learning which are valued in the new curriculum, such as the development of critical thinking, communication and collaborative skills, could be promoted

[3] Validity is taken here to refer to assessment that reflects the aims, objectives and content of the curriculum.
[4] The concept of graduateness implies that those who leave higher education with a degree should not only possess factual knowledge, but also the skills and attitudes that will enable them to succeed in their fields of study, and ultimately in their future working lives (Yorke, 1998).

through assessment that requires more than the reproduction of information in tests and examinations.

2.3 CONTROVERSIES RELATED TO TEACHING FOR SKILLS IN HIGHER EDUCATION

That institutions of higher education have accepted their new role of preparing graduates for employment is clear from statements such as the one made by the Chairman of the British Committee of Vice-Chancellors and Principals in1994: *[T]he world we live in is highly knowledge intensive, and graduates will increasingly require core transferable skills* (Bennett, Dunne & Carré, 2000:7).

Alternatively, this acceptance, supported by national initiatives to reinforce commitment to this view, often meets with scepticism originating from strong views on the purpose of education, as well as on the status and transferability of skills.

2.3.1 Resistance to the prescriptive role of government and employers in determining higher education curricula

The growing influence of governments and employers on higher education curricula is not unconditionally accepted by all. Barnett (cf. Bennett, Dunne & Carré, 2000:6), for example, describes "transferable" skills as a means of disenfranchising discipline-based academics of their expertise. On the basis of the argument that students' pedagogical identity should not be predetermined to meet the instrumental ends of economic and state survival, Barnett (*ibid.*) further argues that ... *adherents of 'personal transferable skills' raise too few questions about their transferability, too easily accept their appropriateness for higher education* ....

In some instances, academic staff are the source of criticism. Gubbay (cf. Bennett, Dunne & Carré, 2000:7) reported in 1994 that at that stage many tutors in British universities had little sympathy for the new definition of quality higher

education. In fact, ... *many tutors see teaching for skills as a distraction in the drive for better research ratings.* This observation was confirmed in 1995 by Dunne (*ibid.*), who found that although many ... *claimed that core skills were being taught, there was little evidence of it in course planning and assessment documentation.* More recently, Drummond et al. (*ibid.*) found that embedding general skills within a traditional university setup was more easily said than done. Their research indicated that the "teaching of skills" would most commonly be a situation ... *where a small number of committed individuals are struggling to effect meaningful change but where their potential to achieve it is limited by their frequent marginalization within departments.* An interesting finding of this study was that where the development of skills has indeed been judged to be effective, it has often happened by accident rather than by design.

2.3.2 Conceptual confusion surrounding the definition of general skills

Whether the development of general skills in higher education is justified or not, there seems to be consensus at an international level that a healthy economy is linked to the ability of educational institutions to equip individuals with the generic attributes that will help them to cope with life in general and work in particular (Drew, 1998). Bennett, Dunne and Carré (2000:9-10), however, express concern, saying that ... *prescription has outrun conceptualization.* This view is supported by Fallows and Steven (2000), who emphasise that there is no definitive definition of skills that may be applied in all situations. A survey of the literature confirms that there is indeed a semantic confusion around *skills* as a concept, and that the term is problematic for various reasons.

The first barrier to clarity is a linguistic one. A variety of synonyms, including *abilities, capabilities, competencies, literacies, qualities* and *attributes,* are used interchangeably to refer to skills. The subtle, but important difference between words such as *skills* and *competencies* creates confusion. In psychological terms, *skill* is defined as ... *practised ability, covering any organized sequence of behaviour that, through practice, becomes fast, accurate and efficient* (Bennett, Dunne & Carré, 2000:11). In this context, the focus is on the acquisition of knowledge, as well as on the modification of processes as the skill develops.

Competence, on the other hand, is seen to be performance- or outcome-based. It is defined as ... *an action, a behaviour or outcome which a person should be able to demonstrate* (*ibid.*:11). According to these definitions, skills encompass competencies, but, as Bennett, Dunne and Carré (2000) point out, policy-makers often take the opposite view. The British Employment Department, for example, claimed that ... *competence is a concept, 'which embodies the ability to transfer skills and knowledge to new situations within the occupational area'* (*ibid.*; cf. also Drew, 1998).

To aggravate the situation, a variety of adjectives are used to qualify the term *skills* and its synonyms. Examples include *generic, basic, key, personal transferable, general, common, work- or employment-related, critical cross-field, soft*, *meta-* or combinations of these. Fallows and Steven (2000:8) provide a classification (Table 2.4) in an effort to clarify the terminological confusion.

Table 2.4 *List of commonly used skills terms and their explanations* (Fallows & Steven, 2000:8)

Terminology	Explanation
Transferable skills	*The implication in the term is that skills developed within one situation (education) are also useful when transferred into another situation (employment).*
Key skills	*The word key ... is generally taken in the context of being important.*
Common skills	*'Common' refers to the universal nature of these skills: they are relevant to each and every student, regardless of discipline and can be demonstrated within all programmes.*
Core skills	*Here the implication is that the skills have to be central to the student's experience within higher education.*

Bennett, Dunne and Carré's (2000:13) discussion of the different models of professional competencies provides another classic example of what they refer to as the conceptual fuzziness of skills and competencies: ... *Cheetham and Chivers' definition of knowledge/cognitive competence is almost the same as Jessup's generic competence, which in turn is deemed synonymous with core skill, whereas other skills normally accepted as core are labelled meta-competencies.*

This verbal confusion is exacerbated still further by the use of skills terminology in conjunction with a variety of action words such as *develop, acquire, have, use,*

demonstrate. Holmes (2000:205) suggests that if these words are not meant literally, a full explanation of what is expected should be provided, which, of course, does not always occur in practice.

A second reason for the terminological problem relates to the diversity of skills deemed appropriate by employers and governmental bodies. Several attempts have been made to define exactly what it is that students need to be capable of in order to be "employable". However, as noted by Mangham and Silver (Holmes, 2000:205), ... *the qualities, attributes and skills of effective performers do not appear to be common currency.* Holmes (2000) questions the notion of *key skills*, saying that employers usually do not articulate what they require in prospective employees in terms of skills or attributes; neither does the methodology typically adopted for the identification of skills provide anything more systematic than ... *surveying a sample of employers (or students, or staff, or some combination of these) with a predetermined list of purported skills* (*ibid.*).

A further complication derives from doubt as to whether employers and academics mean the same thing when they talk about skills. According to Barnett (Bennett, Dunne & Carré, 2000), they do not. Consistent with this view, the research done by Bennett, Dunne and Carré (2000) showed that university teachers refer to skills that are central to their discipline when they use the term *core skills,* and not necessarily to cross-disciplinary skills such as taking notes or managing time.

In the third instance, lists of skills confuse because of their heterogeneity. As noted by Bennett, Dunne and Carré (2000), conventional lists cover a mixture of technical skills such as information technology, interpersonal skills such as communication, and cognitive skills such as problem-solving. Although there is some consensus on the inclusion of aspects such as problem-solving, numeracy, communication, teamwork and technology, the plethora of lists to be found in the literature contain different numbers and combinations of skills, reflecting differences in definitions and in interpretations of their significance (*ibid.*).

An adapted version of the range of skills (Table 2.5) proposed by Fallows and Steven (2000:8-9), gives a good idea of those skills that are universally accepted as the *... skills necessary for employment and for life as a responsible citizen.* However, since this categorisation does not include the basic cognitive skills underpinning academic work, it does not succeed in clarifying the confusion completely.

Table 2.5 *Range of skills necessary to equip students for their transfer from the world of education into the world of work* (Fallows & Steven, 2000)

Skill category	Details of each category
Communication skills	Reading, writing, listening, speaking.
Information management skills	Retrieval, evaluation, analysis and utilisation of information from a range of sources in an appropriate manner.
Modern communication and information technologies	E-mail, word-processing and data handling for a range of common tasks.
People skills	Groupworking, ethics and recognition of diversity.
Personal skills	Time management and recognition of personal responsibilities.

A final obstacle to clarification of the conceptual confusion relates to the multitude of models and frameworks that are used for skills development across the world. Two frameworks, graphically portrayed in Figures 2.1 and 2.2, serve as examples of different approaches to skills development. The first originates from Europe (Cheetham and Chivers, in Bennett, Dunne & Carré, 2000:12) and the second from the United Kingdom (Anderson and Marshall, in Bennett, Dunne & Carré, 2000:13).

Since both these theoretical frameworks have been criticised for showing a lack of depth, as well as for being untested, they do not help much to solve the conceptual confusion in which skills development is shrouded.

2.3.3 A proposed alternative to the conventional "key"-skills model

Theoretical models focusing on the development of general skills needed for professional competence, as depicted in the above examples, are not universally accepted. Holmes (2000), for example, establishes himself as an antagonist of the "key"-skills approach (cf.Table 2.6) by objecting to the assumption that what a

person does (performance) is objectively observable. According to him, this approach is flawed in the sense that its ultimate goal is to identify the main skills or "tools" that are used in academic work for the purpose of ... *developing methods by which students can* ***acquire*** *or* ***develop*** *them (skills development) and demonstrate* ***possession*** *of them (assessment)* [original emphasis] (*ibid.*:202).

Table 2.6 *Critique of the "key"-skills approach* (Holmes, 2000)

Assumptions underlying a skills development approach focusing on key skills	**Perceived flaws of assumptions**
The term *skills* is used to *refer to* purported tool-like entities possessed by an individual and *used* in carrying out performances of particular kinds.	There is no rational, technical basis for selecting the "right" set of entities from the multitude of lists.
Someone *has* and *uses* a particular skill, e.g. communication skill in conducting an interview.	An entity such as *the skill of communication* is not immediately visible – it exists in some unobservable realm of the mind.
The existence of a particular skill in an individual is *inferred* from what the individual *does*.	The idea that skills *result in* some desired or required performance is simplistic, suggesting that skills are *instrumentally causative* of performance.

Holmes (*ibid.*) proposed an alternative model of skills development, called the practice-identity model of performance. This model strongly supports embedded development and assessment of performance tasks requiring students to apply certain key skills, and is premised on the following assumptions:

- Performance is an interpretative construction and not in itself objectively observable.
- Graduates need to develop their understanding of what is required of them within a particular employment context. Such preparation cannot be done beforehand.
- It is the extent to which an individual is able to demonstrate her/his claim to being worthy of employment as a graduate, that is likely to improve their prospects of being selected, rather than some bogus "proof" that she/he possesses certain entities called "skills".

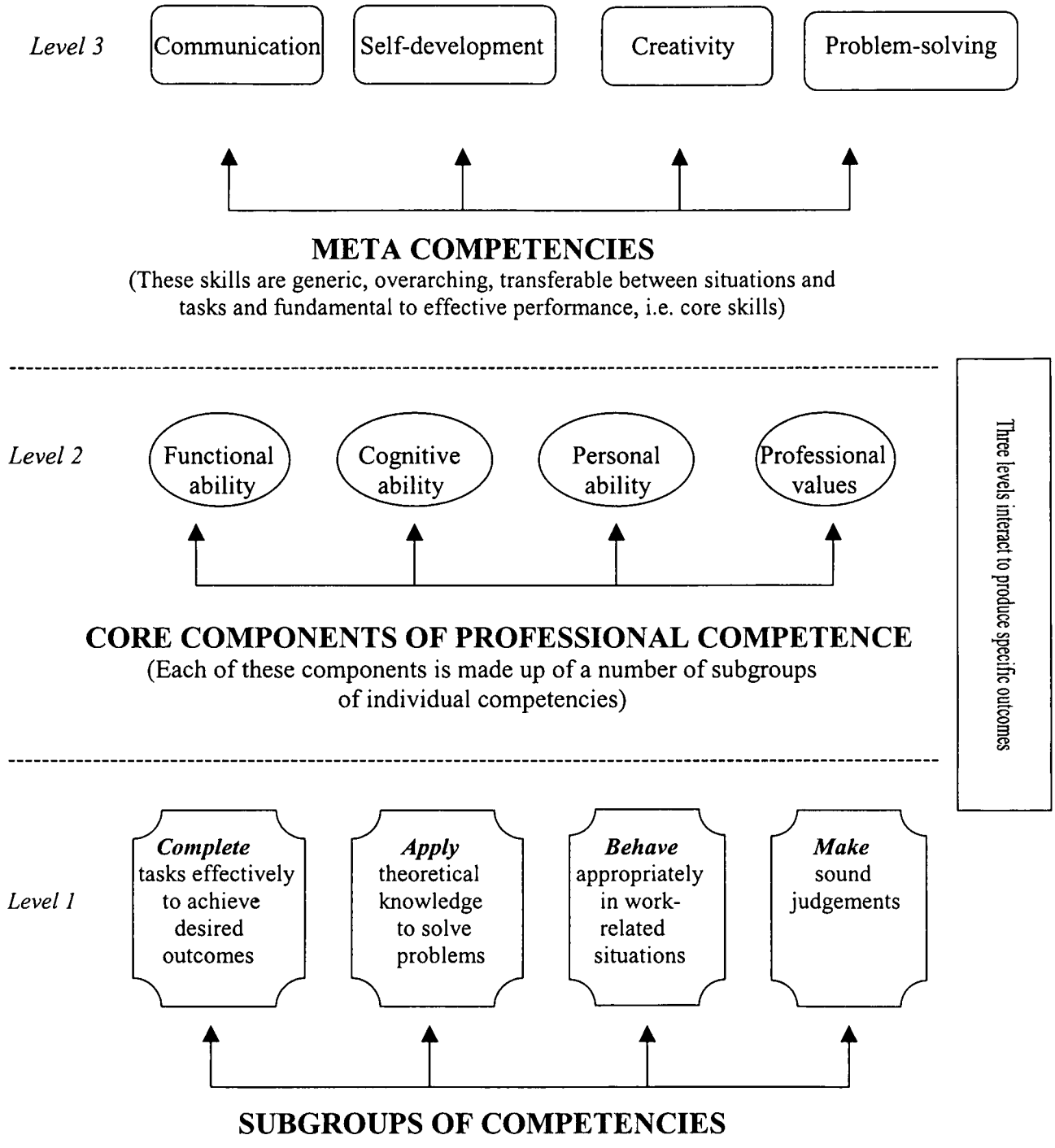


Figure 2.1 *Graphical portrayal of the Cheetham and Chivers' holistic model of professional competence* (constructed from the work of Bennett, Dunne & Carré, 2000)

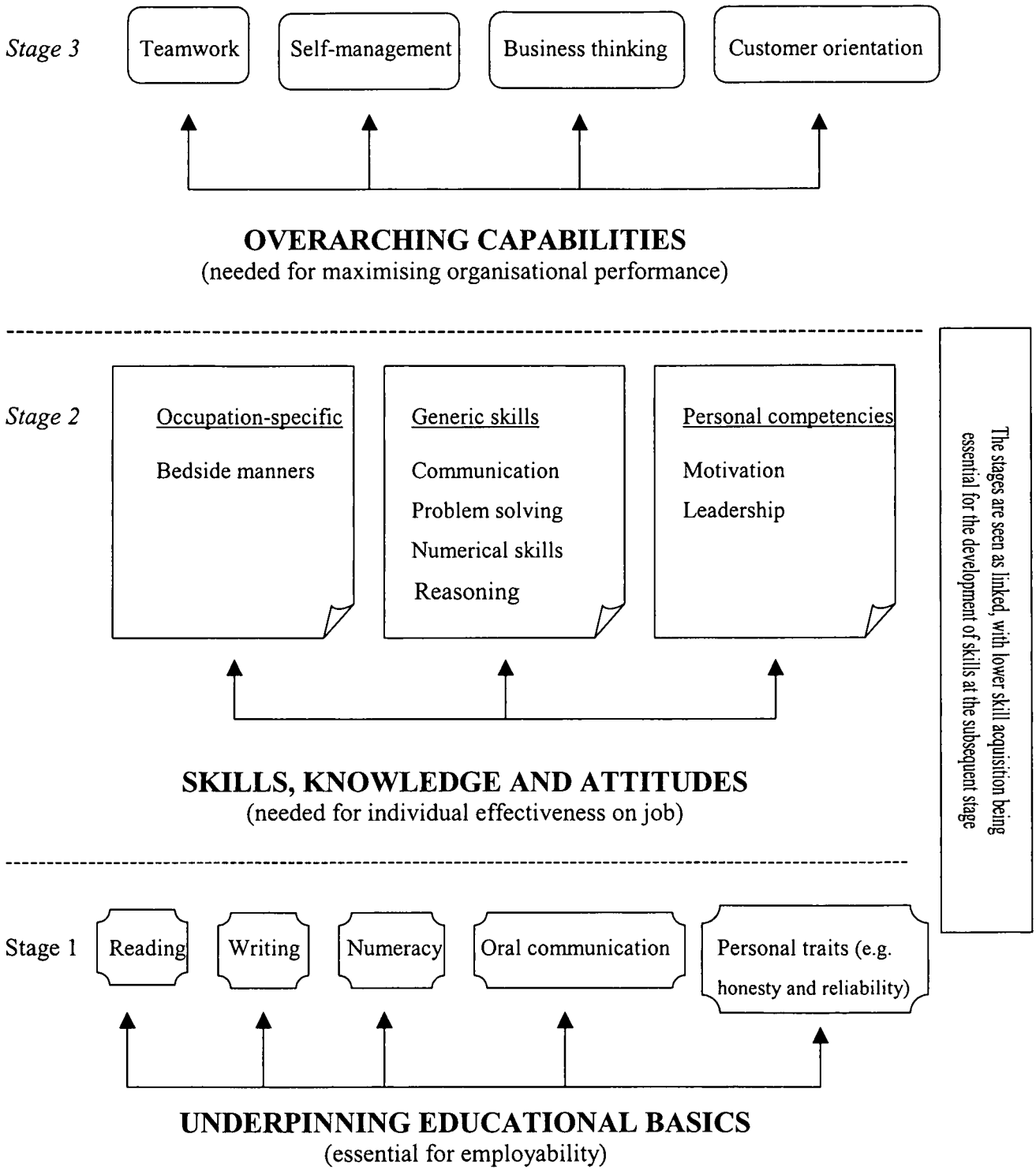


Figure 2.2 *Graphical portrayal of the Anderson and Marshall hierarchical model of skills development* (constructed from the work of Bennett, Dunne & Carré, 2000).

- Rather than presenting students with activities that are predetermined as involving particular, named skills, students should be helped to articulate what they are doing by helping them to become fluent in skills-talk. One way of doing this is to reflect in students' assessed work, the types of practices they may encounter as graduates.

A similar view is held by Holman (1995), who recommends teaching strategies that (a) permit students to express their understanding of their own skills and how to further develop them, (b) help students to increase their awareness of the various types of skill and (c) encourage reflection. This model of skills development is associated with an ipsative[5] approach to assessment, which in turn is aligned with constructivist learning theory (Mabry, 1999). However, since such an approach is time- and resource-intensive, and also gives little information on how students perform in relation to the goals of the curriculum, it is not a feasible route to follow in an outcomes-based curriculum (cf. Chapter Four for a discussion of criterion-referenced assessment of critical outcomes).

2.3.4 Debate on the transferability of general skills

Another key issue in the conceptualisation of general skills is related to their presumed transferability[6]. As noted by Carter (Laybourn et al., 2000:48), ... *[c]ourses in any skill deemed essential to the educated, ... tend to rest on assumptions that they can be 'decontextualized', and that students will be able to apply them to other domains, 'including their lives'.* Fallows and Steven (2000:5) support this view by saying that

> ... *[m]any of these attributes are largely constant regardless of the subject studied. For example, the essential information retrieval and analysis skills required to prepare a review of the background literature to a topic do not essentially differ from archaeology to zoology; similarly, these skills are directly transferable into a wide range of employment.*

[5] An ipsative approach to assessment means that a student's accomplishments and shortcomings, his or her interests, progress over time, use of educational opportunities, and extra-mural engagements are examined in detail to understand as fully as possible what he or she has learned and can do (Mabry, 1999).

[6] Transferability: ... *generally stated is the phenomenon of learning more easily or more effectively than otherwise in a new situation as a result of learning which has taken place earlier* (Matthews, in Drew, 1998:21).

Consideration of the literature, however, shows that empirical evidence for the transferability of general skills is not strong (Holmes, 2000; Drew, 1998; Gibbs et al., 1994; Atkins, Beattie & Dockrell, 1993; Bridges, 1992). Holmes (2000:206), who refers to many published critical analyses of the concept of transferability, quotes Wolf in saying that ... *these skills are by definition inseparable from the contexts in which they are developed and displayed, and ... they only make sense (or, rather, the same sense) to those who have the same recognition and understanding of those contexts.*

A similar view is held by Gibbs et al. (1994), who claim that it is not enough to "bolt" transferable skills onto conventional academic curricula, because they will not transfer automatically to non-academic contexts. The only way in which transfer can be achieved is by bringing elements of the future working environment into the classroom. This can be done by confronting students with problems and situations that resemble those they will have to deal with in their careers, and by requiring them to tackle these problems in the way in which they will eventually have to do so their professional lives.

Fallows and Steven (2000) also advocate this route, if the intention is to encourage and promote the transfer of knowledge and skills. They refer to the incorporation of work-like contexts into curricula as "reverse transfer". This implies that the skills needed in a particular work situation should be considered, and then applied back into the education programme preparing students for that specific job. If, for example, it is the skill of writing reports that is valued in that particular job, assessment of writing skills in that programme should be based on report-writing.

Drew (1998), and also Bennett, Dunne and Carré (2000), comment on the issue by indicating that research on the transferability of skills has been done mostly from a cognitive perspective on problem-solving, making a distinction between near and far transfer. *Near transfer* refers to the application of skills in circumstances that are very similar to those of the initial learning, while *far transfer* refers to transfer between contexts that seem different or remote. When a student is confronted with a problem in the examination that has been dealt with in class,

near transfer of knowledge and skill is likely to take place. Carrying knowledge and skills from the educational setting to an employment context, however, implies far transfer, requiring ... *more conditional, and deeper, disciplinary content knowledge* (*ibid.*:17). The distance of transfer, however, depends on, *inter alia*, how close the learning context is to the desired application context. Transfer is a difficult concept to measure, though, since hard-to-measure qualities, such as motivation towards a task, also come into play.

Whether the skills that are currently receiving so much prominence are transferable, is debatable. Research done by Drew (1998), for example, showed that students find it difficult to link different situations requiring the same skill. As a result, ... *they tend to be unmotivated and puzzled by skills units or modules which are not firmly set within the subject. They find it difficult to identify how interpersonal or communication skills used for traditional academic tasks such as writing essays or participating in seminars might be applicable to work.* This phenomenon is also described by Neath (*ibid.*), who found that students do not necessarily develop interpersonal skills as a result of groupwork projects. Instead, they learn ... *strategies for maximising their marks and reducing any damaging influence of others on their marks* (*ibid.*:21). Interestingly, this study showed that these strategies that students adopt during groupwork, vary among individuals, depending on their preferred way of relating to others. As a result, ... *[these] strategies might be unnecessary and therefore not transferred to group projects which are assessed differently or not assessed at all* (*ibid.*).

In the final analysis, one cannot but conclude, as Gibbs et al. (1994:4-5) do, that *[t]he problem of transfer poses a much greater challenge to conventional curricula than simply having to drop a little from a lecture programme in order to fit in some time for skills.* ***The curricula themselves have to be transformed if skills development is to be worthwhile*** [emphasis added]. This idea is echoed by Bennett, Dunne and Carré (2000:18) who argue that transfer is unlikely to occur ... *unless intentionally planned for in the way that materials and contexts are structured.* Consistent with the rejection of a "leave-them-alone-and-they'll-come-home" attitude, Bennett, Dunne and Carré (2000:18) maintain that teaching programmes which leave transfer up to the student are less effective. Teaching

for transfer, they argue, ... *requires careful thought and high levels of pedagogical skill.*

2.3.5 Embedded versus stand-alone skills development

The above paragraphs indicate that there is no universally accepted skills development model. There is nevertheless considerable consensus that higher education has a responsibility of equipping students with the skills they need to learn effectively in a changing higher education context, and to cope in a fast-changing workplace. There is less agreement on how this responsibility should be met.

Linked to the debate on transferability, arguments related to embedded versus decontextualised skills development are often expressed in the literature. Atkins, Beattie and Dockrell (1993:33), for example, discuss the tension between seeing the development of general skills as something that should happen **in addition to** academic study, or regarding it as something that should happen **through** academic study. They weigh the possibilities by saying that if skills development is added on to the curriculum, -

> ... *it runs the risk of being seen as a fringe activity with low status and contrived legitimacy. If, on the other hand, the core skills are to be developed and assessed as part of the conventional curriculum it raises the question of whether study of a subject can be structured both for knowledge acquisition and as a 'vehicle' for development of these core skills.*

Focused, purpose-built skills modules have advantages in the sense that they can be modified if necessary and that a specialised person or team can be assigned to their delivery. Judging from the literature, however, it seems as if embedded skills development is widely preferred. Fallows and Steven (2000:226) maintain that with the embedded approach, ... *skills development becomes a universal responsibility with the expectation that each and every lecturer recognizes the skills content of all modules taught.* Consistent with this view, Bloy and Williams (2000) report that negative feedback on the stand-alone Personal Transferable

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Skills model at the De Montfort University in the UK has led to the embedding of skills outcomes within modules as a holistic part of the student experience.

On the other hand, embedded skills development often meets with resistance from university teachers who fear that it will take away from the already limited curriculum time they have. Then again, in defence of the embedded approach, Steven and Fallows (2000) maintain that a skills-recognising core module can, apart from highlighting the fact that skills matter, be stimulating and can make the educational experience more enjoyable for both students and staff.

2.3.6 Assessment of skills acquisition

The debate on whether skills should be formally assessed as an integral part of, or separately from, the academic curriculum is indicative of the fact that in this respect, too, there is presently no universal system to provide the recognition and consistency that are needed for a skills assessment system that is valid and reliable (Fallows & Steven, 2000; Wiggins, 1998; Pearce, 1992).

The heading chosen for these two paragraphs should indicate to the reader that the researcher sees skills as qualities that can be developed, and that the acquisition thereof can be assessed. Simultaneously I also support certain aspects of Holmes' (2000) performance model, suggesting that embedded development and assessment of performance-based tasks, requiring students to apply certain key skills, is the route to follow if skills development is to be meaningful. The assessment of skills will be discussed comprehensively in Chapters Three and Four.

2.4 SKILLS DEVELOPMENT AS THE CORNERSTONE OF OUTCOMES-BASED EDUCATION

The idea that teaching for skills and the preparation of students for lifelong learning are more valuable than expecting them to assimilate large volumes of abstract learning content, became a reality in South Africa in 1997 when the government announced the introduction of outcomes-based education (OBE) at all levels of the South African educational system (Jacobs & Chalufu, 2000).

2.4.1 Definition of outcomes-based education

Outcomes-based education (OBE) is an international learning philosophy based on, *inter alia*, insights about the need for active, participative learning and a learner-centred approach to education. Transformed into a curriculum approach, OBE gives priority to the end results, accomplishments and demonstrations of learning in a specific context, rather than to the aims and objectives of teachers (Van Rooyen & Lategan, 1998a).

The concept of OBE was first introduced by an American curriculum specialist, Johnson, who argued ... *that students are taught too much theoretical knowledge that they do not need for job-market knowledge and which they instantly forget after they [have] written their examinations* (Jacobs & Chalufu, 2000:99). The solution advocated by Johnson, and later further developed by Spady and Daggett (*ibid.*), was that students should be helped to achieve certain skills so that they will be able to do useful things with their knowledge at the end of their education.

The concept of outcomes-based education is also linked to arguments and pressure for wider access to higher education. Tolley (1990:151), for example, holds the view that ... *if wider access is indeed to be achieved on any substantial scale and the needs of both individuals and society are to be better provided for, then it is* ***outcomes*** *that must be more clearly expressed and more seriously sought* ...[emphasis added].

2.4.2 The rationale for outcomes-based education

Learning outcomes are instructional objectives defined in terms of performance. Outcomes are also described as the manifestation of what students can *do* with what they know (Spady, in Vakalisa, 2000), which explains the prominence given to skills teaching in an outcomes-based approach. Having said this, it becomes clear why the challenge of helping South African citizens to achieve the practical and thinking skills needed for employment and for uplifting the learning standard of the previously disadvantaged sector of the population, led to the adoption of an outcomes-based model of education.

In the outcomes-based approach adopted by the South African government, a distinction is made between critical and specific outcomes. Specific outcomes relate to the performance or behaviour that learners should be able to demonstrate at the end of a specific teaching session or learning opportunity (contextually demonstrated knowledge, skills and values). Critical outcomes (also referred to as exit outcomes), in turn, refer to the attitudes, skills and knowledge that are meaningful in the long run. William Spady, renowned writer on outcomes-based education, refers to these abilities as "outcomes of significance" (Jacobs, 2000). Van Rooyen and Lategan (1998a) describe them as broad, generic, cross-curricular outcomes, providing the foundation for all specific outcomes.

Within the critical outcomes group, a distinction is made between seven true, and five "nice-to-have" critical outcomes. Jacobs (2000) refers to the true critical outcomes (**Appendix 2A**) as the "invisible roots" of the outcomes-based approach to teaching and learning and outlines their characteristics as follows (*ibid.*:36):
True critical outcomes:

- *are prescribed by the state and therefore all teachers are obliged to facilitate them;*
- *should be the starting point in planning all programmes, units and lessons;*
- *relate directly to real life, real problems and real people;*
- *are long-term goals that need to be pursued for many years before they are achieved;*

- *are useful to people in the long run;*
- *should be taught across all learning areas and study fields;*
- *should be taught continuously by teachers from pre-school up to the highest educational level.*

"Nice-to-have" outcomes (**Appendix 2A**) are seen as slightly less important than the true critical outcomes and focus on the insights and attitudes that learners should be made aware of in order to attain full personal, social and economic development (Jacobs, 2000).

2.4.3 Perspectives on outcomes-based education and training in the world of medicine

Outcomes-based education is not a new concept in medical education. There is a strong resemblance between the current conception of outcomes-based education and Irby, Evans and Larson's (1978:21) definition of competency-based education within the context of the clinical component of medical education in the late seventies:

> *One of the chief purposes of competency-based education is to clearly define what the student is to learn and how mastery is to be demonstrated. Once agreed on, these desired outcomes must be conveyed to the student. ... Communicating course objectives and evaluation criteria allows students to know faculty expectations of them in advance. Decreased anxiety and more effective self-direction are the results. Students are encouraged to monitor their areas of strength and weakness and to be more responsible for achieving their own learning goals.*

The original assumption, according to these authors, was that if a student had spent a certain number of hours in clinical practice, she would have acquired the desired clinical skills for appropriate health care delivery. In the early seventies this approach was exchanged for the mastery of objectives in the form of core competencies and observable behaviours (*ibid.*).

In order to meet the demands of health service delivery in the 21st century, medical education in the 1980s embarked on the fundamental change towards

student-centred teaching and learning that is currently taking place in higher education, in the sense that not only the clinical training, but also the early years of medical study, started adhering to the principles and practices relating to adult education (Knowles, 1984). This change is a global one that has resulted in policy initiatives such as the recommendations in *Tomorrow's Doctors* (GMC, 1993) in the United Kingdom. The profile of the 21st-century doctor, as depicted in this document, demands a tertiary education encompassing knowledge, skills and attitudes needed for successful professional practice. It also stresses the need for the development of an awareness of self-directed and lifelong learning among students.

Consistent with these emerging trends at international level, as well as the SAQA Act and related regulations and guidelines for higher education learning programmes, medical curricula in South Africa currently set critical, specific and professional outcomes as exit requirements of undergraduate learning programmes. Other shifts in the focus of undergraduate medical teaching and learning include typical participatory learning characteristics: students are increasingly expected to solve problems derived from professionally authentic contexts; collaboration with others is highly valued; and skills such as finding and evaluating information, communication and meta-cognition are emphasised (Bezuidenhout, Nel & Vosloo, 2000).

2.5 CONCLUDING REMARKS

For the researcher, the above discussion brought various important insights. First, it became clear to me that the significant impact of an outcomes-based approach to higher education on curricula, should be received as a positive endeavour of the new political dispensation in South Africa to uplift the standard of student performance in a country that desperately needs a skilled workforce.

Secondly, I realised that in order to achieve this macro-level aim of preparing students for life in a fast-changing society, lecturers need to buy into the idea of participatory learning. This means that at micro-level, they need to adopt a

teaching approach that allows students to take ownership of the learning process. It also means that in all teaching, the focus should be on the competencies that students are able to demonstrate as a result of their learning, and not on the volume of learning content that they have to assimilate in order to pass a test or examination.

In the third instance, I came to understand that learning skills and the development of competencies useful for work, and life in general, are compatible; that the process of higher education can significantly contribute towards the development of work skills, and even, as Solmon (1978:1) puts it ... *if not for specific jobs, at least for productive careers, if not for careers in the popular sense, at least for living life more fully.*

Fourthly, I realised that various aspects of the skills development movement in higher education are highly contested. However, I support Laybourn et al. (2000:48), who make an important observation in this regard, namely that these debates ... *should not divert us from the main concern of much generic skills training and development: helping and supporting students as they enter higher education.*

Linked to divergent thinking on skills development, I ultimately also came across contrasting viewpoints as to where the emphasis of outcomes-based education should be - on the process or the product? In the work on teaching and learning dynamics in a participatory approach to outcomes-based education, edited by Jacobs, Gawe and Vakalisa (2000), two directly opposing statements are made in this regard. Jacobs (2000:31), for example, says that ... ***ends*** *are more important than* ***means*** *in outcomes-based education* ...[emphasis added]. In a later chapter, Gawe, Vakalisa and Van Niekerk (2000:185) argue as follows in favour of a socio-constructivist emphasis on the process of OBE: *This approach represents a* ***shift*** *from a so-called* ***product-oriented curriculum*** *to a* ***process-oriented curriculum*** [original emphasis].

I would opt for the viewpoint taken by Harden et al. (1999) who argue that without an appropriate process, the desired product will not emerge. Earlier on,

an outcomes-based approach in medical education tended to emphasise the product (i.e. what kind of doctor would be produced). The underlying argument was that the content and organisation of the curriculum, teaching and learning methods and the assessment process are all determined by the expected outcome (Harden et al., 1999). However, since these determinants of the outcome are all process-related issues, the concept of "outcome" is currently understood to encompass product **and** process. Stewart (2000) underscores this view by pointing out that previous initiatives inspired by the World Health Organisation (WHO) in order to provide relevant health care, were largely unsuccessful because of failure to translate these outcomes into a curriculum, learning experiences and assessment procedures that would facilitate the achievement of desired competencies.

One of the major challenges facing medical education, therefore, is not to merely pay lip-service to outcomes-based education, but to ensure that the educational process itself reflects, reinforces and contributes towards the achievement of intended outcomes.

CHAPTER THREE

CURRENT ASSESSMENT REALITIES

[A]lternative assessment with its potential to develop and assess learning achievements which are congruent with contemporary views of the nature of knowledge and the needs of society for educated persons, is an avenue which we must continue to explore.
(Dochy & McDowell, 1997:293)

3.1 INTRODUCTION

Changed expectations related to the broadened goals of higher education, further encouraged by government-driven qualification frameworks emphasising measurable performance outcomes, necessitate not only innovative teaching approaches and learning opportunities, but also new paths for assessment. Unconventional forms of assessment, reflecting the now widely accepted view of students as active thinkers who construct meaning from reality, however, are not easily accepted. The reason for this state of affairs, is that new forms of assessment challenge traditional assumptions about assessment and increase the workload.

The purpose of this chapter is to provide a basis for understanding why, despite objections such as these, it has become necessary to introduce alternative forms of assessment. The chapter provides a framework for considering the role of assessment in shaping learning and achieving curriculum change. Current thinking on the definition, purpose and focus of assessment is synthesised within the context of general skills development.

The chapter is organised as follows: The powerful influence of assessment on what students pay attention to is brought into focus, emphasising the importance of assessment as a vehicle for curriculum change. The contrast between conventional and unconventional forms of assessment is outlined against the background of the theoretical underpinnings of traditional and reconceptualised assessment structures. An overview of the historical development of assessment,

including the latest trends, is followed by a perspective on the forces demanding changed assessment in the South African higher education sector.

3.2 CONCEPTUALISATION, PURPOSES AND FOCI OF ASSESSMENT

According to Brown, Bull and Pendlebury (1997), the term *assessment* refers to the action of estimating the current status of a person. Throughout the centuries, the estimation of a person's educational status or "worth" has been approached in many different ways, and many different words have been coined to describe the semantic nuances of measuring educational achievement.

3.2.1 Definition of assessment

From a linguistic point of view, it can be said that assessment is only a new word used for defining an old concept, namely the measurement of something. In an educational context that "something" is that which has been learnt; that which can be recalled; that which is understood or applied.

Within the context of outcomes-based education, however, it is important to realise that the term *assessment* is preferred, not only for the sake of using a fashionable word, but because it implies the weighing of educational outcomes in a manner that differs from traditional forms of measurement[7]. Instead of conjuring up thoughts about tests and examinations only, outcomes-based assessment also refers to various other ways of gaining information on the achievement of students; and, most importantly, to the giving of feedback about learning progress (Siebörger & Macintosh, 1998; McMillan, 1997). In short, outcomes-based assessment is intended to reflect desired learning outcomes and should be used in support of learning.

A review of the literature generated a multitude of terms and definitions to describe the measurement of learning outcomes. Table 3.1 provides a cursory overview.

[7] Traditionally the term *measurement* was used to refer to judgement by assignment of a numerical quantity (Goodwin, 1997). In this study, the term measurement will refer to the broadened concept of weighing evidence in order to determine the standard of a learning outcome.

Table 3.1 *Definitions used for referring to the measurement of learning outcomes*

REFERENCE	DEFINITIONS		
	TESTING	ASSESSMENT	EVALUATION
Forsyth, Jolliffe & Stevens, 1999	*A test provides you with information about a learner's response to a set of questions in the test* (p. 37).	*People are assessed; [it] is what you do with [information derived from test data] that will contribute to assessment of the learner* (p. 37).	*[C]ourses and materials are evaluated; ... using the information derived from test data, ... to determine a score for the learner* (p. 37).
Schurr, 1999	*One type of assessment that has a set of questions or situations designed to elicit responses that permit an inference about what a student knows or can do. Tests most often utilize a paper-and-pencil format, occur within established time limits, restrict access to resources, and yield a limited range of acceptable responses* (p. 22).	*A broad term referring to the process of gathering and synthesizing information to help us understand and describe* (p. 20).	*Involves making a judgment regarding quality, value, or worth, based upon criteria* (p. 20).
Siebörger & Macintosh, 1998		*Measurement of the extent of learning in individuals* (p. 5).	*A process by which the effects and effectiveness of teaching can be determined* (p. 5).
Wiggins, 1998		*In assessment I describe ... In assessment, I place the student's performance on a continuum; ... Assessment alone is more of a clinical look at performance, its characteristics, its strengths and weaknesses* (p. 192).	*In evaluation I make a value judgment ... An evaluation adds another layer of judgment, which can be posed as a question: Given where the student is as determined by the assessment, is that where he or she should be? ... [I]n an evaluation we make a further judgment as to whether such a profile is good or bad in [the] light of institutional or personal expectations* (p. 193).
Genishi 1997		*A term reserved for determinations about people, usually individuals (sometimes small groups)*	*Operations associated with nonperson entities, such as curricula, programs, interventions,*

		(p. 36).	*methods of teaching and organizational factors* (p. 36).
McMillan, 1997	*A test is a formalized procedure in which students respond to questions* (p. 9).	*The collection, interpretation, and use of information to help teachers make better decisions* (p. 8).	*The making of judgments about quality - how good the behavior or performance is. Evaluation involves interpretation of what has been gathered through measurement* (p. 10).
Broadfoot, 1996		*The deliberate and overt measurement of educational performance in order to provide information for purposes beyond the immediate interactive learning situation.* *The actual process of measurement ...[and] the uses to which the information so generated is put ...* (p. 6).	*The subsequent interpretation of measurements against particular norms of performance. Refers to the more general process of judgment and feedback* (p. 6). *... fundamentally an interpersonal exercise which cannot be divorced from human subjectivity* (p. 14).
Gipps, 1994		*A wide range of methods for evaluating pupil performance and attainment including formal testing and examinations, practical and oral assessment, classroom based assessment carried out by teachers and portfolios* (p. vii).	
Hart, 1994	*A means of assessment. A test is simply a measuring instrument used to document student learning* (p. 1).	*The process of gathering information about students - what they know and can do* (p.1).	*The process of interpreting and making judgments about assessment information* (p. 1).

Although some sources claim that these terms can be used interchangeably (Forsyth, Jolliffe & Stevens, 1999), Hart (1994) is adamant in her view that the words *assessment, evaluation* and *testing* do not mean the same thing. The distinction among these terms becomes clear once it is realised that assessment and evaluation refer to the **processes** of respectively gathering and interpreting information about students; and a test to a standardised **instrument** used for documenting student learning. The reason why most people think of testing when

they hear the words assessment or evaluation, is that assessment and evaluation of student learning have been dominated by testing for so long.

It can be concluded, therefore, that assessment data alone are of little value because they merely reflect what is going on within the teaching and learning situation. This view is supported by Siebörger and Macintosh (1998), who maintain that assessment is only **one aspect** of evaluating the total progress of a learner. Other aspects to consider would include, for example, intellectual ability and schooling background. This explains why the concept of assessment with a view to developing, rather than testing for the purpose of judgement, is more acceptable in the current educational dispensation.

Furthermore, assessment data only become meaningful once the assessor finds something that she values, reflected in the data, thus answering the question: Are students learning what we want them to learn? (Hart, 1994). This, in turn, explains why the concept of assessment is compatible with the idea of teaching encompassing, not only factual information, but also the development of higher-order skills such as understanding of principles, application of knowledge and skills to new tasks, investigation skills, analysis and discussion of complex issues and problems (Gipps, 1994).

Ultimately, the difference between testing on the one hand, and evaluation and assessment on the other, is to be found in the human factor, as explained by Malone (cf. Hart, 1994:2): *Both assessment and evaluation are based on the judgment of an experienced, thoughtful human being - an expert. Machines don't assess, tests don't assess. Humans assess.*

An intermediate point of view is held by Le Grange and Reddy (1998) and Wiggins (1998), who argue that assessment of a high quality depends on the presence of both the assessment and evaluation levels of measurement. Wiggins (1998:192-193) provides the following clarification: *In assessment I describe; in evaluation I make a value judgment. ... Assessment alone is more of a clinical look at performance, its characteristics, its strengths and weaknesses. However, in an evaluation we make a further judgement as to whether such a profile is good*

or bad in [the] light of institutional or personal expectations. In the same vein, Le Grange and Reddy (1998:3) maintain that *[b]oth assessment and evaluation are essential for authentic learning to take place: once a learner is assessed, the factors that influenced his or her learning should be evaluated in order to determine what further educational experiences should or should not be developed for that learner ... .*

The confusion surrounding the concept of assessment, however, does not end here. A totally different view is held, for example, by Jolly (1997:20), who provides the following definition of assessment within a clinical medical context: *Assessment involves making interim or final judgements about people against defined, usually external, criteria. In general, assessments should be objective and reproducible.* The strength of assessment, according to this view, is the fact that it can yield precise, unbiased or standardised estimates of competence in domains of knowledge and skills, although it requires large data sets and valid and reliable tests. As such, assessment contrasts with appraisal in almost the same way as evaluation differs from assessment, as described above. Appraisal, according to Jolly *(ibid.),* is akin to formative assessment in the sense that its main purpose is to chart and agree on professional achievements and future goals, and to focus on the identified strengths and weaknesses of the individual. He defines appraisal as *...a description of activities, achievements or personal characteristics that derives from an analysis or negotiation involving the subject of the appraisal .... [It provides] a platform for reflection about current status with a view to making both the individual and the appraiser responsive to individual needs and goals.* Another difference between assessment and appraisal is that the latter depends on, and may be used to provide, comprehensive feedback to the subject, whereas in the case of assessment, feedback may or may not be given, especially in summative assessment.

It is important to note that, for the purposes of this study, the term *assessment* is used to refer to a "measurement" activity in which elements of both assessment and evaluation, as understood by Wiggins (1998) and Le Grange and Reddy (1998), are present.

3.2.2 Purposes of assessment

The word *assessment* originally derives from the Latin term *ad sedere*, which means to sit down beside (Brown, Bull & Pendlebury, 1997:11). Etymologically, it can thus be deduced that the primary purpose of assessment is to provide guidance and feedback to a student.

Traditionally, however, the main purposes of assessment were accountability (do we receive value for the money spent on education?), monitoring of progress (how well are we doing - as individuals, as a class, as a school, as an institution?), and placement (which students should be admitted, promoted or assigned to special programmes?) (McAleer, 2001; cf. also Brown, Bull & Pendlebury, 1997, for a more detailed list of the purposes of assessment).

In the current educational dispensation, advocating learner-centredness, assessment has the potential of regaining its important pristine function of improving the quality of students' performance by providing a model of what it is that instructors want them to learn, and how they are to learn it. Siebörger and Macintosh (1998:6) highlight this idea when they state that the purpose of educational assessment is ... *not simply to measure what learners have achieved, but to help learners to learn and achieve more.* Unless assessment indicates where and how students should improve in order to be successful, and motivates them to improve, it misses its educational purpose.

3.2.3 Foci of assessment

Traditionally the "what" of assessment, from the instructor's point of view, focused on every aspect of the curriculum considered important or every area on which a considerable amount of time had been spent (McAleer, 2001). Furthermore, the motto, "If it cannot be tested, it is not worth teaching," often served as a guiding principle in decisions on what to teach (Hart, 1994).

The shift towards more authentic methods of assessment is in the process of converting this motto to read: "If it is worth learning, it is worth assessing." In

support of this movement, Hart (1994:14) advocates the inclusion of critical outcomes in assessment as follows: *If we want students to write well, we should assess their writing. If we want students to learn how to solve problems ..., our assessments should give them such problems to solve.*

From the student's point of view, the focus used to be on the information, methods and skills that **others had performed or produced**. For the purpose of assessment, they had to demonstrate knowledge in the form of easily measured answers to test questions. However, beyond school a person ... *demonstrates knowledge by providing original conversation and writing, by repairing and building physical objects, and by producing ... performances* (Archibald & Newmann, in Hart, 1994:13).

It is self-evident, then, that if the aim is to mirror the fact that higher education values not only knowledge acquisition, but also the ability of students to **use their knowledge and skills** in a variety of work-like situations and contexts, the assessment of products or performances, **created by the students themselves**, should henceforth form the focus. Instead of **telling** or **being questioned about** what they know and what they can do, students should be given the opportunity to **demonstrate** their competence (cf. Chapter Four for a discussion of performance-based assessment).

3.3 ASSESSMENT: A CATALYST FOR CHANGE

Research undertaken in the past 25 years on cognitive learning, student motivation, learning styles and other aspects of student learning has brought the understanding that it is assessment that drives learning and shapes the concept that students have of knowledge (Brown & Knight; 1994). Hart (1994) uses the acronym, WYTIWYG, to refer to this phenomenon: What You Test Is What You Get. As a result, transformation of assessment is recognised as one of the most important means of influencing learning and achieving curriculum change (Siebörger & Macintosh, 1998; Brown & Knight, 1994; Biggs, 1993; Boud, 1990; Ramsden, 1988; Rowntree, 1987).

An overview of the literature renders ample evidence supporting this view. In the 1980s, research done by Watkins and Hattie (cf. Brown, Bull & Pendlebury, 1997) revealed that students' styles of learning are influenced by the types of assessment they are subjected to: multiple-choice questions and other forms of unseen tests, for example, promote reproductive learning, while projects and other forms of open-ended assessments promote deep learning and independence. Ramsden (cf. Brown, Bull & Pendlebury, 1997) indicated that if an assessment system overtly relies on reproductive learning, students will reject a deep approach to learning on the grounds that it is not worthwhile. Brown, Bull and Pendlebury (1997), in referring to authoritative researchers such as Ramsden and Entwistle, assert that students take their cues for learning from what is assessed. They argue that ... *assessment - or measuring - sets the tone of the curriculum to such an extent that a university may be judged by the way it judges - or assesses - its students. Inept assessment systems betoken problems in a university.*

It can thus be concluded that if the changed context of higher education demands that subject knowledge should be supported with the general skills required for successful learning and future employment, then assessment should demand those skills to be achieved and demonstrated.

Dominant techniques of assessment currently in use (tests and examinations), however, give evidence of the content knowledge that students have mastered, but reveal little about how well they understand the material or how well they would perform in an actual situation requiring application of that knowledge (Van Rooyen & Lategan, 1998a). The situation is exacerbated by the fact that tests and examinations are used terminally and summatively for the most part, whereas an educational paradigm requiring the development of understanding, skills and values as a key outcome, presumes constant feedback to learners over an extended period of time. So it seems that supplementation of final, summative assessment by continual formative assessment, using a larger variety of assessment methods, is needed for measuring achievement of critical outcomes (Van Rooyen & Lategan, 1998b; Gultig, 1997).

3.4 THEORETICAL UNDERPINNINGS OF TRADITIONAL AND RECONCEPTUALISED ASSESSMENT

Present moves in higher education as a whole, and assessment in microcosm, need to be understood against the background of the paradigm shift[8] that has occurred from traditional instructional theory to cognitive and constructivist models of learning during the past thirty years (Mabry, 1999; Gipps, 1994).

The behaviourist school of the traditional instructional theory defines learning as change in behaviour by means of a linear and sequential process (Mabry, 1999). Assessment of learning in the behaviourist tradition is positivistic, grounded in the belief that anything that exists, exists in some quantity and can therefore be measured. Based on this assumption, the goal of education should be to teach students the "truths" about the real world through the transmission of knowledge. Assessment, in turn, is seen as an outside force, imposed on the learner and consisting of objective measurement to assess whether and to what extent transmitted information has been received (Anderson, 1998).

As far as skills are concerned, the behaviourist assumption is one of decontextualisation. The theory holds that each component of a complex skill is fixed and can thus be developed outside the context within which it is applicable (*ibid.;* cf. also the debate on the transferability of skills discussed in Chapter Two).

Cognitive theory, on the other hand, suggests that learning is an organic process of reorganising and restructuring ideas. It builds on the idea that things are easier to learn if they make sense. Students are viewed as the active constructors of their own understanding and in order to be useful, new information must be linked to the knowledge structures or schemata already present in their long-term memories (Gipps, 1994). This view of learning, promoted in the 1970s and 1980s under the label of constructivism, originated from the work of John Dewey, Jean Piaget and Lev Vygotsky (Anderson, 1998). Constructivism advocates a sensitivity towards

[8] *A paradigm is a set of interrelated concepts which provide the framework within which we see and understand a particular problem or activity. The paradigm within which we work determines what we look for, the way in which we construe what we observe, and how we solve emerging problems. A paradigm shift or 'scientific revolution' occurs when the old paradigm is unable to deal with an outstanding problem* (Kuhn, in Gipps, 1994:1).

the cultures and contexts within which learning occurs. It is governed by the principles of (a) confronting students with relevant problems, and (b) assessing student learning within the context of teaching.

With regard to skills development, cognitive learning theory maintains that there is an intimate connection between skills and the contexts in which they are used. Gipps (1994:19) quotes Resnick and Resnick in this regard, saying that educationally this suggests ... *that we cannot teach a skill component in one setting and expect it to be applied automatically in another. That means, in turn, that we cannot validly assess a competence in a context very different from the context in which it is practised or used.*

Assessment frameworks are thus anchored in particular understandings of what constitutes good teaching and learning. Table 3.2 gives an overview of how critical aspects of assessment are affected by the beliefs and assumptions underlying traditional and alternative assessment (cf. Anderson, 1998:7-11 for a comprehensive exposition of theoretical views expressed by a diverse spectrum of researchers).

Table 3.2 *Comparison of philosophical beliefs and theoretical assumptions of traditional and alternative assessment* (Anderson, 1998)

Traditional assessment	**Aspects affected by philosophical beliefs and theoretical assumptions**	**Alternative assessment**
Knowledge has the same meaning for all people everywhere.	Knowledge	Knowledge has multiple meanings, for every person gives her own interpretation of an ever-changing reality.
Passive, individual process. Students often work competitively against one another; they are more concerned with the product than the process. Students (novices) memorise the knowledge dispensed by a text or instructor (expert); the focus is on learning about something rather than on how to do something.	Learning	Active, collaborative process. Instructors and students are co-responsible for creating learning experiences. Learning is not something that is given to someone; learning entails producing rather than reproducing knowledge; students actively search for new meanings to transform their present understanding.
Value-free, objective activity. Facts and values are separable and	Assessment	Value-laden, subjective activity. Value systems determine what questions

can be measured objectively.		are asked and answered in a test; values influence assessors' judgement.
Only what students learn is important. Final products, assumed to be representative of student learning, are assessed on the basis of a test of some kind.	Process of assessment	The "what", "how" and "why" of student learning are taken into consideration.
Isolated bits of information, representing lower-level thinking skills.	Focus of assessment	Development of real-world problem-solving skills.
Documentation of student learning; classification and ranking of students.	Purpose of assessment	Facilitation and enhancement of learning by giving feedback.
Cognitive abilities; little or no attention given to students' disposition to use the skills and strategies taught or their ability to apply them.	Learner abilities focused on	Cognitive, affective and conative abilities.
The instructor has the power to decide what is learned and how it is assessed.	Power and control of assessment	Instructors share power with students in deciding what they learn and how they are progressing.

Measured against the basic tenets and assumptions of the constructivist learning theory, as depicted above, rote learning and memorisation are not accepted as learning in the true sense of the word (Speck, 1998). Consequently the primary purpose of education is to assist learners to **learn how to obtain knowledge**. Learning, according to this approach, argue Brooks and Brooks (cf. Anderson, 1998), is ... *a self-regulated process of resolving inner cognitive conflicts that often become apparent through concrete experience, collaborative discourse, and reflection.*

A reconceptualisation of learning of this nature implies that institutions of higher education need to assess the degree to which students can display their abilities to regulate themselves, work collaboratively with others and reflect on what they have learned. This, in turn, suggest Brown and Knight (1994:12), implies that ... *universities need to have in place assessment arrangements which ensure that the curriculum as taught and received actually does make students work at [those abilities]*.... Assessment, within a constructivist theoretical framework, therefore, cannot be an atomistic endeavour focusing on factual recall. Instead, it should focus on ... *helping students to a conscious knowledge of what they know,*

understand and can do, [assessment means] developing metacognition[9]*, which is being identified as a key component in successful learning* (Brown & Knight, 1994:41).

From the above it can be deduced that assessment within the constructivist paradigm implies measuring more than facts or students' abilities to reproduce procedures or routine performances. It means that assessment should be able to ascertain what the student already knows, her learning strategies and her ability to be aware of and control her learning. Furthermore, the development of higher-order skills such as problem-solving and critical thinking needs to be encouraged by using assessment techniques that reflect these processes.

Despite the fact that cognitive and constructivist learning theories were introduced more than thirty years ago, assessment traditions are relatively immune to reform. As Wilbrink (1997:43) points out, ... *before the beginning of the 20th century assessment had already developed into the forms and procedures that still characterize it today. ...[O]ur assessment culture is, for better or for worse, the legacy of societies long since gone.*

Given this tenacity, a discussion of the need to change to innovative forms of assessment for measuring skills outcomes will be incomplete without some knowledge of the historical roots of assessment, along with an understanding of the reasons for dissatisfaction with traditional forms of assessment and, ultimately, a perspective on emerging assessment trends. The historical perspective below is based on the views and observations of various researchers, but borrows mostly from the work of Wilbrink (1997).

3.5 HISTORICAL PERSPECTIVE ON ASSESSMENT

Assessment can be traced back to 200 years before Christ when Socrates used mediated evaluations to guide his students' learning (Cole, Ryan & Kick, 1995). Assessment in the form of examinations was first developed in the Chinese

[9] *Metacognition is a general term which refers to a second-order form of thinking: thinking about thinking. It includes a variety of self-awareness processes to help plan, monitor, orchestrate and control one's own learning. It is a process of being aware of and in control of one's own knowledge and thinking, and therefore learning* (Gipps, 1994:24).

civilisation (Brown, Bull & Pendlebury, 1997). Initially these examinations were practical, consisting of horse riding, singing songs, fighting battles and so on. Anyone could enter these examinations, provided he was a male, not the son of a torturer, an executioner, a barber, a brothel-keeper, a renegade priest or a nail-cutter. Later on, as China developed a bureaucratic government, the actual horse-riding, song-singing and battles gradually changed to writing about such performances. Eventually, the writing about one's own experiences changed to writing about other people's writing about riding horses, singing songs and doing battles (see Brown's account of how the examination system was used to maintain the Chinese social class system).

Solutions to problems of the past are often still honoured as valid in modern times, despite the fact that the original reason for using a particular solution no longer exists. In referring to this phenomenon, Wilbrink (1997) points out that the first written examinations implemented at the Oxford and Cambridge universities in the 19th century, for example, still relied on the archetypal convention of recitation and supplying "right" answers to known types of questions. This approach was based on the belief that *...the way to achieve more accurate and certain means of evaluating a student's work was to narrow the range of likely disagreement and carefully define the area of knowledge students were expected to know* (Rothblatt, quoted by Wilbrink, 1997:33).

3.5.1 Mediaeval roots of regurgitation

The practice of "regurgitation", which refers to supplying "right" answers in response to known types of questions, originated in the 13th century (Wilbrink, 1997). Mediaeval education consisted mainly of the learning of the Holy Scripture and religious texts by monks and nuns. Latin grammar was studied in order to understand the Latin texts. The question-and-answer method of teaching and learning was dominant because knowing the right answers to questions about religious texts was the most important educational goal. The problem in those early years was that manuscripts were scarce and difficult to read. As a solution to this problem, knowing something was understood to mean knowing it by heart.

Proof of knowledge meant recitation and examinations consisted mainly of very simple questions and answers.

3.5.2 Origin of authentic assessment

Conversely, a situation can develop where a form of assessment which had proved to be a solution in the past, comes in demand once again after having been ignored for centuries. This is the case with the current requirement that students should be able to do scientific research, which goes hand-in-hand with the requirement for assessable characteristics such as the ability to make public presentations, measured against explicit standards of good practice. According to Wilbrink (1997) this practice can be seen as the latter-day equivalent of the disputation that was used in mediaeval times.

Although it could take on many different forms, a disputation in the mediaeval university essentially was a formal, public form of examination with the following features: a theorem or problem was posed by a master of arts; one of his students ("a respondens") had to defend the master's position in public in opposition to other masters and their students; the "respondens" would take part in the disputation as fulfilment of his examination requirements. Disputations were related to the questions-and-answer mode of instruction, but were also seen as exercises in sharpening participants' intellectual agility. Self-assessment, as well as assessment by the public, motivated participants to perform at a high standard. In some instances, the posed problem would be a genuine problem that had to be solved in the interest of the public. As such, the disputation was seen as a method of finding new, reliable knowledge and of critically analysing newly discovered theories. The disputation featured prominently in university curricula and examinations until the 18th century, whereafter it gradually gave way to more modern forms of examination (*ibid.*).

3.5.3 Legacy of studying only what will be included in the test

In mediaeval times punishment was part of students' daily routine. In order to motivate students to concentrate on educational tasks, undisciplined behaviour, as

well as crimes committed outside the school, was punished. During the Renaissance, humanists propagated competition and reward instead of punishment. Prizes awarded for the best performance became the chief motivational power. Competition and ranking by academic merit led to a bookkeeping system of points (*notae)* earned in examinations. It is recorded by Compère (cited in Wilbrink, 1997) that Italian parents objected to the prize-giving system, complaining that it gave rise to fraud, stress and neglect of those students who would never be able to obtain a first or second prize.

As a result of the increasingly competitive university climate, oral examinations were replaced by written examinations in the 18th and first half of the 19th centuries (*ibid*). In addition, the ranking system based on examiners' and moderators' overall impression of students' academic merit was replaced by a marking system. In describing the latter development, Wilbrink (1997) ascribes it to the 19th-century belief in the power of measurement. Competitive examinations required credible, objective assessment. Assessment by using marks served this purpose by legitimising ranking judgements made on the basis of examination papers. However, in order to evaluate achievement directly on a marking scale, the curriculum had to be narrowed.

3.5.4 Early beginnings of the objectifying distance between the assessor and the assessed

During the late 18th and early 19th centuries, the state, in the name of quality, played a crucial role in the development of the examination system as described above, and as we still know it today.

In England and many European countries, civil-service examinations were instituted in order to control the quality of civil servants. Instead of family background and wealth, which used to be important criteria for appointment in the civil service, merit became an important criterion for high government positions. Outstanding academic performance was no longer pursued for the sake of winning a prize, but for ensuring a future career. Consequently, assessment became a serious matter, concerned not only with the process of teaching and learning, but

also with the outcome, and therefore with a necessity to study and "cram" what would be tested in the examination. Another result of this development was pressure on designing the ... *type of questions that would not divide assessors, and on procedures of counting errors or assigning marks that would give the impression of exactness* (Wilbrink, 1997:42). Whereas the mediaeval master had sided with the student, assessors henceforth would side with the interests of the state or professional bodies. The main disadvantage of this kind of "merit assessment", was the "objectifying distance" it created between the assessors and the assessed. The advantage it brought, though, was that it broke the monopoly of the aristocracy in government positions and offered ... *educational and career possibilities to the talented from all classes in modern society* (Ringer, in Wilbrink, 1997:42).

3.5.5 Developments regarding the standardisation of assessment

Standardised assessment is strongly anchored in the theory of educational testing, developed in the United States of America by Robert Thorndike in the early 1900s (Cole, Ryan & Kick, 1995). In the 1920s and 1930s standardised testing of human aptitude gained momentum and in the 1940s the evaluation of educational institutions through accreditation firmly established the idea of using a mathematical score to represent learning in an exact manner. In 1947 the American Educational Testing Service came into being, which sealed the supremacy of tests as the ultimate form of assessment. Finally, in the 1980s, the concept of accountability led to increased reliance on tests in order to document student learning objectively (Mabry, 1999; cf. also Hart, 1994, for a comprehensive overview of the demand for accountability and the rise of the test industry).

In the years to follow, various inherent flaws of traditional, standardised testing were identified, necessitating the search for changed approaches to assessment. Especially in the United States, the theory of objective measurement of educational achievement has been challenged severely since the 1980s (Genishi, 1997).

3.5.6 Dissatisfaction with traditional assessment structures

Criticism of traditional assessment structures covers a broad spectrum, including accusations that such structures focus only on lower-level cognitive skills such as memorisation and understanding, ignoring more useful, higher-level, thinking skills such as analysis and synthesis; that they narrow the curriculum to test content; that they lack sensitivity to the individual growth of students and represent only a limited, microscopic and incomplete view of what students are able to do; and that they do not encourage the acquisition of lifelong skills or encourage learners to judge and thoughtfully respond to their own work (Wolf, 1989).

Most prominent, in this regard, is the dissatisfaction with standardised testing practices in the form of machine-scored multiple-choice tests. One of the main areas of criticism against standardised testing in general relates to the lack of recognition given to the development of higher-order thinking skills and other real-life outcomes. Hart (1994:7) succinctly highlights the issue by pointing out the following damaging effects of standardised testing:

- Rote learning and recall are valued at the expense of understanding and reflection.
- Students are turned into passive learners who need only to recognise, but not to construct answers and solutions.
- Skills development is trivialised through the reduction of learning content to a "fill-in-the-bubble" format.

From the literature it is clear that educators all over the world increasingly recognise that a move towards alternative forms of assessment holds the key to teaching and learning that will reflect the present-day broad view of education.

3.5.7 Emerging trends in assessment

In the history of assessment, the 1990s are known as the period in which educators experimented with a variety of assessment methods and techniques in an effort to obtain sound and coherent information on learners' academic

achievements (Mabry, 1999). Especially in the past ten years, significant changes have taken place with regard to the assessment of learning (Table 3.3).

Table 3.3 *Recent trends in assessment* (McMillan, 1997)

From	To
- Sole emphasis on outcomes	- Assessing of process
- Isolated skills	- Integrated skills
- Isolated facts	- Application of knowledge
- Paper-and-pencil tasks	- Authentic tasks
- Decontextualised tasks	- Contextualised tasks
- A single correct answer	- Many correct answers
- Secret standards	- Public standards
- Secret criteria	- Public criteria
- Individuals	- Groups
- After instruction	- During instruction
- Little feedback	- Considerable feedback
- "Objective" tests	- Performance-based tests
- Standardised tests	- Informal tests
- External evaluation	- Student self-evaluation
- Single assessments	- Multiple assessments
- Sporadic	- Continual
- Conclusive	- Recursive

Even though some of these trends are little more than revised or continued versions of long-standing practices, the term, alternative assessment, is used to refer to these new methods as a group. Other labels such as holistic, outcomes-based, performance-based and authentic assessment are also used to describe new approaches to assessment. Although each term suggests a slightly different emphasis, they all imply a movement towards assessment that supports, rather than corrupts the educational process (Hart, 1994; cf. also Sommerville, 2000, for a discussion of the evolution of assessment, as well as Schurr, 1999, for a comprehensive comparison between old and new assessment paradigms).

Examples of alternative modes of assessment, applying some of the emerging trends mentioned in Table 3.3, are projects, portfolios, exhibitions, demonstrations, presentations, journals and other forms of assessment designed to enhance students' abilities to use what they learn in solving real-world problems

and challenges. Such assessments require students to think, actively manage their own learning, compare their performance to set standards, work co-operatively with others and increasingly rely on self- and peer assessment rather than on assessment by the instructor only - all of which are consistent with cognitive learning theory (McMillan, 1997).

A very important observation made by researchers such as McMillan (1997) and Gultig (1997) is that the more modern trends in assessment do not suggest that all conventional forms of assessment are obsolete. On the contrary, credit is given for what has been achieved in previous years by means of traditional forms of assessment. It is stated by McMillan (1997:15), for example, that ... *properly constructed multiple-choice tests are excellent for efficiently and objectively assessing knowledge of a large content domain.* What is proposed, is a balanced approach, making use of appropriate assessment techniques, administered and used in ways that reflect the purpose of the learning activity according to established standards of quality.

Assessment within the context of skills development thus poses the challenge of finding appropriate ways and means of collecting and interpreting evidence of student performance ... *which are more appropriate for the contemporary educational emphasis on the inculcation of skills and personal qualities as well as knowledge* (Broadfoot, 1996:15).

3.6 POLICY DIRECTIVES DEMANDING A SHIFT FROM TRADITIONAL TO ALTERNATIVE ASSESSMENT

Assessment cannot be divorced from an institution's policy on teaching and learning, which, in turn, cannot ignore reality in terms of changed societal needs, financial cut-backs and the diversity of student intake. For this reason, the changing of assessment procedures constitutes a political process that needs to be approached strategically. A realistic assessment strategy in modern times, suggest Brown, Bull and Pendlebury (1997), needs to balance efficiency (in terms of saving staff and student time), effectiveness (assessment should reflect the objectives of the curriculum) and enablement (development of improved

understanding and expertise on the part of all students). However, to maintain all three of these elements at the same time is almost impossible. Mostly, curriculum innovators have to make do with the "two-thirds" law: if they opt for enablement and effectiveness, time-consuming activities are usually involved; if they choose efficiency and effectiveness, enablement is sure to be neglected; if effectiveness and enablement are chosen, the curriculum developers have less control over effectiveness, as measured by the degree to which assessment fits the goals of the curriculum.

Solving this dilemma in a time characterised by demands for change, implies the development of a strategy that is sensitive to the nature of different disciplines that are taught, as well as to the wider range of students entering universities and to the external environment. The development of an assessment strategy, fit for application in the whole of the first year of the Programme for Professional Medicine, is well beyond the purview of this study. What the researcher does propose to do, is to take cognisance of forces necessitating change, with a view to improve the assessment system currently in use in Module MEA112 on general skills.

3.6.1 Forces necessitating changed assessment in South African institutions of higher education

The kind of curriculum change that is currently taking place in South African higher education institutions demands a shift towards more innovative forms of assessment. In the years before 1994, the South African Department of Education focused on teaching. Value-free, neutral knowledge was transmitted uni-directionally from lecturer to student and assessment of this knowledge was largely related to cognitive aspects. Contrary to this approach, the current Department of Education focuses on learning and the preparation of citizens capable of applying knowledge and lifelong learning. The acquisition of knowledge according to this approach goes hand-in-hand with responsibilities to society at large, which means that the teaching of subject content cannot be separated from the development and assessment of general skills. Recognition of this new direction, in turn, influences the validity and relevance of traditional forms of assessment (RSA DoE & DoL, 2002; RSA DoE, 2001).

An important influence in the process of changing to alternative forms of assessment stems from the Qualifications Framework and SAQA viewpoints concerning outcomes-based assessment. Following the guidelines provided by these two sources, the adoption of outcomes-based learning implies a shift from educational aims and objectives that are only loosely connected to the assessment process (and therefore only provide an overall direction for the teaching and learning process) to a more direct and explicit connection between intended learning outcomes and the method of assessment (Jackson, 1999).

In alignment with this policy directive, the Qualifications Framework puts forward the idea that teaching, learning and assessment should be inextricably linked to form a structured learning environment (Gultig, 1997:33). Traditionally, such integration did not form part of the South African educational paradigm. Teaching, learning and assessment were seen as separate entities, with assessment occuring at the end of a particular section of the work, mostly in the form of tests and examinations. Contrary to this model, assessment in outcomes-based education is not only a means of establishing whether intended learning outcomes have been achieved; it also provides opportunities for teaching and learning.

Lack of integration, however, was not the only problem in traditional curricula. Statements on desired learning outcomes and expected performance criteria prior to teaching or learning sessions were largely non-existent. What learners had to know was only vaguely specified (e.g. "You need to study chapters one to five for the test") and learning content ("knowing that ...") did not include a focus on skills and attitudes ("knowing how to ...") (*ibid.*).

Another aspect of assessment addressed by the Qualifications Framework that impacts on the development of skills, is the fact that assessment should no longer be the business of lecturers only. This view is based on the assumption that people subjectively involved with students, such as peers, and students themselves, hold the key to accurate assessment results. As explained by Rolheiser (in Schurr, 1999:18), the involvement of other role-players in the

assessment process has an important contribution to make towards the development of personal, self-regulatory skills:

> *Giving students opportunities to evaluate their work has a positive impact on their achievement. The effects are even greater for students who are taught self-evaluation techniques. Research indicates that self-evaluation plays a key role in fostering an upward cycle of learning. When students evaluate their performance positively, self-evaluation encourages them to set higher goals and commit more personal resources or effort. The combination of goals and efforts equals achievement. A student's achievement results in self-judgement, such as a student contemplating the question, "Were my goals met?" ... Goals, effort, achievement, self-judgement, and self-evaluation all can combine to impact self-confidence in a positive way.*

3.6.2 Assessment of general skills in medical education

In medical education there is a growing movement toward the assessment of clinical skills through the use of non-traditional forms of assessment such as logbooks, data analysis and objective structured clinical examinations (OSCEs) (Fowell et al., 2000), standardised patients, simulations, role-playing and observation of actual performances under real-world conditions (Pangaro, 2000). Following directives from the General Medical Council in *Tomorrow's Doctors,* alternative modes of assessment are also emerging in undergraduate medical education (for extended reading on the use of alternative modes of assessment, see Humphris & Kaney, 2001; Chur-Hansen & Vernon-Roberts, 2000; McLachlan, 2000). A study of current variations in student assessment practices in British undergraduate medical curricula, for example, showed that ... *existing modes of assessment that reflect the former 'transmission model' are rapidly becoming outdated, given the broader, more holistic aims of professional education* (Fowell et al., 2000:6).

However, as far as the assessment of **general skills** is concerned, it was found that little progress has been made. This state of affairs is attributed to the lack of appropriate methods for assessing those skills, conservatism and a lack of staff time and resources. In reporting the outcome of their investigation into current assessment practices in medical schools across the United Kingdom, Fowell et al. (2000) came to the following conclusions related to the assessment of general skills:

- Few schools assess general skills explicitly.
- All schools assess written and oral communication skills at some stage during the curriculum, but only fourteen schools reported that they assess students' abilities to manage their own learning.
- Where general skills are assessed, it is more frequently done during the first two to three years of curricula.

Based on the findings of the Fowell et al. (*ibid.*) study, it may be concluded that the assessment of general skills is lagging behind other curriculum changes, even in the United Kingdom, where the publication of *Tomorrow's Doctors* has prompted a wave of innovation in medical education. The situation is exacerbated by, what Fowell et al. (*ibid.*) refer to as, a "conceptual overlap" between the assessment of general skills and the assessment of outcomes achieved in special study components (SSMs) of curricula.

One way of addressing the nebulosity surrounding the assessment of general skills, is to formulate clear criteria for the assessment of each aspect of general skills (*ibid.).* This view is supported by Jolly (1997:23), who argues, with reference to the new interest in the professional competence of doctors, that ... *[t]here is little point in any public body setting goals for training if these are not implemented in an assessment strategy in terms of a series of standards.*

3.7 CONCLUSION

The point raised by Fowell et al. (2000) that ... *medical schools should have a policy that sets the criteria for the assessment of each aspect of transferable skills ...* , poses a major challenge to those responsible for the teaching and assessment of general skills. However, it is a challenge worth pursuing because of the potential contribution it could make towards the assessment of "hard-to-measure" qualities and skills.

The next chapter is aimed at the identification of measures that may be taken to determine standards and criteria for the achievement of critical outcomes. The

whole chapter is devoted to a discussion of vital issues regarding the design and use of the type of assessment that provides a link to real-world circumstances, and yet preserves the measurement goals of validity, reliability and fairness. By indicating how assessment may be used in a way that reflects current principles of learning and assessment, the chapter also endeavours to show that alternative assessment is not, as some have claimed, ... *simply a new bandwagon which criticizes psychometrics without putting anything substantive in its place* (Hansen, in Gipps 1994:174).

CHAPTER FOUR

THE CHARACTERISTICS OF EDUCATIVE ASSESSMENT

Assessment is undergoing a paradigm shift, from psychometrics to a broader model of educational assessment, from a testing and examination culture to an assessment culture.

(Gipps, 1994)

4.1 INTRODUCTION

As is evident from the preceding chapters, global trends in skills development, in concurrence with local requirements and policy directives, have caused general skills to take a pre-eminent position in the curriculum reform that is taking place in South African higher education institutions.

The adoption of a skills-recognising curriculum, however, has important assessment-related implications. Firstly, such a decision implies that, in addition to a body of knowledge and understanding, a broad range of higher-order abilities such as problem-solving, critical thinking, communication and group functioning have to be assessed. Secondly, it means that those responsible for implementing the policy decision to develop general skills should be able to demonstrate to the different parties interested in the effectiveness of a new programme that the methods and procedures employed for measuring the achievement of skills outcomes may be used with confidence. Interested parties may include

- managers of the institution or accrediting bodies, interested in academic standards as a quality label;
- academic staff, involved in the design and implementation of curricular innovation;
- academic development staff, who need to direct support activities; and
- students, who expect their learning needs and expectations to be met.

This chapter is devoted to a discussion of issues regarding the technical aspects of the design and implementation of assessment practices that reflect the goals of an

innovative, outcomes-based curriculum. The notion that assessment, anchored in authentic performance tasks, provides the best opportunity for achieving critical outcomes is centre-staged, with due consideration of the trustworthiness of the assessment as an indicator of quality. In the final analysis, a case study of criterion-based assessment of general skills in a medical context is discussed to demonstrate the researcher's understanding of an embedded, authentic assessment task.

4.2 ASSESSMENT OF CRITICAL OUTCOMES

Assessment, in a generic sense, refers to the capturing of information about students' competence[10] during and/or at the end of a learning process. In the Qualifications Framework, as discussed by Gultig (1997), educators are encouraged to start using an **outcomes-based, criterion-referenced, formative approach** to assessment, instead of an input-based, norm-referenced, summative approach. The latter approach encompasses those traditional assessment practices which have been labelled by critics as "isolated from" and "damaging to" the processes of teaching and learning (Jamentz, 1994).

An outcomes-based, criterion-referenced approach to assessment refers to the generation of evidence that intended outcomes have been achieved, and the benchmarking of that evidence against a specific set of criteria, instead of against the performance of others (norm-referenced assessment). When this benchmarking does not consist of a single activity only, but of a **process** that makes provision for feedback, adjustment, correction and re-assessment, the process is said to be formative. Formative assessment, in turn, is credited for giving recognition to the fact that students learn in different ways and at different rates (Van Rooyen, 1999:9), for helping students to improve their performances, and for encouraging lecturers to reflect on their teaching practices. Assessment that meets these criteria is described as *educative* (Wiggins, 1998) or *educational*

[10] Competence is defined as a deep cognitive structure of general ability which is not fixed, but has the potential to develop; it is situationally specific, and depends on the value judgements of the individuals present at the time of performing a task which permits the demonstration of comptetence. Competence does not refer to training in specific tasks alone, or to the mastery of a fixed set of performances, but rather to "intelligent adjustment" in all major fiels (Wiggins, 1998; Atkins, Beattie & Dockrell, 1993:39).

(Gipps, 1994), and is commended for serving, rather than damaging the processes of teaching and learning.

This broad definition of outcomes-based, criterion-referenced, formative assessment points to three key practices that play a critical role in "serving" the curriculum, namely the

- generation of evidence demonstrating achievement of intended outcomes;
- formulation of transparent standards against which assessment judgements can be made; and
- utilisation of assessment results for the purpose of adjustment and improvement of performance.

These three elements provide the framework within which answers will now be provided to the question that is pivotal to the work of academic staff who are responsible for the development of general skills: *What does it take to ensure that the methods and procedures used for assessing the achievement of critical outcomes, indeed* ***improve*** *student learning?*

4.3 GENERATING EVIDENCE OF ACHIEVEMENT

Central to the issue of generating evidence of the achievement of intended outcomes, is the setting of standards. According to Wiggins (1998) (from whose work I have borrowed extensively to demonstrate my understanding of generating evidence of the achievement of outcomes), three levels of educational standards are needed in order to ensure that assessment is educative:

- Content standards, answering the question, *What outcomes should be achieved as a result of a particular instructional activity?*
- Task standards, answering the question, *What tasks are worthy and rigorous enough to yield the right kind of evidence?*
- Performance standards, answering the question, *How well must students perform in assigned tasks?*

4.3.1 Content standards

Prior to specifying what outcomes should be achieved, a lecturer or assessor should be clear about exactly what the term *outcomes* means. Outcomes are defined by Jacobs and Chalufu (2000:110) as ... *observable demonstrations of learning that occur at the end of a significant set of learning experiences.* Such demonstrations can include intellectual, personal and/or practical achievements. What these achievements have in common is that they require students to construct, rather than select responses. Assessment of constructed responses, in turn, is best achieved through requiring students to demonstrate what they can **do** (i.e. perform) with what they know. Within this context, content standards refer to ... *very specific **performances** and the levels by which they will be judged* (Mabry, 1999:62) [emphasis added]. Outcomes-based assessment thus encompasses performance-based tasks that call on students to demonstrate what they can do, and generate tangible products as evidence of the achievement of specific and critical outcomes (cf. par. 1.7.2 for conceptual clarification).

With reference to the achievement of **critical outcomes**, performance samples are chosen to represent students' progress in areas such as higher cognitive skills (connecting and integrating knowledge, application of core concepts and principles from subject content in solving problems), basic communication skills, information literacy and technological skills, self-sufficiency as an individual and productivity as a member of a group. Typical performance samples include event tasks, process assessment tasks, problem-solving tasks, projects, exhibitions and enhanced multiple-choice questions (Hart, 1994). Table 4.1 provides brief information on the intended outcomes of each type of task, as well as the methods of assessment that may be used for measuring achievement of those outcomes.

Table 4.1 *Intended outcomes and assessment of performance tasks* (Hart, 1994)

Performance task	Intended outcome	Method of assessment	Elaboration
Event tasks	Demonstration of broad competencies such as writing fluency and problem-solving skills	Scoring of performance samples Self-assessment Peer assessment Combination	Typically grounded in specific subject areas.
Process assessment tasks	Demonstration of how well learners have mastered a process such as effective teamwork	Observation Self-assessment Peer assessment Assessing records or other evidence of the process	Care needs to be taken that the collecting of evidence does not become so onerous that it becomes more important than the skill itself. This may demotivate students and place a heavy workload on staff.
Problem-solving tasks	Demonstration of students' ability to use their analytical skills to solve a problem	Planning report Logbook	Students are generally presented with a realistic problem or situation which they need to solve by working out a feasible plan. The problem may be well-defined and complete, or ill-defined and incomplete to make the task more realistic.
Long-term projects	Demonstration of students' ability to solve a complex problem (individually or in groups) that requires planning, research, discussion and group presentation	Written report Oral presentation	This technique is very appropriate for facilitating co-operation.
Exhibition of mastery	Demonstration of students' ability to apply the skills of enquiry and expression giving them the opportunity to show off what they know and what they can do	Posters Oral presentation of a research paper Portfolio	These tasks often take on the form of long-term projects that serve as a focal point for a particular module or unit of study. The skills of enquiry and expression are regarded as essential skills requiring a synthesis of questioning, problem-posing, problem-solving, independent research, creation of a product or performance and a public demonstration of mastery.
Enhanced multiple-choice questions	Demonstration of students' understanding of concepts and higher-order thinking skills	Tests Examinations	If constructed to present authentic problems, requiring critical thinking in determining the correct response, multiple-choice questions can be an effective form of assessment. They can even be constructed in an open-ended manner, requiring students to explain or justify chosen responses.

There is overwhelming evidence in the literature indicating that performance tasks such as those mentioned above, cannot be learnt *in vacuo*. Cognitive theory teaches that there is an intimate connection between skills, and the contexts in which those skills are used. Resnick and Resnick (1992:43) have the following to say in this regard: *Educationally this suggests that we cannot teach a skill component in one setting and expect it to be applied automatically in another. That means, in turn, that we cannot validly assess a competence in a context very different from the context in which it is practised or used.* Assessment of critical outcomes should thus take place within specific contexts. This links up with the issue of formulating authentic task standards.

4.3.2 Task standards

For assessment to be educative, it should be designed to teach, and not just measure, by demonstrating to students what real-life work looks like. The goal of identifying performance tasks that will yield the "right" kind of evidence that skills outcomes have indeed materialised, can be achieved by means of authentic performance tasks. Authenticity, however, has become a "buzz word" in assessment discourse. Consequently, products such as pieces of writing, performed outside of specific disciplinary contexts, are sometimes erroneously referred to as examples of authentic assessment.

In support of the view that authentic assessment needs to take place in well-defined contexts, Wiggins (1998:15) warns that merely looking at a performance sample constructed outside of a meaningful context would mean reverting to traditional decontextualised assessment. The latter form of assessment allowed *... coaches [to] isolate a bit of performance from the context and work on it with the performer. But the sum of drills is not genuine (flexible, fluid, graceful, responsive, and effective) performance.* Authentic assessment is not based on rote or ritualistic performances, but on performance-based tasks that closely simulate or actually replicate challenges faced by professionals working in a specific disciplinary context. Admittedly, as noted by Wiggins (*ibid.*), there are only a small number of such tasks in any given discipline and although desirable,

contextual authenticity is not a precondition for meeting the aims of educative assessment.

In addition to a realistic context, authentic assessment requires that one or more of the following conditions should prevail: that students explore or conduct an investigation within the disciplinary field; that students are involved actively and co-operatively in the productive process; that opportunity is allowed for rehearsal, practice, consultation of resources and refinement of products and performances (Schurr, 1999; Wiggins, 1998).

In the final analysis, authentic assessment communicates to students what it means to complete a performance task well, by making the standards according to which their work will be judged, explicit. Hart (1994:9) says in this regard: *In this sense authentic [assessment tasks] are* ***standard-setting****, rather than* ***standardized*** *assessment tools* [emphasis added], which brings one to the issue of performance standards, criteria and indicators.

4.3.3 Performance standards

Once the desired outcomes and suitable performance tasks that will render evidence of the achievement of those outcomes have been chosen, the next question to ask in the design of assessment is: How well should students be able to perform? The reasoned exposition below on the articulation of transparent standards as the second determinant of assessment which serves the curriculum, will provide clarity on this question.

4.4 ARTICULATING TRANSPARENT STANDARDS

Excellence in assessment has to do with the worthiness and aptness of performance tasks and the formulation of clear and transparent guidelines on what should count as high-quality demonstrations of achievement. With reference to the need for specificity and transparency as provisos for assessment of high quality, Wiggins (1998) stresses the importance of performance standards by

saying that if the standards against which the actual performance, relative to ideal performance, should be judged are lacking, the exercise cannot be termed assessment.

At this juncture, it is deemed necessary to take cognisance of the debate in the literature on the issue of setting standards. On the one hand, there is the realisation that general verbs or action words forming part of outcome statements (for example: *at the end of this session, learners should be able to* ***conduct*** *a research project and* ***work*** *in groups*) set no standard. Action words are still a long way off from setting standards because they give no indication, in measurable terms, of how the intended performance will be measured. Nor do they give guidance on specific tasks that will be set for assessing students' ability to use their skills. Standards are set only when the conditions that a performance must meet are defined (*ibid.*). On the other hand, some maintain that it is not the ideal situation to be too specific when standards are set, because of the possibility that this might stifle creativity.

Stefani (1998), for example, comes to the conclusion that this is a matter which still needs to be resolved, and that it will be an evolving process. While this evolutionary process has just begun in the UFS School of Medicine, the researcher opts to side with those who argue that in order to maintain and enhance the quality of education, ... *students need to be given access to the 'guilded' knowledge which defines the quality of the expected performance* (Sadler, cited in Stefani, 1998:348).

4.4.1 Setting standards

Having made the point that broad outcome statements should not be mistaken for transparency, a conceptual disentangling of the terms that are used to describe how well a performance task should be done in order to be considered as being of a high quality, may be useful. Therefore, for the purpose of this study, the concepts *standards*, *indicators*, *criteria* and *rubrics*, all of which are used to set standards, carry the meanings indicated in Table 4.2, as summarised from the work of Wiggins (1998).

Table 4.2 *Terminological clarification of concepts used to describe the quality of a performance task*

Standard	An overarching concept, referring to how good a performance should be or how much of something is desired. Criteria, indicators and rubrics are used to give such an indication.
Criterion	A statement indicating what aspects of a performance task will be judged. It serves as a bridge between a broad intended outcome (e.g. effective public speaking) and the aspects comprising that outcome (e.g. impact of presentation, adequacy of methods and behaviour). It is compulsory that all criteria, describing a particular performance task, should be met in order for the performance to be considered "successful".
Indicator	A statement used to describe the idiosyncrasies of a particular task. An indicator gives more information than a criterion (e.g. the quality of the procedures and manner of presentation, prior to and during the presentation). All indicators need not be met for achieving a specific outcome (e.g. the organisation of material and the skills used to present the material may be polished, but the information may be incorrect).
(Scoring) rubric	Statements that describe performance along an excellent-to-poor continuum. There is no "correct" way of constructing rubrics, apart from the fact that they should depend on standards; they should give an indication of the range of possible achievement in respect of the quality of a performance; and they contain a scale of possible points or levels of achievement. Good rubrics do not rely on comparative language (e.g. "this essay is less clear"), but always describe "less" or "better" in tangible qualitative terms.

Apart from clarity on standards, a second prerequisite for skills outcomes of a high quality is that the assessment system should give the message to students that performance tasks identified as demonstrations of skills acquisition are mandatory (*ibid.*). In concrete terms, this requirement could be met by giving students well-structured information on the assessment tasks they will be expected to perform, and clear indications of the kind of performance samples that should be generated for assessment purposes.

Describing the kind and degree of performance that is desired seems deceptively easy. However, those who grapple with this challenge are actually addressing the crucial issue at the heart of assessment, namely validity and reliability, which will now be discussed.

4.4.2 Trustworthiness of assessment

Concepts that are mentioned quite frequently in the discourse on the formulation of standards are reliability, validity and generalisability. Reliability within the psychometric assessment model is about consistency of measurement and the concept is based on the premise that academic achievement can be measured accurately, resulting in a mark that is unaffected by the context or the testing situation (Gipps, 1994). As explained in paragraph 4.3.1, performance is very much context-bound. Furthermore, the post-modernist constructivist model of education rejects the idea of a completely detached and objective assessor, on the basis of the belief that assessors are also human beings who make sense of the world (including the assessment situation) according to their own perceptions and values. The existence of something like a "true score" is thus denied (*ibid.).*

Validity, in turn, refers to the extent to which assessment results reflect intended learning outcomes. Validity is a crucial issue in the assessment of skills, since conventional methods of assessment are inappropriate for the testing of skills. As Drew and Bingham (1996) point out, ... *written examinations on skills tend to test an individual's understanding of theories of skill usage rather than their own actual practice of that skill.* Similarly, the use of multiple-choice questions would be an invalid way of testing the acquisition of group-work skills.

Both validity and reliability are pervasive terms and a reconceptualisation of these concepts within a constructivist paradigm is singled out by various researchers (Siebörger & Macintosh, 1998; Gipps, 1994) as one of the most difficult challenges in current-day assessment. The central issue is how to assure quality ... *when the type of assessment being used is not designed according to psychometric principles and ... highly standardized procedures are not appropriate* (Gipps, 1994:2).

Furthermore there is the issue of the trade-offs between validity and reliability. Assessment can be reliable without being valid. The results of a conventional test on communication skills would, for example, be reliable in the technical sense, but would indicate nothing about the student's ability to communicate. Such a test

has no validity. The opposite may also occur. Writing an essay, for example, is a valid way of assessing writing skill, but is not very reliable, as evidenced by the different marks allocated by different assessors, even with the help of explicit rubrics. Some even claim that assessment can never be completely valid or reliable, given the human factor in the interaction among the assessment situation, the learner and the subjective judgement of the assessor (*ibid.*). Still others argue that reliability is important when the products of performance are measured, but that validity is more appropriate when the process of performance tasks is considered. Brown and Knight (1994:15), for example, maintain that *...reliability was not intended to be a concept applied to dichotomous data, as with criterion-referenced assessment where the candidate has either met or not met the requirements set out in the criterion.* In contrast, at the other end of the spectrum there are those who maintain that validity and reliability are just as important for new as for traditional approaches to assessment (Wiggins, 1998).

Based on views such as these, the psychometric connotations of validity, reliability and generalisability are increasingly being displaced by the concepts of **trustworthiness** (Gipps, 1994) on the one hand, and **quality assurance measures** on the other. The emphasis of the latter approach is on the design of **procedures** that will ensure assessment that is as **fair** as possible (Siebörger & Macintosh, 1998).

Trustworthiness, according to Guba and Lincoln (1989), depends on the concepts of *credibility, transferability and dependability*. *Credibility* has to do with the inclusion of other stakeholders in the assessment as well as with the supplementation of once-off terminal assessments with continuous assessment. *Transferability* refers to the extent to which a repertoire of skills, knowledge and understanding, attained within one context, can be applied in a range of other contexts. Since performance is influenced by the context in which it takes place, the possibility of transfer increases if the sending context (context in which the skills were acquired) and the receiving context (discipline or professional context) correlate with each other. Transferability thus replaces the traditional concept of generalisability. *Dependability*, in turn, is concerned with the concept of fitness-for-purpose. According to Gipps (1994:173), dependability forms the intersection

of reliability and validity and is defined as ... *the highest validity and optimum consistency and comparability for a particular purpose* (cf. also Erwin & Knight, 1995). The level of comparability desired is, of course, directly related to the purpose of the assessment. When the purpose of assessment is summative, comparability of results will be of greater concern than would be the case if the results were intended for formative feedback with a view to adjustment or improvement of performance. Furthermore the dependability of an assessment will increase if the process and results of the assessment are open to scrutiny through, for example, a process of moderation *(ibid.)*.

Fairness implies, amongst other things, that there should be clarity on what will be assessed and how it will be scored. McMillan (1997:63) makes the following observation in this regard: *By knowing the scoring criteria, students understand much better the qualitative differences the teacher is looking for in student performance.* Fairness through transparency is also propagated by Stefani (1998), who supports the move toward providing students with exemplars in the form of previously marked assignments on the bais of which students can become aware of the standards they are expected to meet.

This call for transparency in the name of fairness contrasts sharply with the traditional view of assessment as something that "was done" to a student by an outside force. For many a lecturer "being fair" in this sense will require a mind shift, for as Stefani (1998:348) indicates,

> ... *academics and university teachers are in general terms extremely poor at modelling a learning process for students. There is always a general level of upset at poor essays ..., but if academics would stop to think about it, this upset stems from the assumptions we make that all students inherently know how to construct, for example, a good essay. Teachers/tutors very rarely guide students through or model the process of structuring an essay.*

This issue is of particular significance in the South African context where the diversity of student intake gives prominence to the enhancement of general skills, seeing that many cases of failure and drop-out may be ascribed to basic skill deficiencies caused by many years of disadvantaged schooling.

Fair assessment, however, should also be seen from a **feasibility** point of view, because fairness also has to do with the reasonability or practicability of the exercise. An assessment exercise might, for example, be fair to the students, but completely unfair towards the assessor or the assessing institution. For this reason, the cost of performance-based, alternative forms of assessment, calculated in terms of resources and time, should always be taken into account. McAleer (2001:312) recommends that the following questions, *inter alia*, should guide the decision to embark on a specific form of assessment:

- How long will it take to construct the instrument?
- How much time will be involved in the marking process?
- Will it be relatively easy to interpret the scores and calculate the results?
- Is it practical in terms of organisation?

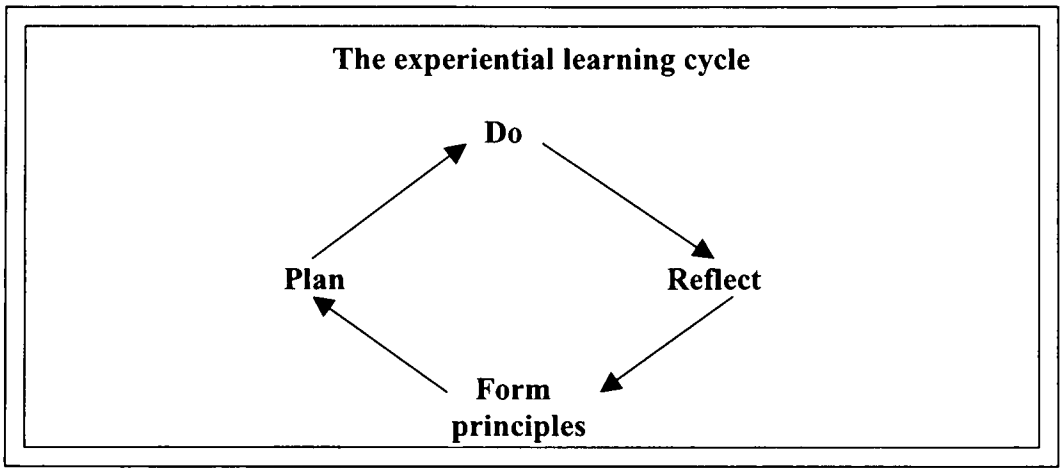
4.5 BUILDING STUDENTS' CAPACITY TO USE ASSESSMENT IN THEIR LEARNING

One way of improving student performance is to help students to become active, skilled users, not only of assessment results, but also of assessment episodes. However, prior to a discussion of procedures that help students to give, receive and use feedback for the purpose of improving the quality of products and performances that demonstrate their level of skills development, it is necessary to understand how skills are acquired.

4.5.1 The process of skills acquisition

Gibbs et al. (1994) use a modified version of Kolb's four-stage experiential learning cycle (Figure 4.1) to explain that learners do not become proficient in the use of a particular skill simply by being lectured on it, discussing it or thinking about it. Skills acquisition requires practice (concrete experience/doing), reflection on what went well and what went wrong (reflective observation), the development of a personal theory on what skilful performance entails (abstract conceptualisation/forming of principles), and a decision on what to do differently the next time (active experimentation/planning).

An important observation made by Gibbs et al. (1994:13) is that ... *ineffective skill development processes often emphasise one aspect of the learning cycle at the expense of the others.* When, for example, there are repeated opportunities for applying the skills that were learnt, but no follow-up opportunities for feedback or time for the students to reflect on their progress, curricular aims are distorted; students miss the opportunity to relate aspects of their performance to assessment criteria and to receive feedback that can help them improve their current level of performance.



Stage	Illustrative learning activity
Do	Experiential exercises, actually using the skills.
Reflect	Watching a video of oneself, discussing what happened, using a checklist to assess the use of a skill, keeping a reflective log or diary, profiling skills.
Form principles	Listening to a lecture about a skill, reading, summarising general principles from a discussion.
Plan	Setting action plans, identifying priorities while preparing for a presentation, written assignment or teamwork.

Figure 4.1 *The experiential learning cycle* (Gibbs et al., 1994:13)

The question that remains, then, is: *What steps can those responsible for the development of general skills take, to ensure that the assessment they use empowers (or enables) students to obtain a better understanding of the standards they are working towards?* To answer this question, the issues of providing feedback and involving students as co-assessors will now be discussed.

4.5.2 The function of feedback

Feedback is not the same as giving approval, disapproval or advice. Praise, says Wiggins (1998), can encourage learners, but cannot help them to improve their performance. Stefani (1998:348) reiterates Wiggins' standpoint as follows: *Feedback is information that provides the performer with direct usable insights into his/her current performance, based on tangible differences between current performance and the learner's hoped for performance.*

Providing feedback to students on their progress to help them to rectify and consolidate their learning is a very important function of assessment which did not receive adequate attention in the past (Gravett, 1996). However, if the preparation of students for the world of work is truly valued, feedback will form an integral part of skills training. As noted by Wiggins (1998), the message of quality control and increased production in all forms of modern work is improvement of performance through feedback in relation to specific standards (cf. *ibid.*:47, for an interesting case study on how formative feedback in an educational setting can encourage self-correction).

However, as indicated by Jamentz (1994), performance assessments are sometimes used like final exams, with neither lecturers nor students showing any inclination to make use of the data that the assessment has revealed. Therefore, in order to be effective, feedback should meet certain requirements (Stefani, 1998; Wiggins, 1998):

- The performer should be clear on the requirements of the performance task and the criteria and rubrics (level descriptors) that will be used to assess the task.
- The feedback should help students to reflect on the overall outcome of the performance (What worked for me and what did not?), and not on efficiency issues.
- The feedback should be given not only after a performance in the form of summative assessment results, but also during the performance.

Table 4.3 provides a summarised view on the differences between effective and ineffective feedback (Wiggins, 1998).

Table 4.3 *Examples of effective and ineffective feedback*

Effective feedback ...	Ineffective feedback ...
... provides confirming (or disconfirming) evidence of effect relative to intent by, for example, comparing product/performance to rubrics and previous exemplary work.	... provides nonspecific advice, praise/blame or exhortations such as "try harder" or "good job!" - a mere score on the paper.
... describes qualities of performance, using concrete indicators and traits unique to each level (i.e. rubrics).	... uses rubrics like "excellent", "good", "fair" and "poor," with no insight into the characteristics that led to such value judgements.
... enables performers to improve through self-assessment and self-adjustment.	... keeps the outcomes of the performance constantly dependent on the assessor.

4.5.3 Self- and peer assessment

Another action that can be taken by educators to ensure that assessment becomes an opportunity of learning is to involve students in the process as peer and self-assessors. As discussed in preceding chapters, the development of intellectual autonomy is one of the most important educational aims of innovative curricula. Critical examination of self- and peer assessment can play a significant role in the achievement of this goal. Boud (1990:109) has the following to say about the self-critical learner: *Self-assessment is fundamental to all aspects of learning. Learning is an active endeavour and thus it is only the learner who can learn and implement decisions about his or her own learning: all other forms of assessment are therefore subordinate to it.* However, in traditional assessment systems, students are passively dependent on the assessor for information on how they have fared. Summative goals dominate assessment and students focus on grades or marks and not on what they have achieved and what areas still need development.

In innovative assessment systems self- and peer[11] assessment are recognised for their inherent potential for developing in students a consciousness about their own

[11] Peer assessment is not the same as peer marking. The latter term is used to describe one student marking another student's work. *Peer assessment is assessment of the work of other by people of equal status and power* (Brown, Bull & Pendlebury, 1997:171).

performances, giving them a certain degree of self-directing independence with a view to the development of lifelong learning habits (Brown & Knight, 1994). Other advantages of peer and self-assessment, as outlined by Mabry (1999), Anderson (1998), Hobson (1998), Wiggins (1998), Brown, Bull and Pendlebury (1997) and Brown and Knight (1994), include the following:

- They can be used to assess products, performances and processes such as leadership, group and project management and how well a groupworks together. As noted by Brown, Bull and Pendlebury (1997), peer assessment may be the only satisfactory way of assessing how students work together as a group.
- They reinforce each other in the sense that when peers assess one another, they are purposefully applying the criteria that they need to develop in their own work. Thus, through assessing their peers, students learn about their own strengths and weaknesses, which is the main purpose of assessment. In the process they also develop the skills they need for lifelong learning.
- They teach students to respond sensitively to one another's work, which is an important aspect of teamwork in the world of work.
- Peer rankings may be averaged and compared to the instructor's ranking to increase the reliability of the assessment.

In concert with the views expressed by these authors, Stefani's (1998) research on assessment in partnership with students, which relies heavily on the influential work of Falchikov and Boud, openly criticises the unilateral control of assessment by academic staff as pedagogically unsound. She advocates that academics should work *in partnership with students, particularly in the context of assessment, for the purpose of enhancing learning and developing autonomous, independent and reflective learners* (*ibid.*:339).

It is important, though, that peer and self-assessment should not be seen as a matter of dumping the responsibility for assessment onto learners as a solution to huge workloads. On the contrary, peer and self-assessment tend to be "front-loaded" in terms of time and effort to ensure fairness and reliability (Wiggins, 1998).

The work of Brown and Knight (1994) gives substance to the idea of "front-loadedness." They admit, in the face of overwhelming evidence of the advantages of self- and peer assessment, that there is a negative side to the coin. First of all, there is the possibility that self- and peer assessment modes may give rise to feelings of uncertainty, insecurity and dissatisfaction. Some learners object to self- and peer assessment on the grounds that they would prefer to trust the "expert" judgement of the lecturer. Others resist having to assess their peers in ways that "count", while still others are afraid that peer assessment may ruin the cohesion of their groups. Some lecturers, in turn, dislike having to give up some of their power, while others question the reliability of peer assessment.

In order to prevent students from developing feelings of insecurity, it is recommended that the introduction of self- and peer assessment should be preceded by careful preparation of students to ensure that they are well-informed on the goals and rationale behind assessment practices that are new to them. Furthermore, students should be involved in the establishment of criteria according to which peers' work will be assessed. Lecturers should guard standards and protect students from unfair assessment by moderating the process of peer assessment (*ibid.*).

Further recommendations aimed at avoiding feelings of resistance are that self-assessment should be used as a learning tool rather than as a tool for summative assessment. Instead of seeing peer and self-assessment as methods of assessment, they should be seen as sources of assessment, or as a form of feedback that may be used **in combination** with different methods and instruments of assessment, prior to summative assessment of a task, or as part of the summative assessment.

Ultimately, the view is expressed by Brown and Knight (1994) that lecturers should concede that students are capable of making accurate judgements. Research done by Race (*ibid.*), for example, showed that peer marks closely match those given by tutors. Boud and Falchikov (1989), in turn, showed that high achievers are prone to underrate themselves, while low achievers tend to do the opposite. However, even if this is the case, the use of self-assessment is still a

powerful instrument for giving feedback because a substantial difference between a student's self-assessment and the verdict of the assessor, provides a useful point of departure for giving formative feedback to the student.

4.5.4 Involvement of students in learning episodes through the use of portfolios

In her article on the use of assessment to improve performance, Jamentz (1994) cautions that performance assessment can easily become a new way of making old mistakes. A typical example of such a mistake occurs when portfolio-based assessment amounts to little more than work accumulated in a file because neither the staff, nor the students, have the skills or the time to use the portfolio system to improve performance. A literature perspective on the purpose, content and procedures of portfolio-based assessment serves to identify the possibilities and pitfalls of this potentially powerful form of assessment.

As part of the move away from a testing culture towards a more encompassing and educative assessment culture, interest in portfolios as a vehicle for assessment has increased. Using portfolios to monitor progress is not a new concept, but the promise it holds for motivating and involving learners in their own learning has fuelled renewed interest in portfolios as a mode of assessment, in all educational contexts, including medical education (Driessen, Overeem, Schuwirth & Vleuten, 2002; Dent & Harden, 2001).

4.5.4.1 Definition of a portfolio

A portfolio is defined by Arter, Spandel and Culham (1996) as a purposeful collection of a student's work that tells the story of her achievement or growth. An overview of the literature revealed that there is no single "correct" way to approach portfolios (Dent & Harden, 2001; Mabry, 1999; Scanlon & Ford, 1998; Wiggins, 1998; Brown, Bull & Pendlebury, 1997; Cole, Ryan & Kick, 1995; Hart, 1994). Confusion seems to centre mostly around a lack of clarity about the purpose of portfolios and the question of what should go into the portfolio.

4.5.4.2 Purpose and content of a portfolio

Arter, Spandel and Culham (1996) argue that there are only two basic reasons for compiling a portfolio. The first is instruction, based on the premise that students learn something while they are assembling a portfolio, and that the portfolio provides them with a framework for reflecting on their work. The second reason for creating a portfolio is that it facilitates the assessment illustrations of a student's proficiency in identified performance tasks at the end of a learning programme or module. Seen from this point of view, a portfolio is not so much a product in itself, as a means of making a student's progress towards the achievement of intended outcomes visible and tangible.

A similar view is held by Cole, Ryan and Kick (1995), who distinguish between process and product portfolios, saying that one automatically flows forth from the other. The process portfolio is a dynamic document that is used as a growth instrument, demonstrating, by means of interim evidence, students' performance at the beginning of a learning task, as well as their progress towards achievement of intended outcomes. The idea is that students should reflect on the interim evidence, articulating what should be done about their problems. On the basis of the process portfolio, students are expected to compile an abbreviated product portfolio at the end of a learning programme or module, by selecting their best pieces of work to demonstrate proficiency in identified performance tasks. All work samples selected for inclusion in the product portfolio should be samples that the student is willing to share; and they should ideally be accompanied by the student's reflection on what competencies each sample represents.

A third approach is the one advocated by Wiggins (1998), who maintains that a portfolio designed to show evidence that a certain performance standard has been achieved (assessment portfolio), is very different from a portfolio designed to show progress over time (personal or instructional portfolio). Whereas the latter kind of portfolio could legitimately consist of interesting documentation chosen by the student, a portfolio that is used for formal assessment ... *must be dictated by the demands of sound evidence, not by the desires, standards, and interests of the student* (*ibid.*:192). If the aim is credible assessment, then the portfolio should

be designed by adult educators on the basis of accepted standards for evidence. To increase the authenticity of the assessment portfolio, Wiggins (1998:108) suggests that in addition to specifying the content and performance standards of products to be included in the portfolio, students may be asked to collect evidence from genuine assignments and assessments that ... *set the* de facto *standard for what counts as performance.* Wiggins (*ibid.*) actually uses a new word, *anthology*, to indicate that the portfolio intended for formal assessment is ... *a deliberately designed-to-be-valid sample of student work* (*ibid.*:194).

Honouring the standards for trustworthiness described in par. 4.5, an assessment portfolio should ideally include three types of performance evidence, namely, tasks, prompts and tests (*ibid.*:195). *Tasks* include the authentic tasks that students have to perform in order to achieve the specific outcomes of core modules. If such tasks are assessed for skills according to scoring rubrics that are known to the students and staff members lecturing in core modules, the assessment of skill outcomes is divested of secrecy, making reliable assessment of students' competence possible. *Prompts* include constructed-response items such as descriptions of learning experiences, oral presentations, open-ended written tasks and exhibits suitable for display. In addition to tasks and prompts, anchored in authentic performance tasks, the portfolio should also include results of previously scored *tests*. Linking the portfolio content with other assessment modalities in this manner allows triangulation of assessment information, which increases the credibility of the portfolio.

4.5.4.3 The grading of a portfolio

The term, *grading*, is often associated with summative assessment, followed by an ultimate value, literal grade, score or mark used for summing up a judgement about the worth of a student's work. In a constructivist assessment paradigm, however, the term *grading* refers to a formative process, including the establishment and discussion of standards and reflection on the quality of a task against the standards and criteria agreed upon (Mabry, 1999).

Grades *per se,* however, reveal nothing about the quality of teaching or the standard of skills achievement. Some progress has been made in institutions using educative forms of assessment which allow a better reflection of students' accomplishments. However, since highly personalised assessment[12] systems (which, according to Mabry, are the only assessment systems that are compatible with constructivism) require radical assessment reform, the majority of institutions embarking on innovative curricula tend to choose a conscious combination of assessment strategies rather than the exclusive use of personalised portfolios. Seen from a personalised portfolio assessment perspective, the reduction of portfolio feedback to a grade instead of detailed individualised comment, represents an assessment system in which new techniques are unwittingly implemented within an old paradigm. However, grades are still needed for certification purposes by the administrations of higher education institutions.

There are also other reasons for perpetuating the habit of grading. Although the problems inherent in grading hard-to-measure qualities have led some to advocate the total abandoning of grades (cf. Smith, 1998), others (cf. Brady, 1997) argue in favour of grading, reminding the reader that everyone who has taught non-assessed subjects in a learning programme where most work is assessed, is familiar with the problems it causes in terms of attendance, behaviour and lack of learning. Gibbs (1992) agrees, saying that the clearest way to indicate the value of the development of skills is to include them in the assessment system. Also, if the production of evidence to prove competence in a particular skills area is to lead to the effective use of that skill throughout a student's study career, then that experience should be regarded as worthwhile by the individual (Latham, 1997). Research done by Janzow and Eison (Bean & Peterson, 1998:33) confirmed this view by showing ... *that students with a high grade orientation value only those portions of a course that are visibly graded.*

[12] *In the personalized paradigm, it is more appropriate for criteria and standards to be individualized, balancing considerations of quality with considerations of each student's background, opportunities, goals, and the like* (Mabry, 1999:31). ... *Rather than compare students to each other (i.e., normative assessment) or to one-size-fits-all standards (e.g. standards-based assessment, criterion-referenced assessment, mastery testing, minimum competency testing), personalized assessment features an ipsative strategy ... [which means] that scoring is useful in intra-individual comparison and not in inter-individual comparison (ibid.*:38*).*

In assessment based on a contextual[13] paradigm, the grading of portfolios used for assessment purposes (also referred to as assessment portfolios) is two-dimensional. At the first level, the work included in the portfolio is marked *en route* as each task takes place within a particular disciplinary context (see Wiggins' notes on marking tasks for content as well as for skill). Closure of an assessment portfolio exercise, however, requires the assignment of an overall grade, comprising the second level. The purpose of such a terminal scoring would be to officially declare that the portfolio content provides sufficient evidence of a student's achievement of or failure to achieve intended outcomes. Scanlon and Ford (1998) describe two ways of end-grading. One strategy is to invite students to self-assess and grade their portfolios according to previously negotiated criteria. In this respect there seems to be general agreement in the literature sources mentioned above that students should be involved (albeit to a lesser extent in assessment portfolios than in personalised portfolios) in selecting some of the content that goes into the portfolio, developing criteria indicating success and reflecting on what they have achieved. As highlighted by Kolb (1984) in his experiential cycle, reflection is the basis for all understanding, a key feature of deep learning and an important aspect of turning experiences into learning (Crosby, 1996). Self-reflection is credited as a useful tool for metacognitive self-monitoring, and therefore it can be used as a preliminary exercise to planning a portfolio (Brown, Bull & Pendlebury, 1997). Drew and Bingham (1996) argue that the habit of self-reflection can be encouraged by requiring students to evaluate their own performance as part of assessing the portfolio. They may be asked, for example, to fill in an assessment sheet prior to turning in the portfolio to indicate how well they think they have performed. The instructor then uses the same form, thus revealing discrepancies that may exist between what was expected and what the student thought was expected. After having reviewed the student's grade, the instructor confers with the student to reach consensus about a final grade.

An alternative option would be for the instructor to take full control of the grading decision according to criteria that are known to the students. Ultimately,

[13] *[In a contextual paradigm] assessments feature not standardized but curriculum-sensitive and authentic content (i.e., content that students have had a chance to learn and that might be useful in the world outside of school);... [and] students have opportunities to evaluate themselves* (Mabry, 1999:28).

participation in the grading process by an independent, external reviewer serves to validate that the judgements as to whether students have met, or failed to meet a certain standard, are appropriate and valid.

From the above it is evident that the implementation of a portfolio system can be a very time-consuming activity, both for the students who have to assemble portfolios and for staff members who have to mark them. For this reason, Brown, Bull and Pendlebury (1997) caution that the purposes of portfolios and their usefulness to students should be well thought through. Important recommendations in this regard include: careful planning of contents required, clear guidelines for students and instructors, realistic estimates of student and staff time, and clarity on the kind of feedback that students can expect.

4.5.4.4 Diagnostic value of a portfolio

As indicated in par. 4.4.2, many cases of academic failure in South African higher education institutions may be ascribed to the skill deficiencies of students from disadvantaged schooling backgrounds. One way in which previously marginialised students can be supported, is by helping them to develop the capacities they need to succeed. This process, according to Darling-Hammond and Falk (1997:55), ... *is encouraged if assessments are embedded in the processes of teaching and curriculum development, rather than added on as an unrelated appendage at the end of the year.*

The information that portfolios provide about students' strengths and weaknesses in the achievement of critical outcomes has the potential of helping academic staff to diagnose student needs and adapt their teaching strategies in response to individual needs. Ensuring that the assessment system is educative is thus more than a technical matter; moral obligations towards students who need academic support also come into the picture. The challenge is to develop an assessment system that responds to the developmental differences among students while simultaneously eliciting the same kind and level of achievement from all students. Darling-Hammond and Falk (*ibid.*) believe that such a system is possible if (a) the elements of content, context, procedures and format of assessment are kept

flexible so as to make provision for students' prior levels of experience, recent growth, and extenuating circumstances, and (b) the assessment design is based on uniform standards and the scoring system makes use of standardised processes.

Wiggins (1998:117) supports this view, saying that ... *out of fairness we should not judge novices and experts with the same expectations.* Allowing students more time to complete a task or to choose content items for inclusion in their portfolios, ensures fairness. At the same time, however, the assessor should not deceive students who are not meeting desired performance levels into thinking that their work is satisfactory, which supports the case for using explicit criteria and rubrics. The value of using uniform and explicit standards in assessment should not be underestimated. As Wiggins (*ibid.*) points out ... *lack of explicitness has particularly profound consequences for marginal students, contributing to their continuing failure.*

4.6 AUTHENTIC PERFORMANCE-BASED ASSESSMENT OF GENERAL SKILLS IN A MEDICAL CONTEXT: A CASE STUDY

In the literature on medical education, there are many examples of the assessment of communication skills, critical thinking and problem-solving skills in a clinical context. Examples of assessment of general skills in the undergraduate years of medical study, however, are rare. This state of affairs corresponds with the finding by Fowell et al. (2000) that few schools in the United Kingdom assess general skills explicitly.

One of the few examples documented is a case study by McLachlan (2000) on the assessment of the information retrieval and analysis skills of undergraduate students at the University of St Andrew's in the United Kingdom. Key aspects of this study will now be highligted.

4.6.1 The context

General skills such as written and oral communication, numeracy, information technology, managing own learning, problem-solving and working with others are increasingly recognised as an important component of undergraduate education at the University of St Andrew's. These skills are assessed regularly in the first four years of the curriculum, either directly or as part of core content assessment.

An interesting feature of skills development at the University of St Andrew's, is the policy decision that ... *students will learn to deploy skills and attitudes in applied rather than abstract contexts.* The rationale for this decision was ongoing reinforcement of the practical relevance of skills. Relevance is achieved through the teaching of information technology skills needed for word-processing, graph-drawing and the use of spreadsheets as part of the first-semester Human Function course. Students demonstrate mastery of these skills by maintaining their laboratory notebooks in electronic format. A hard copy is submitted for assessment. The students' IT performance forms an integral part of this assessment.

4.6.2 An embedded performance task

In the third semester, information retrieval, with specific reference to on-line scientific and medical database searches, is regarded as a very valuable skill, the development of which is embedded in the third-semester course, Assessing Medical Evidence. The aims of this course are to encourage students to use their newly-acquired IT skills, to enhance their written communication skills and to promote their understanding of the characteristics of health reports in the news media.

A media investigation project is used as a vehicle for the achievement of these aims. First of all, the concept of evidence-based medicine is introduced by means of a short lecture and tutorial work. As a next step, the library staff provide students with guidance on medical and scientific database searching on the World

Wide Web. Thereafter, the students are required to select a current story from the popular news media for further investigation.

4.6.3 Assessment of the product

The product that students are expected to submit after six weeks, is a one-paged investigation report, with the following headings: a description of the original story, and details on its source; a description of the search strategy employed; a summary of the findings of the search; and a conclusion, integrating the results of the search into a value judgement of the original story.

In the case study described here, assessment of the information assembled under each of the mentioned headings, was done by means of a five-point Likert scale, using the categories *excellent, good, adequate, poor* and *not attempted.* Written performance indicators describing each category were established in advance. The categories, in turn, were converted into grades, according to a common grade scale used for reporting the outcomes of all assessment in the university (Grade 5 = pass, Grade 12 = merit, Grade 17 = distinction). Students received written guidance on the use and interpretation of this scale.

4.6.4 Outcome

Only five percent of the students failed to achieve a pass grade. Further investigation showed that there was a poor correlation between the grades obtained in the project, and those obtained for the course as a whole. The poor correlation was interpreted to indicate that students who perform poorly in unseen assessments, can still do well in more free-ranging assessment activities.

Both staff and student feedback was positive. Academic staff were satisfied that the aims of the project had been met, and students were enthusiastic about the new mode of assessment, to the extent that they requested detailed feedback on their performance in the project, because they "wanted to apply the lessons learned to their Special Study Modules commencing the next semester".

4.7 CONCLUSION

From the literature perspectives examined in this chapter, three important conclusions stand out above the others. The first is that if critical outcomes are recognised as a legitimate outcome of a curriculum, they should be assessed.

Secondly, it is clear that an assessment system aimed at helping **all** students to achieve desired outcomes, should, through its design, ... *create a validity path from standards to tasks to student scores* (Darling-Hammond and Falk, 1997:58), while honouring the principles of both honesty and fairness (Wiggins, 1998).

Ultimately, as with any innovation, changing assessment structures takes time and, as one is reminded by Mabry (1999:166), it is easy to feel overwhelmed if too much is undertaken too soon. Her advice is that ... *it is likely to be better to concentrate on a few basic ideas initially, to learn through experience, to build the system gradually, to cultivate flexibility and expectation of revision and improvement along the way.*

In Part Three of this study, notably Chapters Seven to Nine, the researcher will document how the development team of Module MEA112 endeavoured to respond to Mabry's advice. A detailed account will be given of how, on realising that traditional assessment methods are unlikely to reflect achievement of identified skills outcomes, the team devised, developed and adjusted a multi-technique assessment system, aimed at providing evidence of students' achievement in a fair and consistent manner.

CHAPTER FIVE

ACTION RESEARCH AS A FORM OF APPLIED EDUCATIONAL INQUIRY

If the gap between theory and practice is wide, action research can be a way to begin to build a bridge across that gap.

(Price, 2001:56-57)

5.1 INTRODUCTION

In this chapter the essential qualities of action research as a form of applied educational inquiry are defined and explored. The reason why a comprehensive theoretical perspective was deemed necessary, was because the conventions of qualitative educational research are not quite as well known as quantitative survey and experimental research traditions. As Vulliamy, Lewin and Stephens (1990) rightly comment, action researchers should be aware of the fact that some readers who have a weakness for "hard" data and avail themselves of imposed tools of data collection and systematic mechanisms leading to comforting quantification, may have false expectations of the research.

Against this background, the information provided in this chapter is intended to provide a clear understanding of the rationale and style of action research, and will hopefully put those who look for complex quantitative analyses and statistics in this study, at ease.

5.2 THE CONCEPT OF ACTION RESEARCH

An action research approach is followed in this study. To do action research means to develop a plan of action to improve what is already happening; to act in order to implement the plan; to observe the effects of action within the context in

which it occurs; and to reflect on these effects as a basis for further planning through a succession of cycles (Zuber-Skerritt, 1995).

5.2.1 Definition of action research

Definitions of action research abound in the literature. Kemmis and McTaggart (1988:5), for example, described action research as ... *a form of self-reflective enquiry undertaken by participants in social [including educational] situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices, and the situations in which the practices are carried out.* A few years later, Elliott (1991:69) popularised action research as a method of teacher research by describing it as ... *the study of a social situation with a view to improving the quality of action within it.*

A trait which all definitions of action research have in common, is their emphasis on the practical, problem-solving character of action research. Other distinctive attributes of action research, such as research questions arising from analysis of problems that practitioners experience in specific situations and the ongoing nature of the research, are succinctly summarised by Denscombe (1998). According to him, action research

- concerns itself with *practical issues*, problems, concerns and needs that arise as a routine part of real-world experiences;
- is geared towards a *better understanding* of things and also to *changing matters*;
- involves those affected by the change as *collaborators* in the research rather than subjects of it; and
- is committed to a process in which the application of research results and the evaluation of their impact on practice become part of a *cycle of research.*

5.2.2 Models of action research

Kurt Lewin is generally credited with having first conceptualised action research in the form of a spiral of cycles in 1934 when he used it for research on, and intervention into, social problems of the post-war period (Hopkins, 1993). Since then, Lewin's model was adapted in various forms by Kemmis and McTaggart (1988), Elliott (1991), Zuber-Skerritt (1995) and Stringer (1996), to name but a few (cf. also Sagor, 1992; McKernan, 1991; Ebbutt, 1985). Zuber-Skerritt's (1992b:21) CRASP model of action research (Figure 5.1), in particular, appears to be appropriate to the present-day goals of providing quality education in a milieu of rapid change. According to this model, action research is:

Critical (and self-critical) collaborative enquiry by
Reflective practitioners being
Accountable and making the results of the enquiry public
Self-evaluating their practice and engaged in
Participatory problem-solving and continuing professional development.

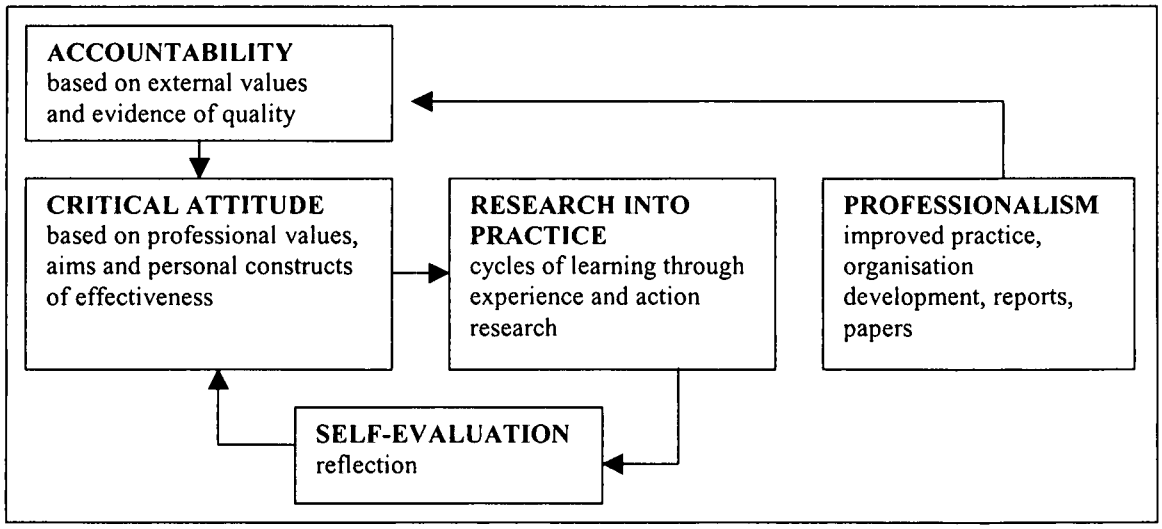


Figure 5.1 *The CRASP model of action research* (Zuber-Skerritt 1992b)

Denscombe's (1998:60) adapted version of the Lewinian cycle (Figure 5.2) also demonstrates how the cyclical process fits in with the concept of perpetual development which is implied by the term professionalism. He warns, however, that the ongoing nature of the cycle which is often claimed in the literature, is something of an ideal because ... *in reality action research often limits itself to discrete, one-off pieces of research.*

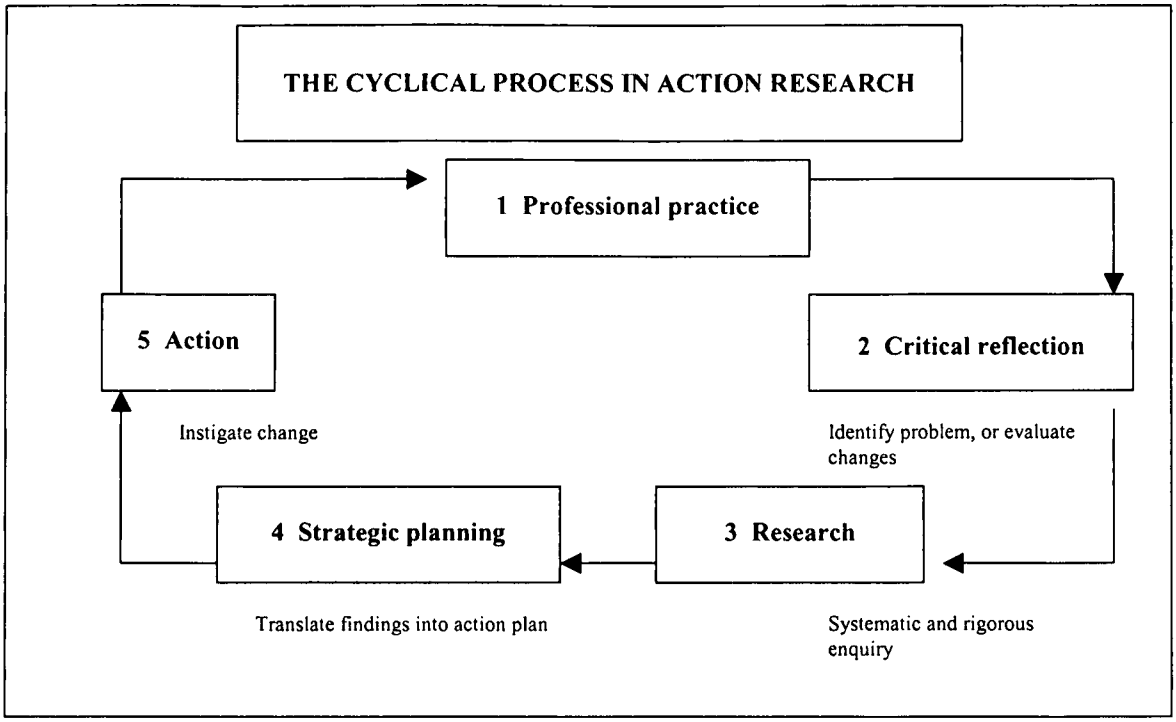


Figure 5.2 *Denscombe's adapted version of the Lewinian action research cycle* (Denscombe, 1998)

Judging from the theory behind the above definitions and models, it seems appropriate to do action research in the current educational dispensation. Not only does such research provide practitioners with a means of gaining insight into their work, but it also has the potential of leading to improved practice and the resolving of problems. The researcher would argue that an institution can only claim to endorse the principle of quality education if the academic staff comprising that institution constantly strive to be effective in what they do (cf. also Bitzer's, 2000 comment on "bottom-up" quality assurance).

The desirability of "practical science" with a view to improvement was already advocated in 1965 when Langeveld (Bell, 1987:11) said on behalf of educational researchers: ... *we do not only want to know facts and to understand relations for the sake of knowledge, we want to know and understand in order to be able to act and to act 'better' than we did before.* More than thirty years later there is seemingly still a need for quality enhancement. Denscombe (1998:63) quotes Somekh in saying that action research ... *directly addresses the knotty problem of*

the persistent failure of research in the social sciences to make a difference in terms of bringing about actual improvements in practice.

5.3 HISTORICAL ROOTS OF ACTION RESEARCH

For many years, quantitative research procedures, associated with large-scale surveys and experiential studies, were the *sine qua non* in the natural, as well as the human and social sciences. However, since the seventies, quantitative research in the social sciences has been replaced to a large extent by a qualitative research paradigm (Vulliamy, Lewin & Stephens, 1990; Patton, 1987; Goetz & LeCompte, 1984). In addition to research according to standardised methods, recognition is now being given to analysis of narrative data. Instead of merely constructing concepts and then measuring and testing variables relating to those concepts, an approach referred to as positivism[14], it is recognised that a researcher can also accurately observe, describe, question, listen, analyse and interpret in terms of a post-positivistic approach. A typical post-positivistic view of science is expressed by Polkinghome, cited by Kvale (1990:5-6), as ... *the creative search to understand better, and it uses whatever approaches are responsive to the particular questions and subject matters addressed. Those methods are acceptable which produce results that convince the community that the new understanding is deeper, fuller and more useful than the previous understanding.*

The idea of action research as a form of qualitative research was born in 1934 when Lewin, as cited in Mills (2000:6), described it as a process that ... *gives credence to the development of powers of reflective thought, discussion, decision and action by ordinary people participating in collective research on 'private troubles' that they have in common.* Since those years the work of leading action researchers in different parts of the world has given rise to different schools of thought on action research. In the United States of America, the work of John Dewey entrenched action research in the progressive education movement; in the

[14] Positivism is a research approach that was developed in the natural sciences and later transferred to the human and social sciences. A positivist approach to social and educational research implies that the methods of natural science are used: *These procedures involve the testing of hypotheses in order to uncover social facts and law-like generalizations about the social world. Thus, it is assumed that, in principle at least, the subjects of research can be treated as 'objects' similar to objects in the natural world and that they can be studied in an objective 'value-free' way* (Vulliamy, Lewin & Stephens, 1990: 8).

United Kingdom, through the work of Elliott, action research came to be recognised as a vehicle for curricular reform and professional development; in the Australian context, Kemmis established action research within the collaborative curriculum-planning movement (Mills, 2000).

Despite the continued evolution and growth of qualitative, educational research approaches, action research as a form of qualitative social inquiry is still subjected to a lack of recognition by academics and researchers in the positivist tradition (Kerfoot & Winberg, 1997). This is the case, firstly, because the traditional bias against qualitative research as a "soft option" that cannot produce statistical "proof", has not yet disappeared (Henning, 1993). Secondly, as Vulliamy, Lewin and Stephens (1990:22) state, ... *qualitative research methodologies are often unacceptable because they tend to probe sensitivities which can safely be buried in the apparent neutrality of numbers.*

Regardless of these objections, action research has a relatively long-standing currency in educational studies (Vulliamy, Lewin & Stephens, 1990). This, however, does not apply to medical education research (Stacy & Spencer, 2000). Justification of the methodology employed in this study and development of a strong theoretical basis are, therefore, imperative in order to allay any methodological concerns on the part of persons who take cognisance of this study.

5.4 THEORETICAL FOUNDATIONS OF ACTION RESEARCH

Research in general is aimed at reaching an improved understanding of phenomena in the world through describing, explaining and evaluating. In the seventeenth century, Francis Bacon proposed that the ... *aim of science is the improvement of man's [sic] lot on earth, and for him that aim was to be achieved by collecting facts through organized observation and deriving theories from them* (Chalmers, 1982: xvii). The way in which the researcher goes about studying social reality, however, is affected by the different interpretations of the nature of that reality. This, in turn, can give rise to nebulous thinking and in the past led to

a "battle" concerning the methodological and the epistemological dimensions of social-science research, including educational research.

Higher education research, just like all research in the social sciences, is affected by the debate about what theoretical perspectives and philosophies should inform the research approach and design. The traditional paradigm, often referred to as "scientific", relies on empirical-analytical methods adopted from the natural sciences. The non-traditional, alternative approach is located in the interpretive or hermeneutic paradigm. According to this approach, theory does not precede empirical research, but follows it, which means that theory is generated from the reality of learning environments. As a result, it makes sense to those to whom it applies (cf. the "grounded" theory of Glaser and Strauss, 1967). Action research, which falls within the critical-interpretive paradigm, acknowledges that knowledge which justifies practical action is not just the knowledge of principles, but also a kind of personal knowledge based on the views and interpretations of the people involved in the inquiry. Hopkins (1993:45) makes the point that action research

> *... aims to feed practical judgement in concrete situations, and the validity of the 'theories' or hypotheses it generates depends not so much on 'scientific' tests of truth, as on their usefulness in helping people to act more intelligently and skillfully ... '[T]heories' are not validated independently and then applied to practice. They are validated through practice* [emphasis added].

5.4.1 The methodology of social research

The methods of qualitative research are not as refined and standardised as those used in quantitative studies. Consequently, an important aspect of qualitative research is to reflect on the methodology.

The methodology of research refers to *how* the social phenomenon under investigation will be studied. At a technical, observable level, there are the actual methods (e.g. methods of sampling, data collection, measurement and analysis) and techniques (e.g. purposeful sampling or telephone interviewing), that a researcher employs to execute the research process (Mouton, 1996).

As far as the methodological dimension of social research is concerned, two major schools of thought can be distinguished. On the one hand, there are proponents of a multi-method approach who claim that the application of both quantitative and qualitative research tools is desirable, since this improves the quality of the research (e.g. using basic descriptive statistics in the analysis of in-depth interview data) (Mouton, 1996; Miles & Huberman, 1984). Critics of this view, on the other hand, claim that the mixing of quantitative and qualitative methods is unacceptable (Smith & Heshusius, 1986; Guba & Lincoln, 1981). Arguments of the latter school of thought, as discussed by Vulliamy, Lewin and Stephens (1990), are based on a belief that

(a) the three levels of the methodological dimension, namely techniques, methods and paradigms, cannot be separated, and
(b) the epistemological and ontological assumptions underlying the abstract, paradigmatic dimension of the research methodology are so fundamental that quantitative and qualitative paradigms cannot be used in conjunction with one another.

An intermediate point of view advocating compatibility and cooperation between the two approaches, such as that held by Patton (1987) and supported by many others (Looker, 1989; Miles & Huberman, 1984; Goetz & LeCompte, 1984), recognises that certain methods and techniques are paradigm-dependent (e.g. participant observation, characteristic of a qualitative approach such as ethnography), while others are not (e.g. questionnaires and interviews, used in both qualitative and quantitative studies).

Linked to the latter stance, Zuber-Skerritt (1992a) comes to the conclusion that the decision to use a certain technique or method is primarily defined by the nature of the unit of analysis (cf. also Mouton, 1996). Such a unit of analysis, or "furniture of the social world" as she calls it, can be comprised either of individuals, a group of people, an organisation or institution, social events, cultural objects, or an intervention in the social world, such as an innovative programme.

What will constitute good information and valid results in relation to the chosen unit of analysis, however, is a question that demands clarification, because the viewpoint that a researcher takes in this regard, influences the way in which the research goal is formulated. It seems appropriate, therefore, to also take cognisance of the debate about what constitutes good and valid knowledge.

5.4.2 The epistemology of social research

The term *epistemology* refers to a branch of philosophy that is concerned with the question of how knowledge is acquired. It studies the origin, nature, validity, methods and limits of human knowledge. Zuber-Skerritt (1993:51) provides the following distinction between the two major epistemological paradigms in the social sciences (Table 5.1):

Table 5.1 *Epistemological paradigms used in the social sciences* (Zuber-Skerritt, 1993)

Traditional paradigm	Alternative, dialectical paradigm
Competitive	Co-operative
Content-centred	Process-based
Trainer-centred	Learner-centred
System-based	Problem-based

According to the traditional paradigm, people are seen as passive recipients of knowledge, skills and attitudes and as products of their environment, history and society. The proponents of this paradigm have a static, analytical conception of knowledge and believe that "objective" knowledge can be obtained by means of empirical-analytical methods and then transmitted from expert to novice (*ibid.*).

The alternative dialectical paradigm, in contrast, sees people as active seekers and negotiators of meaning; they are both the products and producers of the social world; they are actively involved in the construction of meaning. Teaching and learning are regarded as the active acquisition of knowledge, and the critical evaluation and reflective understanding of development (*ibid.*).

Within this broad epistemological framework, four competing research approaches can be distinguished, namely the positivist, interpretive, critical and radical approaches. Table 5.2 provides a summary of the different research approaches and the premises on which they are built (adapted from Winberg 1997; cf. also Vulliamy, Lewin & Stephens, 1990).

Action research, with its emphasis on practical problem-solving, is located within the alternative, dialectical paradigm of epistemology and takes a critical-interpretive and holistic approach to social reality.

Table 5.2 *Distinguishable research approaches used in the social sciences* (Winberg, 1997; Vulliamy, Lewin & Stephens, 1990)

Research approach	Premises
Positivist	• Only observable, measurable data should be used. • Subjects of research are reduced to atomistic units that can be studied in an objective value-free way.
Interpretive	• Understanding the meaning of phenomena is important. • Subjects are viewed holistically within their environments with all their complexity.
Critical	• A critical understanding of the situation or practice under investigation is the focus in order to plan for transformative action. • Subjects become research participants.
Radical	• The focus is on understanding the need to change existing situations from a transformative, socio-economic perspective.

5.5 THE DISCOURSE ON ACTION RESEARCH AS A FORM OF QUALITATIVE SOCIAL INQUIRY

As outlined above, action research focuses on actual people and their real-world experiences and practices (i.e. strategic actions undertaken with commitment in response to practical problems), within a particular context. The approach is based on the belief that knowledge is socially constructed, which means that knowledge is "made" when people talk about and explore their personal experiences.

5.5.1 The critical dimension of action research

Taking a critical view of reality implies that the action researcher, on the basis of this socially constructed knowledge, strives towards a critical understanding of the situation or practice under investigation with a view to bringing about change. This process is described by Apple (1975:127) as:

> *... a painful process of radically examining current positions and asking pointed questions about the relationship that exists between these positions and the social structures from which they arrive. It ... necessitates a serious in-depth search for alternatives to those almost unconscious lenses we employ and an ability to cope with an ambiguous situation for which answers can now be only dimly seen and will not be easy to come by.*

Action research can also be described as critical because of its reliance on systematic reflection that entails more than an individual's thinking about her/his day-to-day action within a specific social context. Reflection, according to Kemmis (1982:5), has a dual meaning: *It involves the relationship between an individual's thought and action and the relationship between an individual teacher [researcher] and his or her membership in a larger collective called society.* The first relationship refers to the subjective thoughts that the action researcher might have. The second level of thinking, which gives action research its critical dimension, is a conscious focus on the relationship between an individual's actions and the purposes of education in society. Carr and Kemmis (1986:182) refer to the critical nature of action research by indicating how it seeks out the relations between old and new knowledge:

> *... action research involves relating practices and understandings and situations to one another. It involves discovering* ***correspondences*** *and* ***non-correspondences*** *between* ***understandings*** *and* ***practices*** *(for example, by counterposing such categories as rhetoric and reality or theory and practice), between* ***practices*** *and* ***situations*** *(for example, by counterposing practices against the institutional permissions and constraints which shape them), and between* ***understandings*** *and* ***situations*** *(for example, by counterposing the educational values of practitioners and their self-interests as these are shaped by institutional organisational structures and rewards)* [original emphasis].

It is this very critical nature of action research that makes it such a powerful means of reaching the goals of accountability and contributing towards

professional development. Kemmis and McTaggart (1988:25), in discussing the critical nature of action research, point out that action research ... *allows us to give a reasoned justification of our educational work to others. Through systematic and rigorous observation and reflection we can show how the evidence we have gathered and the critical reflection we have done have helped us to develop a tested and critically examined rationale for what we are doing.*

It is thus the critical dimension of action research that provides the researcher with a "licence" to experiment in the teaching and learning environment.

5.5.2 The interpretive and holistic dimensions of action research

An interpretive understanding of reality refers to the uncovering of the meaning that individuals or groups of people give to their own situations, interactions and relationships, and how this meaning influences their actions and intentions. The focus is on interpretation in context, rather than on generalisation and the discovering of universal laws of human interaction (Winberg, 1997).

Holistic interpretation, in turn, refers to the so-called "wholeness science" which is founded on the ontological assumption that everything in the social world is interconnected. An action researcher taking a holistic view of a phenomenon would therefore take the epistemological decision to ... *include all the evidence ... [which] would comprise measurable data, self-reports of subjective experience, data of expert judges ... and subjective self-reports of skilled 'inner explorers'*... (Copley, 1994:13).

A holistic approach, in the words of Patton (1987:17), ... *also assumes that a description and understanding of a program's social and political context is essential for overall understanding of that programme.* Such a description would pay attention not only to the **products** of a programme, but also to the **process** in terms of nuance, setting, interdependencies, complexities and context.

5.6 THE PURPOSES OF ACTION RESEARCH

The distinct goal of an action researcher is to "do reform" (Prawat, 1996). This goal is achieved by developing a critical, reflective disposition towards daily practice, driven by a ... *continual quest for ways in which to change practice for the better* (Denscombe, 1998:59).

5.6.1 Quality enhancement and management of change

With the contemporary emphasis on quality education, it has become important to identify useful means through which new educational initiatives can be improved (Fourie, Strydom & Stetar, 1999). Action research as a kind of formative evaluation has some distinct advantages in this respect. Figure 5.3 illustrates how action research can serve to "do better things" before one starts "doing things better".

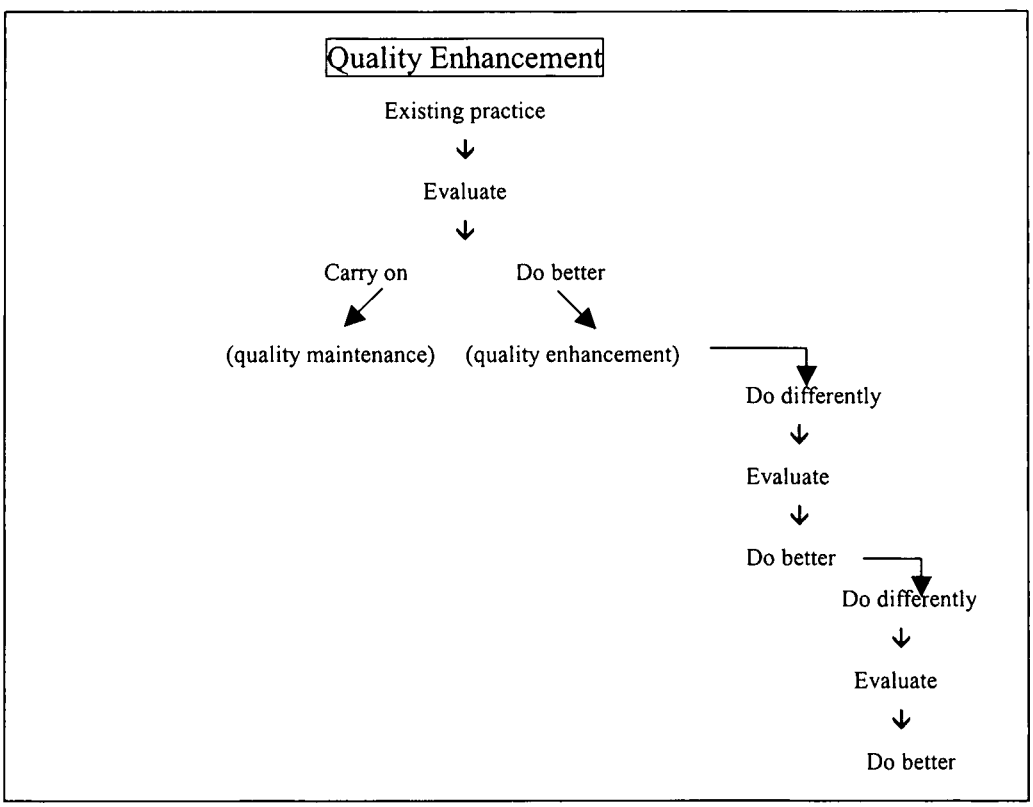


Figure 5.3 *Iconography to illustrate quality enhancement through action research* (from a workshop conducted by Professor Lewis Elton on 13 June 2001)

The qualitative nature of action research makes it a powerful tool for quality enhancement. Patton (1987) is adamant in his view that counting the numbers of people who have derived benefit from a particular innovation, and even the scaling of quality attributes, are inadequate in capturing the quality of a programme. Quality, in his view, has a dimension which requires description rather than scaling. In a striking analogy, cited by Vulliamy, Lewin and Stephens (1990:19), an evaluator who relies on traditional, positivist methods is compared to ... *a critic who reviews a production on the basis of the script and applause-meter readings, having missed the performance.*

Quality, maintains Patton (1987:30), ... *has to do with nuance, with detail, with the subtle and unique things that make a difference beyond the points on a standardized scale.* Krathwohl (1998:601) also refers to this quality dimension of action research by emphasising that it is decision-driven rather than hypothesis-driven and therefore facilitates the making of decisions about the appropriateness or worth of actions taken in solving a particular problem. In contrast to the "black-box" approach to evaluation, where outcomes are evaluated without knowledge of implementation, and therefore seldom provide direction for new action (Patton, 1987), the holistic nature of action research ensures that outcomes are interpreted against the background of information on what produced the observed outcomes.

Finch (1985) comments on this issue by pointing out that traditionally, policy formulation in higher education was based on the results of macro-level quantitative studies. In the current climate of educational change, however, it would be of little use to institutional leaders and decision-makers to know what the overall impact of an innovation was. What is currently needed for effectively managing complex problems related to educational change, is information that will contribute toward understanding a particular problem related to innovation, and which will put the consequences of a specific innovative action in perspective. Kember and Gow (1992:302) suggest that concerns about the implementation of innovation should be turned into action research projects. The conception of educational policy as something that is forced onto people will thus

be exchanged for one in which curriculum development is perceived as an on-going activity, involving full participation by those responsible for implementing change.

5.6.2 Professional development

The shift in the focus of higher education from content to process is also gaining ground as far as the professional development of academic staff is concerned. In a context where the implementation of innovative approaches to teaching and learning rests heavily on practitioners, action research is increasingly being recognised as a useful framework within which to develop the competencies and strategies required for tackling complex tasks in an uncertain context of rapid change.

Supportive work-in-progress discussions allow people to describe their concerns, explore what others think, and probe to find out what should be done and what is feasible. Kemmis and McTaggart (1988:23) argue that action research means trying out ideas in practice and learning from the consequences of changes: *Action research is a systematic learning process in which people act deliberately, though remaining open to surprises and responsive to opportunities. It is a process of using 'critical intelligence' to inform our action, and developing it so that our educational action becomes praxis (critically informed, committed action).* In the process, people usually develop a better understanding of the rationale for change; they become owners of planned changes; by sharing their concerns with other practitioners they learn to live with the complexity of real experience.

Academics, especially those who can be described as enthusiastic and creative educational practitioners, are in a very good position to buy into the changes which are currently taking place in higher education. Many of them, however, are unwilling to change their governing values and strategies; firstly, because these values and strategies form part of their automatic behaviour, and secondly, because resistance to change is a natural phenomenon in the academe. According to Argyris (in Farquhar & McKay, 1996), people who resist change are only

capable of "single-loop" solving of routine problems. When it comes to the solving of real challenges, like the ones higher education institutions are currently facing, there is often an insight into and recognition of what should be done, but an inability to produce effective action that would lead to the required change.

Action research has the potential to help academics move from single-loop to double-loop problem-solving. A change in individuals' theories-in-use cannot be imposed by an institution - it can only result from free choice and internal commitment (Zuber-Skerritt, in Nightingale & O'Neil, 1994). A distinctive feature of action research is that it involves those who are responsible for implementing change in a collaborative process. A potential spin-off is that people resistant to change become involved in a constructive, participatory way.

5.6.3 Organisational learning

Action research, according to Zuber-Skerritt (cf. Nightingale & O'Neil, 1994:112), is a process which can result in organisational learning. She describes a learning organisation as ... *one which is capable of detecting and correcting error, even when that correction requires changing the organisation's norms, policies and/or objectives (double-loop learning).*

In discussing the need for institutions of higher education to transform themselves, Zuber-Skerritt (1992b:160) says that bureaucracy and technical thinking endanger the idea of a university as a place where scholarship is developed through communicative processes and critique of social practices. If universities are serious about their roles and functions in society, they have to find new forms of communication which are educative and allow for open and continuous debate about social processes. Institutions of higher education are not supposed to be static organisations, but rather dynamic communities of ... *active, knowing, socially aware and morally responsible people whose practices and critiques of practices constitute the foremost justification for the existence of the institution* (*ibid.*:160). This view is nowadays also strongly emphasised in reports and documentation on the transformation of higher education in South Africa (Hay & Strydom, 1999).

Reality shows, however, that instead of practising double-loop learning, organisations as well as the individuals they comprise often fall prey to a "primary inhibiting loop" (Argyris & Schön, 1978:85). This means that what they tell the world (espoused theory), is often not congruent with what they practise (theory-in-use)[15]. In the process, members of the organisation ... *interact according to their theories-in-use which reinforce and are reinforced by conditions for error.*

In contrast to this behaviour, Argyris and Schön (1978:318) note that individual members of organisations can, by learning to reflect on their practice, complement organisational development:

> *Organisational learning occurs when individuals, acting from their images and maps, detect a match or mismatch of outcome to expectation which confirms or disconfirms organisational theory-in-use. In the case of disconfirmation, individuals move from error detection to error correction. Error correction takes the form of inquiry. The learning agents must discover the sources of error - that is, they must attribute error to strategies and assumptions in existing theory-in-use. They must invent new strategies, based on new assumptions, in order to correct error. They must produce those strategies. And they must evaluate and generalise the results of that new action. 'Error correction' is shorthand for a complex learning cycle.*

The action research cycle of planning, acting, observing, reflecting and re-planning lends itself handsomely to the detection of error while an institution finds itself on a learning curve.

5.7 CONTROVERSIAL ASPECTS OF ACTION RESEARCH AND THE STANCE TAKEN BY THE RESEARCHER ON EACH OF THEM

In the discourse about action research there is still disagreement about certain key issues, including the action research cycle, the need for reviewing the literature, the collaborative nature of action research and its emancipatory aspirations.

[15] The UFS School of Medicine now has an outcomes-based curriculum aimed not only at knowledge instruction, but also at the development of relevant skills and attitudes with a view to producing competent health practitioners. In the programme documentation the term *evaluation* relating to "measurement" of learning has been replaced with *assessment*. However, at this stage few significant changes have occurred as far as a shift from evaluation to assessment is concerned (see clarification of terminology for the difference between evaluation and assessment).

Having explored the general features of action research as a qualitative methodology, it is incumbent on the researcher to also pay attention to these controversies.

5.7.1 The action research cycle

Action research differs from other forms of qualitative research in the sense that it takes place in action-oriented settings: people affected by planned changes decide on courses of action that seem likely to lead to improvement, and at the same time evaluate the results of strategies tried out in practice. This process usually follows the already-mentioned Lewinian action research cycle of planning, acting, observing, reflecting and re-planning.

A question that is often asked, is whether the action research cycle does not form part of what every educational practitioner does in any case. As Kerfoot and Winberg (1997: 26) point out, this cycle is followed intuitively by educational practitioners when something is not working as well as they would like it to: ... *they consider the situation based on the information they have, they look for alternative ways of dealing with the problem, they select one way and try it out, they then observe the results and if necessary adjust what they are doing or try something else.*

The difference, though, between an isolated, spontaneous form of reflection, and action research as a scientific process, is that the latter is ... *deliberately and systematically undertaken, and generally requires that some form of evidence be presented to support assertions* (Kerfoot & Winberg, 1997:20; cf. also Altrichter, Posch & Somekh, 1993).

Although the action research cycle can serve as a useful strategy for linking practice with critical analysis of that practice, the spiral can create confusion when it is regarded as a research **procedure**. McTaggart (1996:248) cautions that ... [i]*t is a mistake to think that slavishly following the 'action research spiral' constitutes 'doing action research'*. She goes on to explain that Lewin's spiral is simplistic iconography, meant to suggest that action research differs from

traditional, empirical-analytical research, given its dynamic nature and its continuity with emergent practice. The main function of the spiral metaphor is to explain *the need for acting differently 'within the study' as a result of progressively learning from experience* (*ibid.*). The cycle visibly illustrates that action research recognises the need for flexible action plans, given the complexity of real social situations. It merely serves to show that action research is not a linear process.

In following Ebbutt's (1985) suggestions in this regard, the action research process is conceived in this study as a series of successive cycles, each incorporating the possibility for the feedback of information within and between cycles. The fact that the research is reported in the form of three chronologically distinct cycles (Chapters Seven, Eight and Nine), does not detract from this oscillating process, as is evident from cross-referencing.

5.7.2 Reliance on literature in preparation for action research

There is some debate in the literature on the necessity and even desirability of reviewing the literature in order to better understand the problem area that the action researcher is focusing on (Mills, 2000). In keeping with the standpoint of experts who maintain that reviewing the literature can help action researchers to see their problem more clearly (Kemmis & McTaggart, 1988), I chose to review existing research thoroughly in the belief that I would be able to learn from how other researchers have tackled similar problems. To borrow an observation from Mills (2000:30): *Taking time to immerse yourself in the literature gives you time to reflect on your own problems through someone else's lens.*

5.7.3 The collaborative nature of action research

Action research takes place in social settings of which the researcher forms a part. An aspect that needs clarification is the nature of the researcher's role.

Some educational researchers, including Kemmis and McTaggart (1982) and Krathwohl (1998), maintain that action research is best done in collaboration with

others, such as fellow practitioners in the particular social setting, students, parents or community members who "own" the situation (Kerfoot & Winberg, 1997). Others, including Kemmis (1982) and Zuber-Skerritt (1994), hold the view that, although the formation of a group of researchers who help one another to understand what they observe, is the ideal situation, action research may be conducted in isolation if necessary. In such a case, ... *the others involved in the activity [the researcher] is studying and seeking to improve are her collaborators and help her to understand the activity and the outcomes of her interventions* (*ibid.*:103).

As far as shared participation is concerned, the relationship changes from ... *the researcher's co-option of practitioners to co-operation (process consultancy) to true collaboration and 'symmetrical communication' in which everyone is an equal participant contributing to the research process and problem solution* (Zuber-Skerritt, in Farquhar & McKay, 1996: 224).

The latter viewpoint is supported by Winter (1996) who interprets collaboration to mean that weight is given to the particular understanding of every contributor to the research. These contributions are deconstructed in order to form new interpretations and the collaborative process serves to counter the researcher's subjectivity by acting as a challenge to the researcher's personal assumptions and interpretations: ... *[i]t is by using this resource of differences that our analysis can begin to move onwards from its inevitably personal starting point towards ideas which have been interpersonally negotiated* (*ibid.*:20). The outcome of this process is a series of analyses that can lead to new knowledge, according to which other situations of a similar kind can be illuminated.

Collaboration in this study refers to the community of academics working on the implementation of Phase I of Curriculum 2000. Whole-group workshops and Phase I meetings provided direction and guidance as to where the School is heading with the new programme. The core research group comprised members of the module development team, and several individuals involved in core modules. Despite different foci, partnership in the core group was established in the form of a community in which ideas were critically examined, experiences

were shared and outcomes analysed within the safe, supportive context of formal meetings and informal discussions.

5.7.4 The emancipatory aspirations of action research

Social systems are by nature characterised by conflicting values and unequal distribution of resources and power. Consequently, plans which form part of action research will assume the character of ... *a material, social and political 'struggle' towards improvement* ... [in which] ... *negotiation and compromises may be necessary* (Kemmis & McTaggart, 1988:12). From this it follows that critically informed action will recognise that it is, on the one hand, bound by prior practice (e.g. the traditional way of "measuring" factual knowledge acquisition). On the other hand, prior practice has only a tentative grasp on the realities of the present (currently, educational goals and assessment increasingly focus on higher-order thinking, reasoning and student collaboration around real problems).

Emancipation has to do with power relations and the redress of disadvantage. Emancipation in the context of action research, however, does not refer to an ideal state to be achieved, but rather to a ... *critique of current conditions and more or less immediate attempts at concrete improvement* (McTaggart, 1996:245). The basic question that action researchers ask on a regular basis is whether things are "better" (i.e. more reasonable or satisfying) in the eyes of participants than they were before the research commenced.

According to a typology developed by Carr and Kemmis (1986), emancipatory action research is on a third, and most advanced level, preceded by two other levels, namely practical and technical approaches. The aim of technical action research is to create effectiveness and efficiency in educational practice and to contribute to the professional development of practitioners who depend on an outside expert to direct the research. Practical research has the same aim as technical research but, in addition, is directed at the enhancement of practitioners' understanding of the issue under investigation, as well as at the transformation of their consciousness through encouraging them to participate in self-reflection. Over and above these goals, emancipatory action research aims at providing a

critique of the dictates of tradition, organisational constraints, and theories-in-use (Zuber-Skerritt, 1993).

According to Carr and Kemmis (1986), only emancipatory action research has scientific value. Perry and Zuber-Skerritt, (1992), on the other hand, claim that the different levels of action research are not mutually exclusive; that the shift from technical, via practical to emancipatory action research is a process of gradual development.

In this study, a mixture of the different levels is visible and the distinction between practical and emancipatory action research becomes somewhat blurred. The research is *practical* because the research questions arose from issues, problems, concerns and needs that emerged as a routine part of the process of implementing the development of general skills in the "real world" of the UFS School of Medicine. The research was undertaken not only to reflect on, and gain a better understanding of identified problem areas, but also to actually alter some aspects as part and parcel of the research. The research is *emancipatory* in the sense that by experimenting with innovative forms of assessment, followed by critical reflection and informed, committed action, I firstly emancipated myself from the habitual use of traditional forms of assessment. In the second instance, the research helped to create – albeit on a small scale - an atmosphere conducive to change and/or improvement of current assessment practices.

5.8 CONCLUSION

Monitoring and evaluating the effectiveness of learning programmes and the teaching-learning process is currently recognised as an integral part of the educational process. As Harden and Crosby (2000:340) assert, *[c]urriculum and teacher evaluation is a form of accountability which emphasizes the obligation of those employed in the education system to be answerable to the public, to the profession, to those who fund the education and to the students themselves.* Evaluation in this sense, emphasises the responsibility of teachers in higher education to monitor their own performance.

In Chapters Seven to Nine I will endeavour to show how I approached my task as leader of Module MEA112 with the deliberate intention of using action research and learning to make rigorous, informed judgements and decisions about the integration and assessment of critical outcomes into the UFS Programme for Professional Medicine, with a view to facilitate appropriate and feasible development. Prior to doing this, I will devote the next chapter to an explication of the origins of my qualitative orientation to research, giving details of the research design and operational plans.

CHAPTER SIX

RESEARCH APPROACH AND DESIGN

...[O]ne hallmark of qualitative research is the creative involvement of the ... researcher. There is 'no fixed formula'. It is possible to analyze any phenomenon in more than one way and 'each qualitative analyst must find his or her own process'.
(Tesch, 1990: 96)

6.1 INTRODUCTION

As explained in Chapter Five, qualitative research is difficult to define, because there is no "fixed formula." This, however, does not imply methodological lawlessness. In this chapter I move on to an autobiographical account of the methodological approach I took to the design and implementation of the research reported in this thesis. In order to maintain the social focus, I touch on the actual problems that confronted me and decisions I had to take as part of my experience of collecting, analysing, interpreting and reporting data.

6.2 ADOPTING A QUALITATIVE RESEARCH ORIENTATION

Seeing that most forms of qualitative research, including action research, show tangent points with a naturalistic approach to social inquiry, the characteristic attributes of naturalism, as described by Lincoln and Guba (quoted in Tesch, 1990:44), fully represent my understanding of what it means to have a qualitative orientation to research:

> *Natural setting; human instrument; utilization of tacit knowledge; qualitative methodology; purposive sampling [instead of random]; inductive data analysis; grounded theory; emergent design; negotiated outcome [negotiated with the study participants]; case study reporting mode; idiographic interpretation; tentative application [instead of generalization]; focus-determined boundaries; special criteria for trustworthiness.*

6.2.1 Origins of the researcher's qualitative orientation

The qualitative approach followed in this study stems from a variety of influences. In the first instance, my interest in qualitative research methodology was stimulated way back in 1992 when I attended a workshop on qualitative research presented by Professor Rex van Vuuren from the University of Pretoria. Professor Van Vuuren's enthusiasm for qualitative data made me realise that there is much more information available to the researcher than that which is derived from merely counting things; that there are many issues related to any phenomenon under investigation that do not emerge until various perspectives are examined, compared and analysed.

Another major influence which inclined me toward an action research methodology was provided by the renowned Otrun Zuber-Skerritt herself. In April 1997, I had the privilege of attending a workshop that she was presenting in Gordon's Bay, Western Cape. In the closing stages of the workshop, Professor Zuber-Skerritt invited the participants to formulate their own definitions of action learning (presupposed in any action research project) on the basis of what she had shared with us during the course of the three-day workshop. Workshop participants had to forward their definitions electronically to her once they were back home and had had time to reflect on what they had learnt. My definition read as follows:

"Action learning is an attitude, characterised by

- acceptance of the dynamics of real life, and thus acceptance of change as a reality;
- preparedness to take a critical look at the why, what, how of a specific part of that reality (the given situation or context) as seen from different points of view;
- flexibility to modify practice;
- a consensus approach toward making these modifications by involving all concerned; and
- a never-ending striving after quality and improvement."

In the accompanying E-mail message to Professor Zuber-Skerritt, I admitted to the possibility that I might be accused of "moral evangelism" (in the words of Professor Revans who featured in the video insert that was shown as part of the workshop). Whether Professor Zuber-Skerritt took any notice of my definition or not, I do not know. What I do know, is that I go along with Professor Revans and others such as Eisner and Peshkin (cf. Henning, 1993:114) who claim that ... *appraising the products of our scholarly effort should not be in the spirit of 'This is it', but rather in that of 'What have we here? If this, then what possibilities are next?'.*

Given this history, it was to be expected that I would choose a research question that would predispose the investigation toward a qualitative approach.

A second important consideration in choosing a suitable qualitative methodology, was the fact that action research presupposes a small-scale, hands-on approach that permits in-depth research (Denscombe, 1998). In a higher education environment characterised, on the one hand, by limited financial and human resources, and, on the other, by increasing demands to live with complex problems, it seemed appropriate to choose an action research framework.

In the third instance, my decision to choose action research as a qualitative methodology was influenced by claims in the literature (a) that qualitative inquiry is particularly suited to the early stages of the implementation of innovation (Lemmer, 1992), and (b) that action research projects are sufficiently localised and small-scale to make them a suitable method for investigating change at micro-level (Denscombe, 1998). Quantitative approaches are regarded as more appropriate for assessing the impact of innovation when the innovation has been effectively implemented already (Vulliamy, Lewin & Stephens, 1990). Masemann, referred to by Lemmer (1992:294), made the following observation in this regard: *Often educational policies formulated on the macro level ... fail to translate effectively on the micro level of the individual or smaller group because policy designers have lacked an understanding of how policy is perceived by and will affect recipients.*

Qualitative research allows insiders within the education system to have a voice in defining their problems and needs. Given that to date, action research strategies have been used very sparsely in medical education for managing complex situations at micro-level in a practical and critical manner, I was prompted to venture onto this relatively unexplored landscape. To me, the research did not only offer a conceptual framework within which to take cognisance of SAQA's ideals, but also a concrete procedure for translating evolving ideas into critically informed action. I saw my research as having the potential to increase the harmony between educational ideas on the assessment of critical outcomes and the translation of those ideas into action, within the parameters of the School of Medicine.

In the final analysis, what settled the matter in favour of a qualitative approach was the fact that key qualitative research skills such as interviewing, listening and coherent writing are capabilities that I possess, and which I would like to believe are among my more strongly developed talents. Instead of trying to build on the meagre quantitative skills I have, I decided to concentrate on what I am best at.

6.2.2 Reporting style

In following those who argue that qualitative research is made more accessible, realistic and practically useful to other practitioners when the discussion of methodology and results is given a personal dimension (Vulliamy, Lewin & Stephens, 1990), a narrative, autobiographical style has been applied in this study, but only to a certain extent. On the one hand, my role as an active participant in a process of critically evaluating and changing current circumstances permitted explicit analysis and autobiographical accounts of personal experiences in Chapters Six to Nine. On the other hand, the decision I had taken to make a thorough literature overview an integral part of my study (cf. par. 5.7.2) dictated the impersonal, more aloof type of reporting style adopted in Chapters Two to Five. A similar, but compromising approach was used in Chapter Ten, where a personal reflective overview was alternated with more formal recommendations. This mixed approach was owing to the distinction I had made between my own

future action research at modular level, and the steps I considered relevant for improvement at programme level.

6.3 DESIGN OF THE RESEARCH PROCESS

The research was pursued in the context of the learning programme for first-year medical students in the UFS School of Medicine as a case or instance in action within which issues were indicated, discovered and studied so that a full understanding of the case became possible. Nisbet and Watt (1984:78) comment that ... *it is the* ***context*** *which is often the key to understanding effects in education* [emphasis added].

The research process comprised three basic elements, namely

- formulation of a general idea, or the identification of an area of focus
- collection, analysis and interpretation of data
- planning of action, based on the monitoring of implementation and its effects (Mills, 2000; Elliott, 1991).

6.3.1 Finding a focus

Starting points for action research projects typically arise from experiences of discrepancies (Altrichter, Posch & Somekh, 1993). The inconsistency that comprised the main thrust behind this study, was the one between (a) the aim of general skills development (helping students to gain the intrinsic abilities, attitudes and insights needed for full personal, social and economic development), and (b) current conditions in the School of Medicine as far as the prevalence of conventional forms of teaching and assessment[16] is concerned.

Another concern held by the researcher in her capacity as leader of the module on general skills, was the dichotomy between the demands for, and resistance to

[16] In Phase I of Curriculum 2000, lectures, followed by written tests and examinations which measure individual intellectual ability, are still held in high esteem.

change. On the one hand, the possibility existed that tradition, limited resources, habit and convenience might hinder the process of changing to innovative forms of teaching and assessment which are a prerequisite if the educational aim is skills development. On the other hand, there was the real danger that new methods would be introduced only for the sake of change. Biggs (1992) cautions in this respect that too sudden a change towards untried methods could be a serious mistake. In the re-designing of learning contexts, according to this author, an endeavour should be made to strike a balance between what is officially wanted, what is technically possible in the circumstances of that institution, and what has evolved so far through consensus amongst colleagues. A carefully planned and staged approach, with due cognisance of established practice, should apply when one starts working on changing traditional educational practices.

Against this background, the following questions had started crystallising in my mind since the commencement of the new curriculum in 2000: What was the rationale for creating the current model of skills development? What is the *status quo* in the core modules as far as the teaching and assessment of critical outcomes are concerned? What is it that I would like to change? What are the possibilities for change? Who will be affected by new forms of assessment aimed at skills development? How can I convince students to accept new forms of assessment? How can I contribute to decreasing the workload of those who are responsible for implementing new forms of assessment? Can innovative forms of assessment become a reality in the learning programme for first-year medical students, given the traditional educational backgrounds of students and the limited staff resources in the School of Medicine?

The possibility of systematically reflecting on issues such as these, generating knowledge about the process that is followed in addressing perceived problems, and trying out new ideas with a view to improvement of the situation, appealed to me as a suitable focus for an action research project.

However, following the advice of Winter (1996), who emphasises that certain key issues should be sorted out before action research begins, I had to decide

what problem should be singled out for thorough investigation, and also acknowledge where my genuine interest lay in respect of this problem. According to Winter (1996), nebulous thinking concerning exactly what it is that one would like to change or improve has an effect on how the researcher evaluates and interprets the events brought out in the open as a result of the investigation. The danger exists that the researcher will ... *unconsciously make new insights fit in with current perception and thus not yield new knowledge* (*ibid.*).

The initial decision to focus specifically on the **assessment** of critical outcomes as a means of promoting skills development was taken because assessment was within the locus of my control as module leader, and also because I felt strongly about the incorporation of assessment, reflecting curriculum changes. Reinforcement of this decision came on 22 November 2000 when I attended a lecture by Professor Filip Dochy from the University of Leuven. The theme of his presentation was *Innovation in learning and assessment: research, findings and practical applications*. Unwittingly, he addressed many of the issues I was already grappling with at that stage, including

- how to break down student and staff resistance to new forms of assessment;
- how to use peer or co-assessment in a way that would render reliable results;
- how to overcome the problems of over- and underscoring when using peer or co-assessment;
- how to integrate individual and group assessment; and
- how to circumvent the tension between institutional regulations and new forms of assessment.

Based on the presupposition that action research would help me to incorporate a reflective stance in my work, the following self-reflective question, intended for thorough investigation, emerged:

How can I, through the experience I am gaining with the integration and assessment of general skills in Module MEA112, help to achieve the overarching

aim of the new learning programme for first-year medical students, namely to foster the development of lifelong learning skills and independent learning?

Providing an answer to this question implied that I would have to critically examine (a) what has been done thus far with regard to the integration and assessment of key skills, (b) the effect that these actions have had on the students, and (c) how what has been done already, can be improved and refined to enhance student learning. In order to avoid falling prey to, what Vulliamy, Lewin and Stephens (1990:88) refer to as ... *spending too much time floundering in the field and finally emerging with too little data for rigorous analysis*, I framed my research in terms of the four primary questions mentioned in par. 1.4[17].

6.3.2 Approach to data gathering, analysis and interpretation

Data capture, analysis and interpretation went hand in hand in this study in order to promote the emergence of theory, based on empirical data (Marshall & Rossman, 1989). As it is accepted practice in action research that the researcher should not rely on a ... *single source of data, interview, observation, or instrument* (Mills, 2000:49), a mixed approach, employing various data-gathering methods and techniques, was used to gather information. In selecting methods and techniques appropriate for my study, I found Mills' (*ibid.*:66) taxonomy of "action research qualitative data collection techniques" a useful tool (Figure 6.1).

All three of the data sources mentioned in the taxonomy were used: my own, first-hand experiences, gained through active and passive observation, were noted; the views of different role-players and stakeholders were captured by asking questions through the medium of questionnaire surveys or interviews; tangible evidence of experiences or decisions that were taken, was gathered in the form of official and unofficial documents and records.

[17] Why did the UFS School of Medicine choose to follow the route that it did as far as skills development is concerned? How did those responsible for implementing policy intentions go about doing it? What was done (with special reference to actual examples)? What was the outcome of actions taken? What lessons were learned?

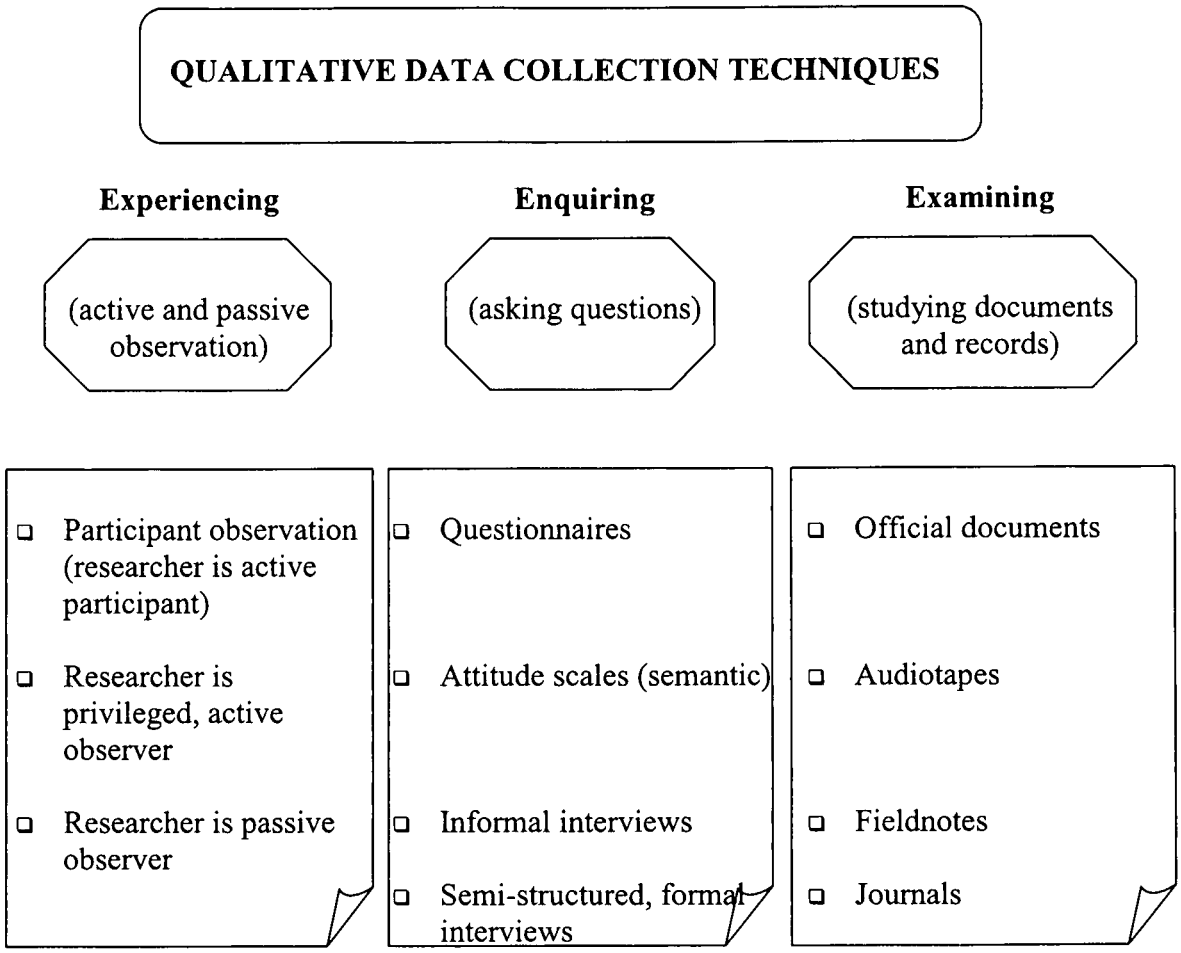


Figure 6.1 *Adapted version of Mills' taxonomy of action research qualitative data-collection techniques* (Mills, 2000)

Throughout the research, I consciously used the research questions (cf. par. 1.4) as an organising framework for the interpretation of data gathered from documents, questionnaires, interviews and observations.

6.3.2.1 Levels of analysis

The collection and analysis of data took place at different levels. At **programmatic level**, an account of how Module MEA112 came into being was based on an analysis of curricular review documentation and ensuing curriculum

materials. Interpretation of data focused on the charting of key decisions that were taken and the rationales behind those decisions. The case-study boundary of the study was (a) the community of academic staff in the UFS School of Medicine, organised into various committees and task teams and commissioned to execute policy decisions on curricular innovation, and (b) official and unofficial documents emerging from the work that was done to give effect to decisions taken by these committees and task teams.

At **modular level,** the performance of Module MEA112 in action was analysed on the basis of observations and feedback gathered from individuals and groups by means of questionnaire surveys and interviews. Interpretation of data took place against the background of the intentions, expectations and judgements of the module development team.

6.3.2.2 Modes of analysis

In analysing the data, I used two approaches. In the first instance, I constantly moved through the modes of recording, analysing and reflecting on data that were collected. The purpose of this iterative process was to identify key issues that had to be investigated. On hindsight, it has become clear to me that this level of analysis had a formative function, in the sense that it helped me to realise that certain intended outcomes of Module MEA112 had not materialised, or even worse, that the module development team was simply wrong in assuming that these outcomes would materialise (cf. par.7.3.4.4 and 8.3.2.1.3).

Secondly, I conducted a more systematic analysis of some important attributes of the data that were gathered (cf. par. 8.3.2.1.3 and 8.3.2.2.6.). Many of the data had a limited quantitative significance, but rendered qualitative insights that were followed up by means of interviews (cf. par. 7.3.3, 8.3.2.1.3 and 9.3.6). Descriptive statistical analysis mostly involved a frequency counting of responses. In some instances (such as the MED113 project) basic analysis was followed by more sophisticated, correlational analyses of data that were significantly related to the research questions. It is also important to note that throughout the study, data

were collected from individuals belonging to two language groups[18]. This enabled me to aggregate quantitative responses at the level of the whole sample, or at the level of the Afrikaans and English groups within the sample (cf.par. 7.3.3.2, 8.3.2.1.3 and 9.3.6.1). In this manner, interesting differences between the perceptions held by the two groups were revealed.

Throughout the three cycles of my action research I tried to avoid bias by keeping in mind that, after having analysed a first set of data, I might run the risk of becoming preoccupied, in subsequent sets of data, with certain trends, by subconsciously focusing on those aspects of the Module that I had *a priori* reasons to suspect of being inadequate. I therefore deliberately tried to avoid missing other important attributes of the data that were not anticipated. I would like to believe that I managed to do this, seeing that I had no preconceived hypothesis to confirm or reject.

6.3.3 Planning the research process

In order to align the research process with the **action learning cycle** (plan-implement-observe-reflect-replan), I used the diagrammatic framework (Figure 6.2), developed by Perry and Zuber-Skerritt (1992), to distinguish between core and thesis action research projects.

The **thesis project** refers to the work that went into the production of this research report. It gives an account of how, under the guidance and support of the study-leader work group, consisting of Professors Bitzer, Hay and Van der Spuy, the research was conceptualised (Chapters One to Five), how the fieldwork (core project) was approached (Chapters Six to Nine), and draws conclusions and makes recommendations for further research (Chapter Ten). Throughout the course of the research, I saw my supervisor and co-study leaders not only as advisors, but also as co-researchers on issues concerning theory and methodology.

[18] The University of the Orange Free State follows a parallel-medium method of instruction, which means that all learning activities are presented through the medium of both Afrikaans and English.

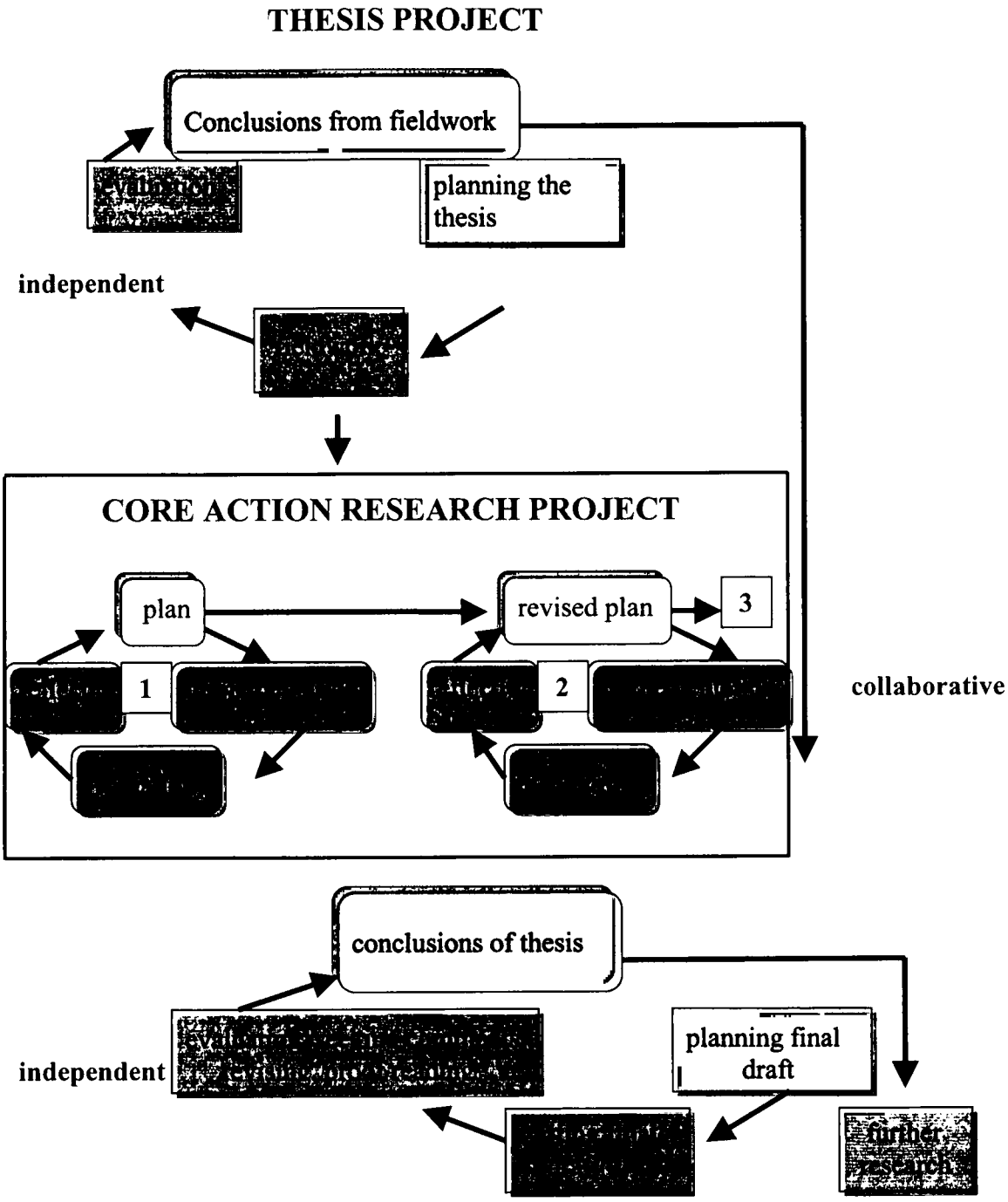


Figure 6.2 *Conceptual model for conducting an action research thesis* (Perry & Zuber-Skerritt, 1992)

The **core project,** in the main, represents the empirical fieldwork I undertook during the past three years, but also relates to interventions that had taken place in core modules, in which I was a participant at various stages during the research period (cf. par. 8.3.2.2.5, 9.3.3 and 9.3.4.2). The core project tells the dynamic story of the situation before and after each cycle, consisting of a plan, action, observation and reflection.

6.3.4 Planning the fieldwork

An adapted version of the Lewinian action research cycle, as described by Kemmis (1990), was used to structure fieldwork (Figure 6.3).

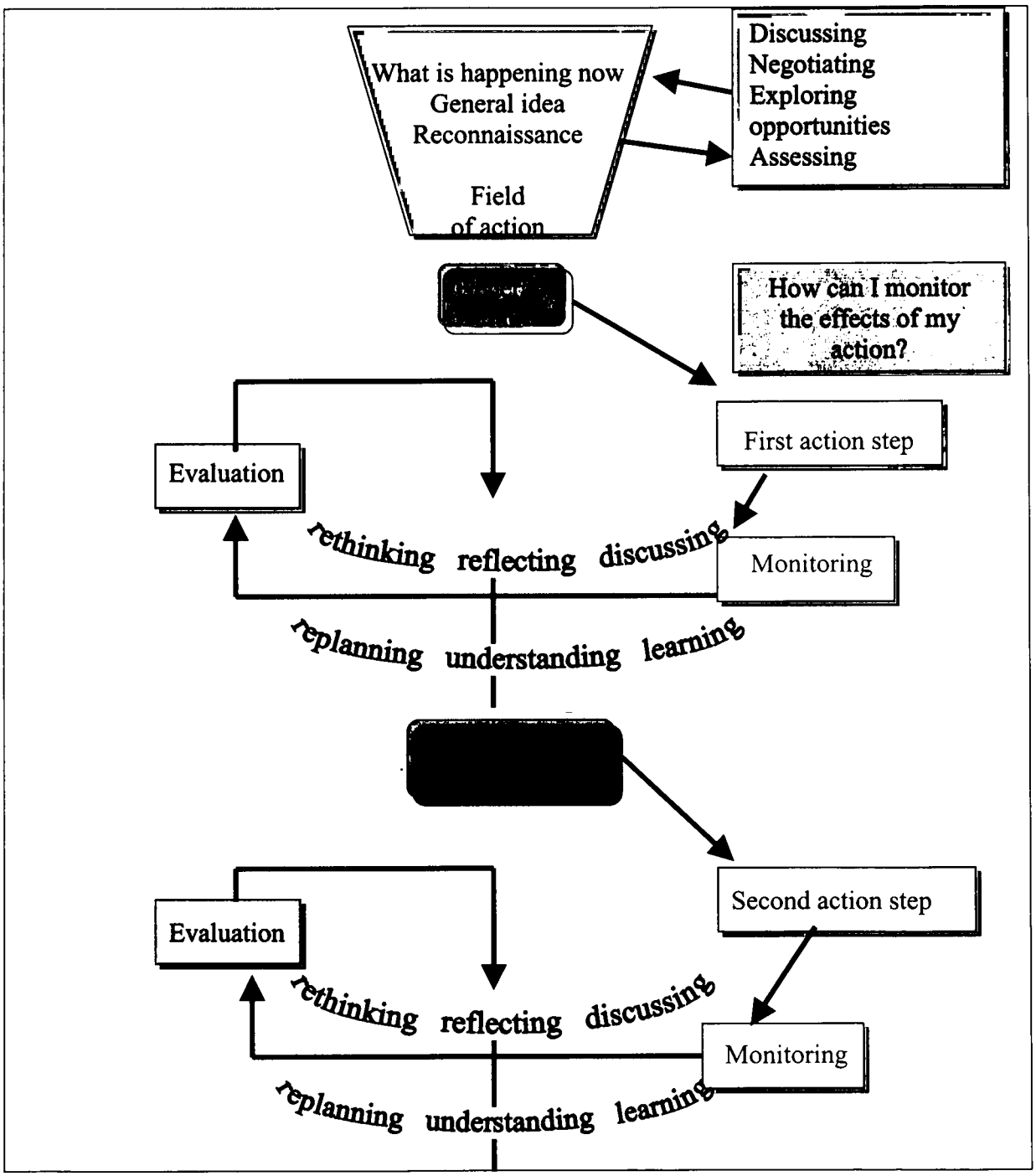


Figure 6.3 *Kemmis' representation of Lewin's action research cycle* (Mills, 2000)

To co-ordinate the series of data-collection tasks I had planned, I borrowed from Vulliamy, Lewin and Stephens (1990) by plotting out my operational fieldwork plan on a two-dimensional, three-column matrix of activities (Table 6.1). The research questions (par. 1.4) served as an organising basis for compiling the matrix.

Table 6.1 *Operational fieldwork plan* (adapted from Vulliamy, Lewin & Stephens, 1990)

RESEARCH QUESTIONS	SOURCES OF DATA	DATA-GATHERING METHODS	GOALS
Why did the UFS School of Medicine choose to follow the route that it did, as far as skills development is concerned?	-Literature -Reports on Faculty retreats and workshops -Curriculum documents	-Literature study -Observation	-To gain an in-depth understanding of the rationale for the inclusion of general skills in a medical curriculum; to learn from the work of others in creating a framework for the integration and assessment of general skills.
How did those responsible for implementing policy intentions go about doing so?	-Minutes of meetings -Phase guides, module guides and workbooks -Module leaders and lecturers teaching in Phase I -Journal entries -Senior staff members in managing, supervising or co-ordinating positions	-Documentary study -Questionnaire surveys -Individual interviews	-To obtain an overview of how the decisions taken by the UFS School of Medicine were conceptualised in curriculum materials. -To develop an understanding of strategic plans and problems related to practical implementation of plans.
What was done (with special reference to actual examples) and what was the outcome of the actions taken?	-First-year students -Research diary -Learning experiences -Assessment results -Moderator's report	-Questionnaire surveys -Half-sheet written responses -Focus group interviews -Individual interviews -Observation of student performances -Informal discussions -Assessment sheets - Journal entries	-To gain information on how students' experiences of curricular interventions related to the development of general skills. -To gather staff perspectives on interventions related to the development of general skills. -To gain insight into the expectations of significant others with regard to the content and outcome of Module MEA112. -To triangulate issues identified as significant for improvement.
-What lessons were learned?	-Journal entries and co-study leaders	-Reflection on questionnaire feedback, interview data and journal entries - Discussion, review and modification of perspectives	-To identify problematic areas and concerns that need to inform continued action; to reflect on highlights in the implementation process with a view to reinforcement. -To focus the research more sharply.

After having worked with the original framework for a while, I realised that it was a good thing to have an operational plan, but that the plan should remain flexible. Consequently, some cells of the matrix were expanded through the course of the research according to the amount of detail I needed in order to re-plan the research activities for each consecutive cycle.

6.3.5 Planning action steps in response to findings

Reflection on the findings of a study and developing new ways of understanding a problem are major components of action research. However, unless real action flows from the process, the goal of action research, namely to improve existing practice through educational change, cannot be achieved. To ensure that action would be the outcome of this investigation, I used the following question as a point of departure in each round of data analysis and interpretation: **On the basis of what I have learned from this slice of reality, what should I do now?** The answer to this question, in turn, formed the basis for new, overarching action plans, which were plotted on various rough versions of the chart below (Table 6.2). The template was borrowed from the work of Jack Reston, (cf. Mills, 2000).

Table 6.2 *Steps for taking action* (adapted from Reston, in Mills, 2000)

Research question directing action in successive cycle	Action to be taken	Person(s) responsible for implementing the action	Other role-players who need to be consulted and/or informed	Person(s) responsible for monitoring action/collecting data	Time frame for implementing the action	Resources that will be needed to imple-ment the action
Round 1: -What should be done, within the para-meters of the original policy decision to design and implement an "orientation programme" to address SAQA requirements for general skills development?	-Develop a module, including the critical cross-field outcomes listed in SAQA documentation	-Development team of Module MEA112	-Members of Work Groups A and B (cf. Figure 7.2) -Phase I Committee	-Leader (Adri Beylefeld) and co-leader (Mpho Jama) of Module MEA112, in collaboration with other members of module development team	-Until November 1999, when the Phase guide and workbooks should be ready for printing	-Funding -Technical assistance -Secretarial assistance
Round 2: -What should be done, now that we know that the students think that Module MEA112 is not medically oriented enough and is taking up too	-Integrate skills development sessions with learning content in core modules. -Establish close collaboration with	-Leader (Adri Beylefeld) and co-leader (Mpho Jama) of Module MEA112, in collaboration with other	-Phase Chair -Members of M.B.,Ch.B.I and Module Leaders Committee -Curriculum	-Leader (Adri Beylefeld) and co-leader (Mpho Jama) of Module MEA112, in collaboration with other members of module	-Until November 2001, when updated Phase guide and workbooks should be ready for printing	-Funding -Technical assistance -Secretarial assistance

much of the time they could spend on "studying"?	subject experts to create authentic learning experiences -Design and implement alternative forms of assessment	members of module development team	Committee	development team -Leaders of modules with whom joint working procedures are negotiated		
Round 3: -What should be done now that we have a better understanding of the problems related to integration and alternative forms of assessment (e.g. over-assessment, friendship marking, lack of formative feedback)?	-Re-instate a short "orientation" period -Re-establish links with core modules where joint assessment activities are well-accepted -Refine portfolio system -Refine standards, criteria and rubrics for assessment of performance tasks	-Leader (Adri Beylefeld) and co-leader (Mpho Jama) of Module MEA112, in collaboration with other members of module development team	-Programme Director, New Medical Curriculum 2000 -Phase Chair -Semester I Chair -Members of M.B.,Ch.B.I and Module Leaders Committee -Curriculum Committee	-Leader (Adri Beylefeld) and co-leader (Mpho Jama) of Module MEA112, in collaboration with other members of module development team -Leaders of modules with whom joint working procedures are negotiated	-Until November 2002, when updated Phase guide and workbooks should be ready for printing	-Funding -Technical assistance -Secretarial assistance

6.4 ENSURING THE TRUSTWORTHINESS OF THE RESEARCH

According to Krathwohl (1998:230): ... *qualitative researchers are judged by how insightfully they analyze their data, how well they present their interpretations, and how carefully and tightly they relate them to their information base.* The trustworthiness of data generated by qualitative methods encompasses concepts which are known in the quantitative paradigms as validity, reliability and generalisability. In a qualitative paradigm, these notions are referred to as credibility, transferability, dependability and confirmability (Tesch, 1990), referring respectively to

- the researcher's ability to take all the complexities of the context under investigation into account and to deal with unexpected patterns;
- the researcher's belief that everything is context-bound;
- the stability of the data; and
- the neutrality or objectivity of the data collected (Mills, 2000).

In keeping with Guba's (1981) suggestions in order to ensure trustworthy results, the following strategies and methods were followed (Table 6.3).

Table 6.3 *Adapted version of Guba's criteria for ensuring trustworthiness in qualitative research* (Mills, 2000)

Criteria of trustworthiness upheld by the researcher	Strategies and methods followed to ensure that criteria of trustworthiness were being met
Credibility	Observed students' perceptions of Module MEA112 persistently over a period of three years (par. 7.3.3.1, 9.2 and 9.3.6.1). Interacted with members of the development team of Module MEA112, lecturers teaching in Phase I of Curriculum 2000, as well as with significant others (phase chairpersons, semester chairpersons, managers, moderator, supervisor and study leaders). Practised triangulation of assessors (par. 9.3.6.4 and 9.3.6.5), sources of data (students, lecturers, managers), methods (questionnaires, interviews, observations), and different perspectives to interpret data (statistical analysis within a qualitative action research mode of inquiry). Collected a variety of data items (self-reports, half-sheet responses, questionnaire responses, assessment results). Corroborated findings, summaries and reports with research participants before sharing information on broader forums such as meetings or workshops (par.7.3.4.4. and 8.3.2.1.3).
Transferability	Collected detailed descriptive data and compiled detailed descriptions of the context to facilitate comparison with other contexts (par. 8.3.2.2.5).

Dependability	Compensated for a possible weakness in one data-gathering method by using more than one method (e.g. questionnaires and focus group interviews in par. 7.3.3.1).
Confirmability	Practised triangulation by confirming interpretations with those concerned (Appendices 7G and 9S). Recorded own reflections on what had happened in a particular situation so as to be able to reveal underlying assumptions or biases that led to a specific interpretation or caused the researcher to present findings in a particular way (par. 9.3.4.2).

6.5 ETHICAL CONSIDERATIONS

In implementing change, it is important to take the values and culture of the institution and of higher education in general, into account. Social principles such as professionalism, sensitivity to individuals' fears of exposure, collegial relations and cultural sensitivity dictated my ethical stance. Furthermore, I took note of Mill's (2000:90) observation in which he reminds the action researcher to take time to clarify her values and ethical perspectives in order to conduct the research in a professional, personal and caring fashion: *Working with colleagues through issues related to confidentiality, anonymity, informed consent, and rational judgement in matters of ethics will ensure that you avoid potentially difficult situations that may arise in implementing your action research effort.*

In giving effect to this suggestion, I took the following precautions:

- Permission was asked to make tape-recordings of focus group interviews.
- Written permission was obtained from participants who were video-taped during the poster presentation session in Module MED113 for the purpose of using this data source as an artefact at the Faculty Forum.
- In all instances students were informed that they were subjects in a study and assurance of confidentiality was given to participants, prior to all data-collecting activities.
- In order to conceal the identities of respondents in descriptive data, information was reported in a form that would not reveal its source. However, where prominent individuals, such as the top leadership team of the UFS School of Medicine, were interviewed, there would be little point in trying to hide their

identity. In such cases I made it clear that information collected might be reported in publications and that they could indicate if they objected to being quoted.

- Colleagues whose practices were exposed by students in questionnaire responses or interview data, were protected from embarrassment when findings were shared with others.

6.6 LIMITATIONS OF THE STUDY

Several limitations must be noted about the design of this study. In the first place, data obtained through interviews and questionnaires were captured from a relatively small sample of students and lecturers in a single Faculty at a single institution. As outlined above, the strength of action research lies not so much in the generalisability of findings based on a large number of cases, as in the degree to which the researcher truthfully contributes to the full understanding of a slice of reality. Despite the fact that the generalisability of findings was not considered top priority, it was anticipated that the relatively small sample might be considered a weakness. As a result, respondent validation was achieved by means of triangulation. On this basis, the respondents may well be representative of students and lecturers at institutions that have already made, or plan to make moves to incorporate the development of general skills into their curricula.

Secondly, the study examined a phenomenon, namely the integration and assessment of critical outcomes, over a relatively short period of three years. It seems quite possible, and indeed probable, that some changes in respondents' conceptions of assessment may occur over a longer period. The scope of this study, however, did not allow me to address questions relating to the magnitude of change over a longer period.

6.7 CONCLUSION

In the quotation that was used to set the tone at the beginning of this chapter, Tesch (1990:96) reminds us, with reference to the pervasive nature of qualitative

research, that ... *it is possible to analyze any phenomenon in more than one way and 'each qualitative analyst must find his or her own process'.* My methodological point of departure, as explained above, aligns with this point of view, which means that the research was not conducted in terms of a specific, narrowly defined research tradition. It will become clear in the next chapter that I reserved the right to select, on the basis of emerging research questions, appropriate methods and techniques that would allow me to gain insight into matters of concern.

Furthermore, it should be evident from the extensive literature study reported in Chapters Two to Five that I rejected the extreme version of the open-ended, inductivist approach to qualitative research. According to this approach, a researcher should ensure that she is uncontaminated by prior concepts or preconceived ideas at the start of a research project by ignoring the literature on the area of study. Although the literature study was not completed when I embarked on the empirical part of the research, I did not start with a *tabula rasa*. On the contrary, I began with admittedly ill-structured, but nontheless definite problems in mind, namely (a) how to put the teaching of general skills into practice in a medical curriculum; and (b) how to fine-tune my ideas, gathered from models reported in the literature, in order to strike a balance between what, according to my interpretation, should be done and what is practically possible within the specific context of the first year of the Programme for Professional Medicine (M.B.,Ch.B.).

My reflective journey through a three-year period of action research comes up for discussion in the next three chapters.

CHAPTER SEVEN

CYCLE ONE (1999 - 2000): DOING GENERAL SKILLS DEVELOPMENT IN A MEDICAL CURRICULUM IS CHALLENGING

7.1 INTRODUCTION

This chapter, along with the next two consecutive ones, is completely autobiographical in nature. Its purpose is to combine the theory of this study with the reality of my professional practice of the past three years. By describing the cycles of planning, action, observation of action, reflection and re-planning comprising my reflective practice, the chapter gives an account of the major areas in which new insights were gained, and also of my own professional development as I endeavoured to improve on the work that I was commissioned to do in the field of skills development. It offers retrospective reflections on lessons learnt in each cycle, and on how these were applied in each successive cycle.

Conclusions about the integration and assessment of general skills are synthesised from the information gathered throughout this process, and presented within the conceptual framework of the research questions formulated in Chapter One. Typical responses from interview and questionnaire data and quotations from my journal entries are used to substantiate and illuminate the conclusions that are drawn.

Documentary evidence is included in the form of appendices and some parts of this chapter will be constructed in the form of freestanding reports, immediately accessible for publication.

In reporting events that formed part of each of the three research cycles, I will try to answer the fundamental questions at the core of my research:

- Why did the UFS School of Medicine choose to follow the route that it did as far as skills development is concerned? (par. 7.3.1)
- How did those responsible for implementing policy intentions go about doing so? (par. 7.3.1)
- What was done? (par. 7.3.2)
- What was the outcome of actions taken? (par. 7.3.3)
- What lessons were learned? (par. 7.3.4)

7.2 BACKGROUND TO THE IMPLEMENTATION OF MODULE MEA112

Integrating general skills into a first-year programme for medical students can be a daunting task. Medical students are typically negative towards learning content that is related to the human or social sciences. However, when I was given the task of acting as module leader of Module MEA112 in 1998, I had to accept the challenge. The superficial knowledge and experience of action research that I had at that time became the proverbial straw that I clung to. I vaguely remembered having heard the claim that action research can help professionals to deal with messy problems. Consequently I decided that learning through action research was the way to go if I wanted to make a success of the ill-structured brief I received in 1998, namely to design, in collaboration with others, an "orientation programme", addressing the SAQA requirements for skills development in the first year of the new medical curriculum. Included in this brief, almost as a postscript, were the minutes of a meeting of the Phase I Committee held early in 1999, which reminded those involved in this venture to "remember to integrate skills unobtrusively into the curriculum."

The scene was set for my action research to begin, because at that stage, I did not know where else to start other than to learn by trial and error. The Dean's message in closing the Faculty Retreat at Clarens in June 1998 provided the needed impetus. In commenting on how he foresaw the progress of the curriculum review process, he introduced the committee structure explained below and suggested that (a) the Theme Committees (cf.Figure 7.2) should

evaluate their themes on a continual basis with a view to improvement, and (b) implementers of policy decisions should feel free to apply the SIS principle (i.e. "steal ideas shamelessly"), on condition that those ideas were applied appropriately and in a contextually relevant manner in the UFS School of Medicine.

Against this backdrop, the primary focus of Cycle One is on the collection of evidence to justify what the MEA112 module development team planned to do in the first round of delivering a module on general skills. According to my operational fieldwork plan (cf.Table 6.1), sources of data that were explored during the first phase (General Plan) of Cycle One, included workshop reports, the minutes of committee meetings, official programme documentation, my own observational notes and literature references. In following the procedure for preliminary information gathering, as described by Mills (2000), reconnaissance activities (cf.Figure 6.1) included examining (studying documents and records), experiencing (active and passive observation), and enquiring (asking questions). The purpose of these activities was (a) to gain an in-depth understanding of the rationale, from the UFS School of Medicine's point of view, for the inclusion of general skills into the new curriculum and (b) to obtain an overview of how the decisions taken by the school were conceptualised in curriculum materials.

Data interpretation at this stage of the research consisted mainly of connecting personal understandings with perspectives that were emerging from curriculum documentation and the literature, with a view to anticipating the implications that the findings might have with regard to the establishment of a module on general skills.

7.3 THE ACTION RESEARCH PROCESS

7.3.1 General plan: Defining the field of action

Consistent with the strategies followed by many other medical schools all over the world, the UFS School of Medicine embarked on a process of curriculum review

in 1996 with the aim of reducing its reliance on the didactic, lecture-based mode of instruction. The better part of four years was spent in preparing for the curriculum change that culminated in 2000 in the five-year Programme for Professional Medicine, leading to the M.B.,Ch.B. qualification (hereafter referred to as Curriculum 2000). During this preparatory period, several workshops were conducted by the Division of Educational Development, Office of the Dean, to orient academic staff members to new expectations with regard to the education and training of doctors. Policy directives, discussed at the African Regional Conference on Medical Education that was held in Cape Town in April 1995, and summarised in the form of the *Cape Town Declaration,* served as a point of departure in these early discussions.

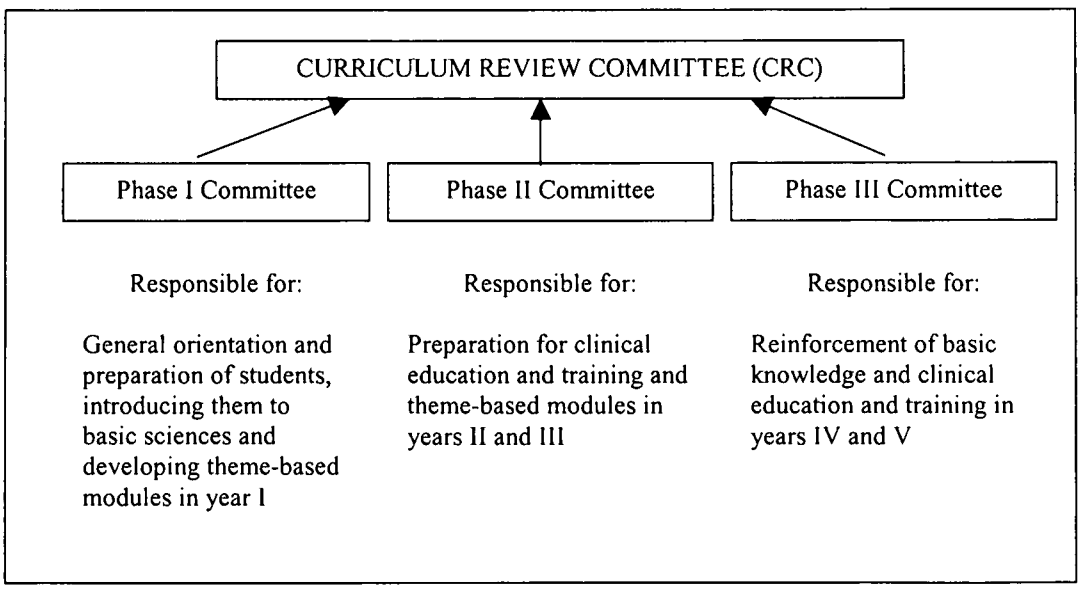


Figure 7.1 *Committee structure responsible for curricular reform*

A Curriculum Review Committee (CRC), chaired by the Dean and consisting of seven senior academic staff members and educationists, spearheaded the curriculum reform. Regular meetings were held, and several planning documents emerged from their discussions. The work of the CRC was informed by contributions from three Phase Committees and various *ad hoc* sub-groups (Figure 7.1).

In addition, a structure established early in 1998 ensured that the work of each Phase Committee was informed and supported by means of input generated by Work Groups (or Theme Committees as they were originally referred to), each of which had to develop a specific aspect of the new curriculum (Figure 7.2). These groups worked together as the Phase I Task Team.

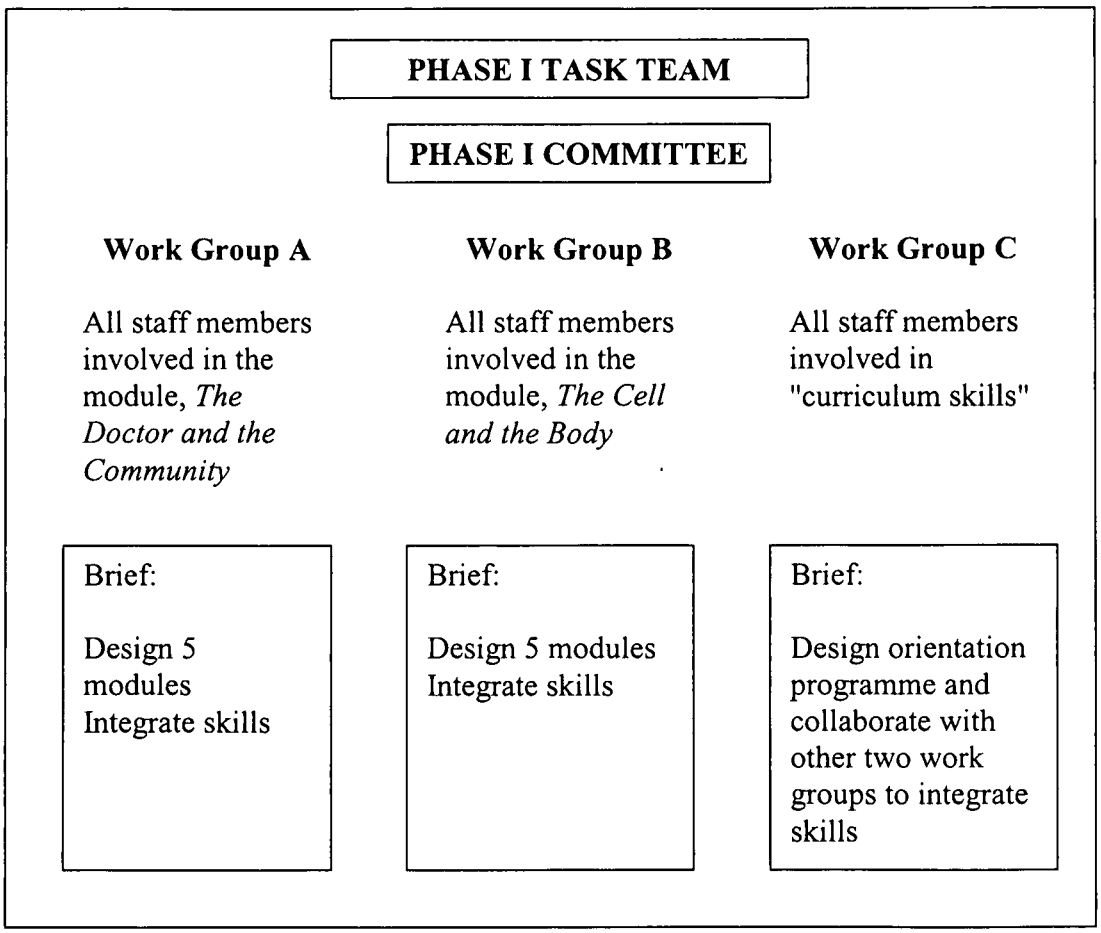


Figure 7.2 *Committee structure informing the work of the Phase I Committee*

For a school that had been steeped in the traditions of medical education for many years, some of the educational changes planned for Curriculum 2000 seemed somewhat idealistic. Committed individuals who were able to put policy decisions into practice had to be identified. In 1998 staff members were elected to serve on the Phase I Committee in the capacity of convenors of the different Work Groups. I was elected to lead Work Group C, commissioned to design an "orientation programme," as the module on general skills was referred to at that stage.

In the process of collaborative engagement between the various committees and task groups, a rich source of documentation emerged. **Appendix 7A** is a summary of documentary evidence gathered to justify and give direction to the design and implementation of the module on the theme of general skills that Work Group C had to develop.

Data gathering at this stage consisted of the listing of recurrent themes in the data. From a synthesis of the documentary evidence, I came to the following conclusions:

- The changed composition of the student body and the increased reliance on independent, autonomous learning in Curriculum 2000 necessitate the inclusion of a module with a general formative character; not only to level the playing field for students from disadvantaged schooling backgrounds, but also to prepare all students for the demands of a student-centred curriculum.
- In order to deal with the possibility that students might regard such a component of the curriculum as stigmatised or of lesser importance, precautionary measures had to be taken, including the following: The module should be compulsory for all students; it should be credit-bearing; and, for the purpose of revisitation of skills throughout the five-year programme and anticipated integration within the learning content of core modules, the initial introduction to general skills should not have the connotation of a remedial programme.
- The module should address the development of students at a personal, curriculum and professional level.
- All the critical, long-term outcomes considered by SAQA as essential to ensure that the values of a democratic society are preserved (**Appendix 2A**), were covered by the Programme for Professional Medicine submitted to SAQA.

In the months to follow, I immersed myself in the literature on skills development. I started writing what became Chapter Two of this study, early in 1999. Inductive lists of recurrent themes in the literature and several observational notes made during committee meetings, discussions and workshops were eventually sorted out into three interrelated categories:

- Typical content of skills development programmes.
- Integration and contextualisation of general skills into the learning content of core modules.
- Ideas that are relevant and feasible in the context of the UFS School of Medicine.

Input from module development team members, interpreted against the background of information assembled under each of these categories, culminated in Module MEA112, which will now be discussed.

7.3.2 First action step: Design and implementation of Module MEA112

Formulation of the original design of Module MEA112 consisted of an iterative process between the members of Work Group C and other stakeholders represented in the committee structure outlined above (**Appendix 7B** demonstrates this process). Data collection and analysis during this first phase of action consisted of making observational notes during meetings and workshops and trying to understand these in relation to inductive ideas taken from the literature. Data interpretation consisted of sharing newly-found insights with colleagues and seeking their criticism.

7.3.2.1 Typical content of skills development programmes

After having pursued through the literature on skills development, with specific reference to the Skill Packs used at the Sheffield Hallam University (Drew & Bingham, 1997), I came up with a list of specific themes (cf. Table 7.1), as a first step, for consideration by the module development team:

During a meeting of the module development team on 18 March 1999, these themes were divided into two main groups, namely (a) a general academic and life-skill group (including topics such as orientation to environment, time management, stress management, communication and group functioning); and (b) an applied scientific method group (including topics such as utilising the library,

Table 7. 1 *Themes that may be considered for inclusion in Module MEA112*

Skills domain	Relevant topics within each domain
General orientation	Higher education The university/faculty Student-centred education Problem-/community-/resource-based education
Personal life skills	Time management Goal setting Task management Financial management Decision making
Language skills	Grammar Spelling and punctuation Subject terminology
Numerical skills	Graphs Tables Basic mathematical calculations
Study skills	Reading Taking notes Organisation of information (summary making) Time scheduling Memorisation techniques Test- and examination taking
Thinking skills	Identification of core messages Structuring of information Problem-solving techniques
Social skills	Interpersonal relationships Cultural tolerance Group dynamics Individual contribution to groupwork Team work Informal small group discussion Formal group presentations
Communication skills	Listening skills Writing skills Asking questions (interviewing) Giving instructions Non-verbal communication Negotiation skills Assertiveness
Research skills	Using the library Compilation of a protocol Data gathering and analysis Data interpretation and presentation Referencing
Technological skills	Using a computer Writing a video script

application of number and computer skills). After several discussions between module development team members and between Work Group C and the Phase I Committee, the following conclusions were reached:

- Each of the above domains or groupings of domains would be allocated to a domain manager, who would then take responsibility for the development of appropriate content material, the incorporation thereof into subject content (in collaboration with lecturers/facilitators), as well as for the delivery of that content.
- Some of the themes would be presented in the form of a three-day workshop at the beginning of the academic year, supplemented by a practical assignment on a topic aimed at enhancing students' understanding of how to find their feet in the university milieu and make a success at university.
- Other themes included in the list were naturally compatible with the topics addressed in the core modules and thus would be integrated according to the following procedure: lecturers/facilitators would identify the areas of skills development that were relevant in their respective modules; they would indicate the extent to which they themselves would take care of developing those skills; lecturers/facilitators would indicate whether there were aspects of the skills they planned to develop, on which they would like to have supporting material and/or someone to present the material; the Phase I Committee would delegate the development and presentation of the material requested, to a suitable person(s).

At a meeting of the Phase I Task Team on 25 November 1998, the above suggestions were graphically portrayed as follows (Figure 7.3):

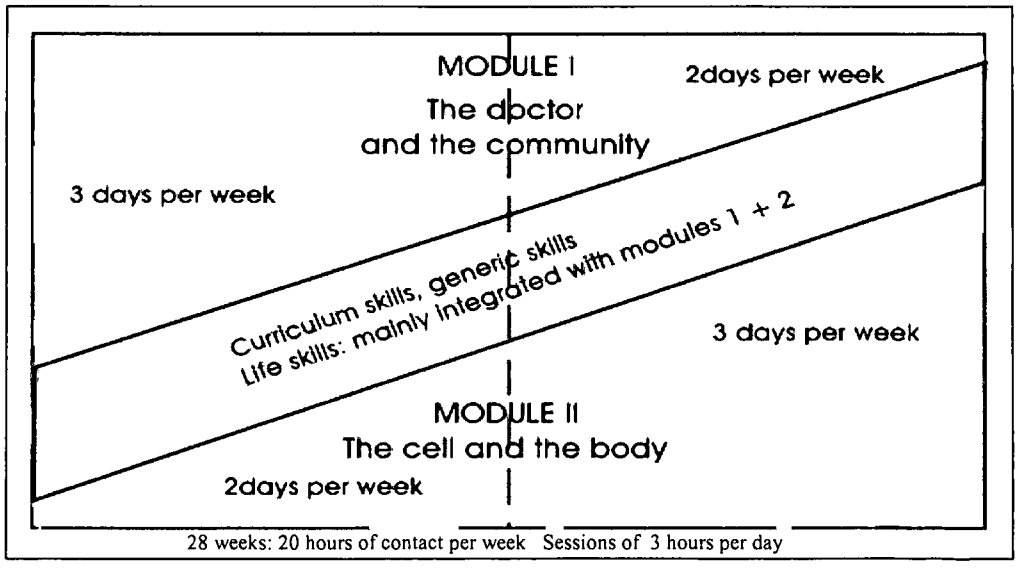


Figure 7.3 *Integration of general skills into the curriculum*

A question raised on this occasion was whether all of the critical outcomes specified in SAQA documentation had to be addressed in the first year of the medical curriculum. Alternatively, the UFS School of Medicine could identify those skills that were deemed essential for the first year of study and concentrate on them only. The latter option was chosen and put into effect when the module development team compiled the final version of Module MEA112. Other suggestions that were taken from the literature and submitted for consideration to the Phase 1 Committee, are summarised in Table 7.2.

Table 7.2 *Suggestions for the integration of skills development into learning content*

SUGGESTION	MOTIVATION
The orientation period presents an opportunity to "diagnose" students' level of preparedness. Use self-study packs supplemented by support from resource persons.	Well-structured self-study assignments promote ownership of learning. A research assignment, supplemented by a self-instructional skills pack, ensures that students use directed learning time sensibly. Resource persons can supply need-driven support to students who encounter difficulties during this time.
Use fixed resource sessions and make provision for the recognition of prior learning.	Self-study assignments often necessitate formal instruction, e.g. how to do a database search. A fixed resource session, appropriately scheduled in directed learning time, is often all that students need in order to complete an assignment on their own. Recognition of prior learning, for those who can prove that they have already mastered a particular skill addressed in a resource session, can save the students and the presenters of such "extra" sessions a great deal of frustration.
Use individual or group drop-in sessions.	Students enter higher education at different levels of academic, social and personal preparedness. A person whom students can consult on a drop-in basis whenever they need help, is a valuable resource. Well-prepared students can also be used to give support to the less-prepared ones.
Concentrate on the relevancy of skills development.	Skills development activities presented as separate entities should be skilfully scheduled within the mainstream programme at a time when mastering a particular skill can help a student to be successful in the core modules. For the same reason, the material used in fixed resource sessions should be related to the content of core modules.
Synergise the efforts of subject experts and skills development staff.	Students often attend skills development sessions with widely different expectations. As far as language development is concerned, for example, some may want to concentrate on correct language usage, while others expect to be assisted with subject-specific terminological difficulties. The problem may be solved if language and subject experts work together.
Make provision for the assessment of skills.	The powerful influence of assessment on students' learning behaviour should not be underestimated. Assessment of general skills can thus be used to prevent students from regarding skills development as being of minor importance.
Allow time in other modules for the revisitation of general skills.	A two-week period is insufficient to really skill students in a specific area, especially with regard to skills related to the application of a scientific method of research. The initial two-week period should at best be seen as a general introduction to certain skills with a view to reinforcement in core modules.

Discussions, negotiations and suggestions which flowed from these suggestions materialised on paper in the form of the initial submission of the content and structure of Module MEA112 on 25 November 1998 at a meeting of the Phase I Task Team (**Appendix 7C**). A changed version was submitted to the Curriculum Review Workshop on 20 January 1999 (**Appendix 7D**).

7.3.2.2 Integration and contextualisation of general skills into the learning content of core modules

An opportunity for receiving critical comment on the preliminary plans for Module MEA112 presented itself when Professor Stewart from the Leicester Warwick Medical School in the United Kingdom, one of the most prominent consultants in the curriculum review process, came to visit the UFS School of Medicine. With a view to receiving feedback from him, Theme Committees were told to "put something on the table" and to compile a wish list, indicating what it was that they would like to see happening in the areas they were responsible for.

From my field notes on Professor Petersen's critique, I condensed the following recommendations, related to the integration of general skills into core modules, and submitted them to the module development team on 18 March 1999:

- Topics such as medical statistics, which are highly context-dependent, should not be addressed in the module on general skills, but rather as a fully integrated part of a core module on epidemiology.
- Project work too early in the learning programme was not recommended. In Module MEA112 the team should think in terms of a basic introduction to research skills, followed by the practising of those skills throughout Phase I.
- The integration of a skill such as information retrieval should happen throughout the curriculum. Module development team members should identify appropriate places and opportunities and make suggestions on how this skill could be built into core themes.
- Skills should be embedded in assessment activities through the identification of activities in core modules where those skills are prominent, followed by the

formulation of assessment criteria that will test whether intended skills outcomes have been achieved.

Without my realising, at that stage, that assessment would become a pivotal aspect of the implementation of Module MEA112, my journal entry on 20 January 1999 - the day I met with Professor Petersen - read as follows:

20 January 1999

A possible strategy : 1. Look at final outcomes of curriculum. 2. Identify tasks students have to perform. 3. Pull out selection of topics or tasks related to skills we would like to teach. 4. ***Identify vehicle for testing those skills*** [emphasis added for purpose of this thesis].

7.3.2.3 Ideas that are relevant and feasible in the context of the UFS School of Medicine

On the strength of the knowledge and insight I had gained from curriculum documentation, the literature and Professor Petersen's input, I presented a paper, on behalf of the module development team, at a Phase I Task Team workshop in April 1999, addressing the "what", the "who", the "when" and the "where" of Module MEA112. Table 7.3 is a summary of the perspectives that were shared with the rest of the Phase I Task Team.

Table 7.3 *Design and implementation plans for the development of general skills in Curriculum 2000*

Critical aspects of design	Plans for implementation
What general skills are relevant for doctors in training?	General skills will be divided into two sub-groups: Human and social science topics (language and communication, group functioning, self-regulation and stress management); Natural science topics (numeracy, technology, information literacy, research).
Who should be the target group?	The module is compulsory for all students. The composition of groups can help to support students who have academic backlogs. Stronger students can be kept interested by using them as tutors.
Who should be responsible for developing general skills?	Lecturers and skills specialists should collaborate to facilitate integration of skills in core learning content.
Where and when should the	General skills development should occur from day one, when

development of general skills take place?	students are still receptive. By means of assignments that require them to use skills, students who need support can be identified early. Thereafter, skills development can be "hidden" within core learning content.
How should the development of skills be approached to ensure (a) that the skills are integrated into core learning content, and (b) that problematic areas receive extra attention?	The following need to be considered: assignments that demand the use of certain skills; assessment of skills; referral of students who need help for extra support; the provision of opportunities for self-correction.
How should the assessment of skills be approached in order to make it meaningful for the student?	Inform students on desired outcomes and assessment criteria; use assessment tasks that reflect the performance of the skill that is being measured; use assessment criteria that are widely recognised and not influenced by the assessor's values and attitudes; provide students with explicit and timely feedback.

On the completion of the design of Module MEA112, the module had the following features:

General approach and structure

The module comprised ten eight-hour sessions offered by a fairly large number of staff members, including academics, administrative staff and people from the public sector. It involved 55 hours of contact time and 25 hours of directed learning over a two-week period. The content of these sessions was delivered by means of various teaching and learning methods such as live lectures, video-taped presentations, groupwork, hands-on sessions, computer-assisted learning and "do-it-yourself" assignments (directed learning).

Content

The aim of the module was to:

- familiarise students with the physical environment and administrative procedures of the Faculty of Health Sciences;
- serve as an introduction to the way in which students are expected to function within the new curriculum;
- develop and enhance the general skills and competencies demanded by a resource-based learning approach.

The content of the module covered the following themes:

- physical arrangement, administration and management of the Faculty of Health Sciences;
- medical education in the Faculty of Health Sciences;
- inter-cultural etiquette and non-verbal interaction;
- group approach;
- self-regulation: personal, financial and time management;
- discovering computers;
- subject-specific communication;
- introduction to information technology and research;
- finding and evaluating information;
- data-base searching and bibliographic reference technique;
- project presentation.

Assessment of the achievement of outcomes was based on class attendance, a group project assessed for content, structure and referencing technique, and an oral presentation assessed by a panel of academic staff members as well as by the students. In **Appendix 7E** the final version of Module MEA112, indicating the intended outcomes for each theme, along with the mode of instruction, is expounded.

7.3.3 Monitoring and observing: Implementation process and obstacles to effectiveness

This section of the report focuses on evidence indicating that the model we had in use in 2000 suffered from various shortcomings. Data were gathered at modular level by the MEA112 module development team and at programme level by the Division of Educational Development, Office of the Dean.

7.3.3.1 Collection, analysis and interpretation of data at modular level

On the basis of the assumption that all the noise made by the government and SAQA about the development of general skills may have silenced the students' voice in respect of their needs and expectations with regard to the development of general skills, data were gathered by means of enquiry (asking questions) during

the initial stage of Cycle One. In spite of the limitations of student perceptions, I decided to use student feedback as a main source of data. As George Kelly, originator of the personal construct theory, once said, ... *[i]f you don't know what is wrong with the patient, ask him* [sic], *he may tell you* (Drew & Payne, 1992:147).

Student views were collected by means of a three-staged process. Two and a half weeks after the commencement of Curriculum 2000, 58 Afrikaans- and 30 English-speaking students individually completed a semi-structured questionnaire asking them to comment on what was "right" and what was "not so right" in Module MEA112 (cf. **Appendix 7F** for the questionnaire that was used). A preliminary analysis of the questionnaire data identified the following important issues:

- Overall, most of the students' expectations were met by the module, but significantly fewer Afrikaans-speaking students (53percent) than English-speaking students (80percent) were satisfied with the module.
- Those who were disappointed by the module, indicated that they had expected it to be more medically oriented.
- Almost one third of the students did not feel comfortable with the assessment process. They failed to see how some aspects of that process (for example, class attendance and completion of workbook activities) related to the aims of the module, and complained about the idea of a group mark.

These issues seemed important enough to warrant verification from another source. Consequently the students' views were triangulated by means of a follow-up questionnaire (**Appendix 7G**), asking them to comment on a summary of their feedback elicited by the first questionnaire. The qualitative data that were accumulated in this round were mostly idiosyncratic in nature, relating to relatively few responses, and in some instances, to a single response. However, these responses were interpreted as indications of what students perceived as issues that needed to be changed and not as a comprehensive list of generalisable ideas on how to modify Module MEA112.

On the basis of a content analysis of students' responses, I came to the conclusion that groupwork, considered as one of the critical aspects of Curriculum 2000, was bound to cause a great deal of resistance if left unattended. A total of 50 responses indicated that groupwork was a problem. The following *verbatim* responses indicate the range of concerns that were raised:

"Groupwork is hectic and time consuming."
"It is difficult to share out the work equally."
"Some group members are not willing to work at all."
"Groepwerk word oordoen." ["There is too much emphasis on groupwork."]
"Groepwerk mag wel deel van kurrikulum [2000] vorm, maar ek voel dat dit as ['t] ware die leerder benadeel en selfs terugdryf in die verlede." ["Groupwork may form part of Curriculum 2005, but I feel that it puts students at a disadvantage and drives them back to the past."]
"Hardwerkende studente neem die ander se take oor en kry swak punte terwyl ander meer [stres] het." ["Conscientious students take on others' tasks and obtain poor marks, while others experience a great deal of stress."]
"Groepverslae moet verminder word." ["Group reports should be reduced."]

Furthermore, two-thirds of the students indicated dissatisfaction with the method of assessment that applied in MEA112. Most of the negative responses were once again related to groupwork, as is evident from the following quotations:

"Punte word toegeken ten opsigte van die groep se [al]gehele prestasie en reflekteer nie altyd die individu se potensiaal nie." ["Marks are allocated for the group's overall achievement and do not always reflect the individual's potential."]
"Personally I do not like continuous evaluation in the form of tasks/projects, etc. unless I am able to present an individual effort where I can be evaluated on my own work."
"Groupwork assignment should count [for] less."

Students also expressed views which alerted the module development team to two crucial issues related to assessment. Firstly, it was clear that many students' expectations were still firmly anchored in traditional forms of assessment. Five

students expressed the idea that students should not be allowed to assess other students. Four said that written evaluation was important. The fact that students prefer to adhere to what they are used to is clear from the following comment: "Orals took up too much time which caused us to neglect our academic work - rather administer a written test." One respondent succinctly stated that the method of assessment was unfair ... "because I believe that everybody should be evaluated individually through tests that are written [and] not through group participation." Secondly, it became clear that students experienced the methods of assessment used in Module MEA112 in 2000 as haphazard and excessive. Their recommendations on the following assessment-related issues indicated that the system in place should give way to a more systematic approach and that clear information on the implementation of alternative forms of assessment would be welcomed:

Number of assignments should be decreased and topics should be made more relevant (thirteen responses).
Assignment-related expectations should be made clear (five responses).
The number of presentations should be decreased (five responses).
Attendance should not be used as a measurement criterion (ten responses).
Marks should not be allocated to oral presentations as such, but rather to the planning and preparation of the project in general (eight responses).
Feedback from lecturers is important and should take place sooner (six responses).
Lecturers' expectations should be made more clear (six responses).
There should be fewer group reports (four responses).
Journal writing should be abolished (three responses).
Research should receive less emphasis and research-related instructions coming from different lecturers should correspond (three responses).
Lecturers should change their way of marking (two responses).

Further triangulation of these findings was pursued by means of a focus group interview which took place on 25 July 2000. Probes that were used to elicit discussion centred around the themes of groupwork, the method of assessment and the requirement of compulsory attendance (cf.**Appendix 7H**). Findings emanating from the questionnaire surveys were confirmed during the interview

and the outcome of the discussion focused attention on three important issues: students should be sufficiently informed about how the assessment system works; the allocation of a group mark should be approached carefully because it can easily lead to conflict and feelings of guilt; and finally, Module MEA112 should be made more relevant to a medical context. **Appendix 7I** gives a full account of the evaluation of Module MEA112 in the form of a paper presented at the 32nd Annual Forum of the Faculty of Health Sciences.

Ultimately, students' views were sought on their experience of journal entries as a learning activity. This was done by means of a questionnaire that was implemented during the final session of MEA112 (**Appendix 7J**). Throughout the year, students were routinely expected to reflect on their learning at the end of each session. The inclusion of journal writing in the daily programme was based on a claim in the literature that reflection is a valuable learning strategy in the education of *healthcare* professionals. Reflection is credited for its ability to enhance the integration of theory and practice, to facilitate reinforced learning through re-visitation of experiences and to help students deal with problems (Mezirow, 1998).

Although some students were quite positive about the journal writing, a significant number of students (23 Afrikaans-speaking and five English-speaking students) responded negatively. The negative feedback indicated a mismatch between the intended outcome of the activity and students' interpretation of that intention, as is evident from the following responses:

"As ek gedink het dit is nodig om die dag se werk op te som, sou ek dit by die huis gedoen het" ["If I thought it necessary to summarise the day's work, I wouldl do it at home."]

"Ons het genoeg notas ontvang - dit was nie nodig om vir myself 'n brief te skryf nie - dit was simpel" ["We received enough notes - it was not necessary to write a letter to myself or [to] my parents - it was stupid."]

"The rationale (namely to summarise the day's work) was valid, but the method was of no use."

"I believe journal writing belongs elsewhere, not in the study of medicine where there's a lot of work to do and no time for trivialities."

"The journal writing was a total waste of time in the sense that, students were channeled to a specific question. The understanding and meaning of [a] journal got lost there, as we thought we were to reflect on the happenings of each day as they passed by; the *co-ordinator*s were actually interested [in] what they wanted to hear and not the general feeling of the students."

At a workshop on undergraduate teaching, learning and assessment, conducted by Professor Lewis Elton from the University College of London, at the University of the Free State in June 2001, I shared these findings with attendees. Professor Elton agreed with the students that the goal of the journal-writing exercise was meritorious, but not the method. He strongly criticised the requirement that students had to hand in their journal entries. Instead, he recommended that students should be allowed to decide what they wanted to share with others. This recommendation correlated with what one of the students had said: "It is something personal that I am expected to write down - then one will not be honest, because you know somebody else is going to read it."

At that stage I had to admit to myself that by ignoring the fact that the reflective process involves both cognition and feelings, I had violated the students' personal space and thus defeated the purpose of the journal-writing activity as a learning event.

7.3.3.2 Data generated at programme level

In July 2000, a lecturer training course, held in the UFS School of Medicine, provided a forum in which staff could review the progress and performance of their modules. On this occasion, the Dean commented on the vast difference between Afrikaans- and English-speaking students' experience of Module MEA112, as revealed in a questionnaire survey conducted by the Division of Educational Development (DED, 1999). Table 7.4 is an excerpt from the data generated by this survey.

Table 7.4 *Student feedback on the effectiveness and efficiency of Module MEA112 in 2000*

	%	%	
My interest was not stimulated by this module	A*: 52,08 E**: 26,32	A: 16,67 E: 57,89	My interest in the work was stimulated by this module
The assessments weren't useful learning opportunities	A: 41,67 E: 15,79	A: 27,08 E: 57,89	Each assessment was a useful learning opportunity
The relevance of this module to the practice of medicine wasn't clear	A: 60,42 E: 31,58	A:20,83 E: 26,32	The relevance of this module to the practice of medicine was clear
Overall, the module did not meet my expectations	A: 58,33 E: 15,79	A: 10,42 E: 31,58	Overall, the module exceeded all expectations

* A: Afrikaans group (n = 48)
** E: English group (n = 19)

According to this set of data, the intended outcomes of the module had not been achieved satisfactorily - at least not as far as the Afrikaans-speaking students were concerned. The Dean encouraged the workshop participants to reflect on the reasons for this situation.

7.3.4 Reflection: Outcome of the first action step

In reflecting on the outcome of implementing the general plan for skills development in the UFS School of Medicine, I use some of the insights discussed above. There are four points I wish to make regarding the way in which I developed an understanding of general skills during the first cycle of my research: the concern that caused me to embark on an action research project; the necessity of clarifying the terminological confusion surrounding skills development; my own professional growth; and areas that needed modification before the second round of implementation of Module MEA112.

7.3.4.1 Concern that triggered the action research project

At the start of my research project, my main concern was the uncertainty and lack of direction as far as the content, structure and outcomes of the module on general skills were concerned. On hindsight, I realised that I had actually been passing through, what King and Kitchener (in Kember et al., 2001) refer to as, a pre-reflective stage. According to their model of reflective judgement, an individual's

ability to recognise and deal with ill-defined problems depends on her beliefs about knowledge. The first three stages of King and Kitchener's model focus on pre-reflective thinking, based on the assumption that knowledge is absolute and that it can be obtained from authority figures. The situation in which I found myself in 1999, however, forced me to grow from a pre-reflective thinker into a quasi-reflective, and eventually into the reflective practitioner that I would like to believe that I am now. By this I mean that I soon realised that nobody was going to tell me, or any of the members of Work Group C, what to do in constructing a module on general skills. Furthermore, my collective engagement with the staff members who were co-workers in this endeavour, brought the realisation that knowledge is uncertain and personal. This insight came when I was confronted with the wide variety of interpretations of what should be included in the module on general skills. Later on I was ready to accept the fact that ... *knowledge about ill-structured problems is constructed by evaluating evidence and the opinions of others* ...; and ultimately, that ... *knowledge of ill-structured problems is constructed from inquiry which leads to reasonable solutions based upon evidence currently available* (*ibid.*:12).

7.3.4.2 Clarification of conceptual confusion

A further concern that I had, prior to the inception of Curriculum 2000, was the "messiness" of the topic Work Group C had to deal with. From the documentary study (cf. **Appendix 7A**), it became evident that the terminological confusion was immense. Terms such as *academic support, academic development, basic course* and *orientation programme* were used in a haphazard manner. Similarly, in the SAQA documentation, words such as *skills, competencies, abilities and critical outcomes* were used awkwardly and inconsistently.

The work session of the Phase I Committee in November 1998 aggravated the matter. On this occasion the Dean indicated that he did not wish to link the concept of skills with adjectives such as *basic* or *fundamental* because of the pejorative connotation of these terms in the South African context. He also objected to descriptive terms such as *personal* or *transferable*. In the documents used in that particular workshop, all of the following terms appeared: *curriculum*

skills, generic skills, life skills, associated skills, personal skills. The confusion and misdirection that were troubling me are apparent from the presentation I delivered on that day. I referred to the proposed Module MEA112 as a "programme for the enrichment and reinforcement of critical cross-field outcomes."

At that stage, I realised that I needed to gain a better understanding of the development of general skills and that it was time to engage in an in-depth literature study. After having familiarised myself with the work of Bridges (1992), Gibbs et.al. (1994) and Drew (1998), I made the following notes in my reflective journal:

Now that I have the benefit of hindsight, I understand why the Dean wanted to steer clear of the terms ***basic, fundamental, personal*** *and* ***transferable****. The inconsistent use of these terms in the literature, and the debate on whether skills are transferable or not, are reason enough to opt for a more neutral term such as* ***general skills.***

7.3.4.3 Professional growth

During the period immediately preceding the inception of Curriculum 2000, the workshops and retreats organised by the Office of the Dean, in collaboration with the Division of Educational Development, taught me how to "do" the curriculum. I experienced the series of workshops on relevant topics such as outcomes-based education and training, small-group teaching, programme development and writing workbooks as meaningful professional development exercises. Apart from imparting information on the SAQA parameters within which curriculum renewal had to take place, these sessions created opportunities for sharing my ideas on the development of general skills with colleagues. Through critical input from them, I enhanced my own understanding of what it was that Work Group C were supposed to do.

7.3.4.4 Areas that needed modification in Cycle Two

In reflecting on the lessons that were learned in Cycle One, I identified the following as vital issues:

Instructional approach

The design of Module MEA112 was based on the premise that students would be skilled in **doing** the things that warrant success in a student-centred curriculum, such as working independently, working in groups, communicating with ease, showing respect for other cultural groups, and so forth. However, the module was crammed with content and lectures on those topics, rather than opportunities for practising those skills. In my reflection I attributed this state of affairs to the fact that the idea of skills development was new to both staff and students and I realised that the theory espoused in Tables 7.2 and 7.3 was not the theory that we had in use at that point in time.

What should change?

One of the main conclusions I reached in 2000 was that the rationale behind skills development, practical opportunities for practising skills and the purpose of directed learning should receive more emphasis. To achieve this, we should get students to focus on the outcomes of the curriculum immediately, perhaps by asking them to work through the aims and objectives of the curriculum and answer questions in a workbook format. Thereafter, students should be plunged into **using** certain skills. When introducing students to different teaching strategies, for example, tasks should be structured so as to permit them to actually experience those different teaching methods. Instead of taking them on guided tours of facilities, we should rather give them a map of the sites to which they need to go and require them to collect the needed information. This independent expedition could be followed by a quiz or an opportunity for making a group presentation to the rest of the class.

Furthermore, it should not be forgotten that the orientation period is not so much about imparting knowledge, as about fostering certain attitudes. For this reason, students should start working in groups immediately and there should be ample

opportunities for them to experience the **process** of groupwork. This can be achieved by structuring tasks in a manner that will force them to experience the process. An entry I made in my diary on 17 January 2001 while I was reflecting on the outcome of the programmatic survey conducted by the Division of Educational Development, in preparation for a dialogue with the Dean on the outcome of this survey, bears testimony to the changed strategy that was anticipated at that stage:

17 January 2001

Student responses requiring reaction:

Method of instruction should be adapted to help students achieve desired outcomes - therefore more groupwork, fewer lectures. Allow more time for problem solving, as well as the posing and answering of questions.

Involvement of students in the assessment process

The idea of a project at the very start of the medical learning programme (cf. par. 7.3.2.3, under heading, *Content*) is a good one. It has the potential of getting students to bond in their respective groups and also of forcing them to start using the resources available to them. However, if students do not see the relevance of such a project to the rest of the learning programme, it is indeed, as many of them indicated, a waste of time.

What should change?

In reflecting on this aspect of Module MEA112, I explored the literature once again in search of a solution and came across the following quotation taken from Boud (Morrison, 1991:221):

> *...if people outside of the educational institutions do, by force of circumstances, act more or less as autonomous learners ... then the activities within educational institutions should be structured in such a way that they prepare students for 'learning after school' and assist them to develop the skills that they will need to* ***exercise responsibility for learning effectively*** [emphasis added].

I realised that the module development team had erred in this regard by using a minimalistic approach to the project and the assessment thereof, which had

antagonised the students. First of all, the instructions were few and vague. Exhibit 7.1 is an example of the instructions given to students.

Secondly, the complex task of doing a project in collaboration with other students was summatively assessed by giving students descriptive ratings for the content, structure and referencing, which were then translated into a single percentage mark. Apart from the odd note here and there (e.g. the cryptic remark, "see p.8 of handouts for correct referencing techniques", on a returned assignment of which the referencing technique was rated "unsatisfactory"), no qualititative comments were given on the basis of which students could interpret how they had performed or derive benefit for future project work. The fact that 42 percent of Afrikaans-speaking and 16 percent of the English-speaking students indicated in the programmatic survey that the assessments in MEA112 were not experienced as useful learning opportunities, could most probably be traced back to shortcomings such as these.

" ... low level radiation causes adverse health effects ..." Is this statement true? Support your answer with scientific evidence from books obtainable in the UOFS libraries. In your report and presentation synthesise the information of the sources used, evaluate the information critically and come to a conclusion. Refer in your report to between 5 and 10 sources. The presentation will be 10 minutes per group, with 5 minutes for discussion. Transparencies should be used as visual aids.

Exhibit 7.1 *Minimalistic instructions on MEA112 assignments in 2000*

It was furthermore concluded that students' disillusionment with the assessment of skills outcomes might be attributed to the fact that the assessment episodes in Module MEA112 was administered in a top-down manner. The assessment of students' oral presentations at the end of the module is a good example of what this top-down process entailed. In the 2000 Phase Guide and Year Planner, the following announcement was made:

Students will be given a topic on which to find information, evaluate the information, write a short assignment including correct bibliographic description of the sources they have used. An oral presentation of this assignment will be evaluated on the scheduled date.

A score sheet was developed by the module development team for use by a panel of academic staff assessors.

On 21 February 2000, the module development team decided unilaterally that it might be a good idea to require student groups to assess one another by using that same assessment tool (**Appendix 7K**). This decision would bring the developers of Module MEA112 in line with the holistic model of assessment. According to this model, students should be involved, from the very beginning, in project work. Students' ability to interpret learning tasks is enhanced when they understand how a project is structured and how the assessment forms part of the learning process.

However, none of these suggestions was adhered to in the MEA112 project. Students did eventually participate in assessing their peers, but they received the assessment criteria only when the presentations were about to start on the morning of 1 March 2000, without having had the opportunity to understand where these criteria came from and how they related to the aims of the project. This, according to Morrison (1991) is a sure recipe for alienating students from the assessment process, and for making them feel insecure. The following excerpt from a conference paper presented in May 2000[19] demonstrates the inclination of the module development team to address this shortcoming:

> *On hindsight it should be acknowledged that there is major room for improvement in the assessment of projects. In 2001 the module team will definitely see to it that students understand the purpose of the project. They will receive clear guidelines and explicit information on how the assessment criteria relate to the learning outcomes of the module. By providing constructive and timely feedback the team will also ensure a higher level of validity to the process.*

Ultimately, the students' response to a question included in the first questionnaire survey on whether the process that was used to measure their progress in Module MEA112 was fair (Table 7.5), caused the module development team to realise if

[19] On 25-26 May 2000, the following members of the MEA112 development team presented a paper on the development of general skills at a national conference on access with success, jointly organised by the University of Ghent, Hogeschool Ghent and the University of the Free State: A.A. Beylefeld, H. Lombard and M.P. Jama. Two first-year students, Ms Z. Kotze and Mr L.M. Mophosho, also participated in the team presentation. This initiative was taken to introduce these students to an authentic opportunity to apply the oral communication skills they had been introduced to in MEA112.

more than a third of the Afrikaans-speaking group, and almost a third of the English-speaking group had doubts about the fairness of the assessment of critical outcomes, the matter needed urgent attention. Based on the analysis of feedback received during the course of the year (cf. par. 7.3.3.1) the following conclusions were drawn: a delicate balance should be maintained between group and individual assessment; group assignments should be structured in a manner that would prevent individual students from "hiding" behind hard-working peers; and finally, students should be well informed on the goals and procedures of innovative forms of assessment.

Table 7.5 *Student feedback on fairness of assessment in MEA112 in 2000*

Groups	Yes	No	Not sure	No response
Afrikaans (n = 58)	57% (33)	29% (17)	7% (4)	7% (4)
Engels (n = 30)	67% (20)	13% (4)	10% (3)	10% (3)

Contextual relevance

In the final analysis, the many complaints lodged about the absence of a medical context in Module MEA112 highlighted the issue of the transferability of skills. Judging from the student feedback, it seems as if the students instinctively realised a fact that comprises a recurrent theme in the literature, namely that it does not make sense to bolt general skills onto an academic programme. No less than 60 percent of the Afrikaans-speaking students and 32 percent of the English-speaking students indicated, in the programmatic survey (cf. par. 7.3.3.2), that the relevance of Module MEA112 to the practice of medicine was not clear.

What should change?

Students' open comment in the programmatic survey (DED, 1999) drove the point home in no uncertain terms: "Sessies aangeplak en kunsmatig" ["Sessions bolted on and artificial"]. The solution, according to the literature (cf. par. 2.3.5), lies in embedded skills development, which means that students should be confronted with problems and situations that are similar to those that they would have to deal with in core modules, and at best, in their future working lives.

At this point the notion of enhanced co-operation between subject experts and skill specialists, broached in par. 7.3.2.1, became a priority with a view to the second implementation round of Module MEA112.

7.4 CONCLUSION

The different surveys described above showed small variations in key parameters, but nevertheless all pointed towards certain key aspects of Module MEA112 that had to be improved. Most prominent among aspects that left much to be desired, were contextual relevance, group functioning and assessment of skills outcomes.

In reflecting on what improvement in these areas should entail, it seemed appropriate to revert to the wise words uttered by Professor Elton on quality enhancement (cf. Figure 5.3). He said that one should first consider doing better things before one starts doing things better; that one can do better, only after having learned to do differently; and finally, that experiencing problems is indicative of reflection, and thus learning, because stagnation brings no problems.

In retrospect, I was able to say, at the end of the first year of Curriculum 2000, that the development team responsible for Module MEA112 had started off with a highly imperfect system, but that we had learned enough to be ready to replace it with something a little less imperfect in 2001. A diary entry on 17 January 2001 bears witness to the resoluteness that was unleashed by the 31 percent of Afrikaans-speaking students and 21 percent of English-speaking students who, according to the feedback on a question in the programmatic survey on the overall value of the module (DED, 1999), felt that Module MEA112 did not belong in the learning programme for Professional Medicine:

17 January 2001

They do not see our module as an essential part of the learning programme - WE SHOULD CHANGE THAT!

CHAPTER EIGHT

CYCLE TWO (2000 - 2001): DOING DIFFERENTLY HAS EVERYTHING TO DO WITH ASSESSMENT

8.1 INTRODUCTION

At the end of the first year of Curriculum 2000, I had a fair idea of what aspects of Module MEA112 needed modification. My main concerns at that stage were as follows:

- A significant number of students' expectations had not been met and many regarded the module as contextually irrelevant.
- Teaching and learning activities in MEA112 afforded students very little opportunity of practising skills and experiencing the interactive group process presupposed by a student-centred curriculum.
- Groupwork caused many students to feel insecure.
- The module development team had not done justice to the potentially powerful influence of assessment on learning behaviour in the sense that assessment was not used to help students to acquire the skills of judgement and self-appraisal.

In this chapter I hope to demonstrate how these concerns were addressed. In doing so, I will use the same primary questions that provided the framework for the previous chapter, with the emphasis on what was done in 2001, what the outcome was in respect of actions taken, and what lessons were learned.

I intend to show that a return to the drawing board, supplemented by discussions and negotiations with staff teaching in core modules, enhanced the module development team's efforts to help students achieve desired skills outcomes.

Secondly, I will show how my exploration of the literature, followed by dialogue with an expert on assessment, my co-investigator, module development team members, key respondents and study leaders, enhanced my understanding of assessment in general, and the assessment of general skills in particular.

8.2 BACKGROUND TO DOING DIFFERENTLY IN 2001

In describing my journey from the first to the second round of Curriculum 2000, I wish to link the action steps taken in Cycle Two (March 2000 to March 2001) to some of the personal feelings I had to deal with after having lived through the first year of general skills teaching.

At the end of the first semester of 2000, I felt rather disappointed about not having met the expectations of a greater proportion of the first cohort of students enrolled for the new curriculum. On the other hand, student feedback on MEA112, gathered in the programmatic survey referred to in par.7.3.3.2, compared well with comments concerning other modules in Phase I.

Further confirmation of students' relatively positive disposition towards Module MEA112 came from their answers to a question asked in the modular questionnaire survey (cf. par. 7.3.3.1) on whether Module MEA112 had helped them to adapt to the new learning environment. This question was included in the questionnaire on the basis of the belief that the whole environment created by the design and delivery of Module MEA112, and not only the learning content, formed part of students' teaching and learning experience. In compiling the questionnaire, the module development team agreed that questions should not only address the academic process, but also the support that students could avail themselves of.

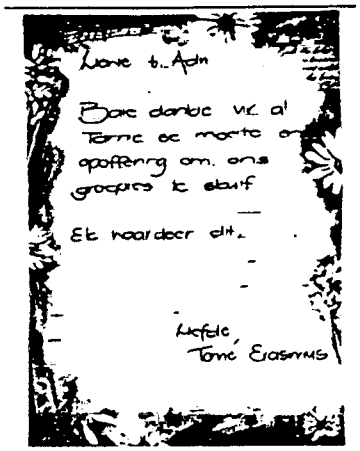
It is often stated in the literature that the first few weeks of higher education are critical, since most students who drop out do so within the first six weeks (Upcraft, Gardner & Associates, 1989). Judging from the response received, MEA112 contributed significantly to the students' adjustment to the new learning

environment in 2000. An overwhelming majority of the Afrikaans-speaking (76 percent) and English-speaking groups (77 percent) indicated that the module on general skills was helpful in this regard. Favourable comments such as those quoted below helped the module team to believe in the value of trying to teach a highly selective group of students the skills that many of them, given their privileged schooling backgrounds, took for granted:

"Het my op [my] gemak gestel met klasmaats." ["Helped me to feel comfortable with my class mates."]
"Weet nou hoe om inligting op [die] rekenaar te kry, mediese terme te ontleed en die biblioteek te gebruik." ["Now I know how to find information on the computer, analyse medical terms and utilise the library."]
"Weet nou wat van my verwag word." ["Now I know what is expected of me."]
"I now feel comfortable in the Faculty and know where everything is."
"Meeting and associating with other people with different cultural groups was helpful."
"Instilled a sense of responsibility and independence."
"It showed me the benefits of groupwork."
"I am now familiar with finding and presenting information."

Furthermore the laments I expressed from time to time to members of the module development team about the arrogance of some students, were alleviated by small tokens of appreciation coming from other students. Exhibit 8.1 contains two such notes.

At this juncture, it is also important to acknowledge the influence of Professor Filip Dochy on my practice. On 22 November 2000 Professor Dochy, employed by the Universities of Maastricht and Leuven, presented a workshop on assessment on the UFS campus. The perspectives he shared with attendees helped to clarify many of the questions I was wrestling with at that stage. I found it reassuring to learn from Professor Dochy that the modifications that the MEA112 development team was planning to make were in alignment with trends elsewhere in the world. Physically I was not well at that time and my diary entry on the day of the workshop read as follows:



Geagte me Beylefeld

Hiermee wil ek u persoonlik bedank dat u toegelaat het dat ek in Groep U kan bly.

Ek waardeer dit opreg

Ronel Malherbe

Exhibit 8.1 *Personal notes of appreciation received from students in 2000*

22 November 2000

I am so glad that I got out of bed to attend workshop. Why? Because what we plan to do with assessment in MEA112 is new and a dramatic change from what students AND the system are used to. So I do feel a bit nervous and anticipate resistance and criticism.

Presentation served to confirm the new direction we plan to take. That is the way they go in Europe as well - concrete examples were presented from Universities of Maastricht and Leuven.

Afterwards I searched the literature for more information on skills teaching, with specific reference to innovative ways of assessing those skills, by reading Gibbs et al. (1994), Hart (1994), Resnick and Resnick (1992), Scanlon and Ford (1998) and Wiggins (1998).

From Gibbs et al. (1994) I learned that students do not become proficient in the use of a particular skill simply by being lectured on it, discussing it or thinking about it (cf. Chapter Four, par. 4.5.1). On the basis of this information, I realised that a decrease in the number of lectures in MEA112 through the use of more groupwork and opportunities for discussion would still not solve the problem of contextual irrelevance. Furthermore I took cognisance of the observation made by Gibbs et al. (*ibid.*) that effective implementation of skills development

programmes demands the presence of four elements, namely training, demand for the **use** of skills, monitoring of effectiveness and assessment of mastery. Table 8.1 shows how neglect of any one of these elements compels one to admit that when it comes to skills development, practice alone does not make perfect.

Table 8.1 *Inter-dependency among the elements of skills development* (Gibbs et al., 1994)

Element receiving emphasis / performance demanded	Element neglected	Consequences
Students are expected to work in assigned groups during the first term	Initial training in groupwork	Students become antagonistic towards groupwork, showing no progress
Training in communication skills	Follow-up modules make no demand to display communication skills	Use of communication skills falls into disuse
Training in writing skills	Provide no follow-up support	Students perpetuate the same kind of errors they started off with
Training in teamwork skills	No incentive in the form of expecting a group report for assessment purposes	Students do not take skills development seriously and concentrate on private, competitive study
Repeated assessment of skills	No feedback or opportunity for the students to reflect on their progress	No noticeable improvement

From Hart (1994) I learned that the achievement of critical outcomes is best represented by performance tasks that can be classified as event tasks, process assessment tasks, problem-solving tasks, long-term projects and exhibition of mastery. The matrix I compiled from Hart's (*ibid.*) work to summarise the intended outcomes of each of these tasks, as well as the methods of assessment used for measuring achievement of those outcomes (cf. Chapter Four, Table 4.1), provided an excellent heuristic tool from which I chose tasks and assessment methods for application in MEA112.

From Resnick and Resnick (1992) I took the cue that performance tasks such as those mentioned in Table 4.1 cannot be learnt *in vacuo*; that it is educationally wrong to teach a skill component in one setting and expect it to be applied in another; and finally, that it is impossible to validly assess competence in a context very different from the one in which it is used. This knowledge spurred me on to read more about authentic assessment. The work of Wiggins (1998), and also

Scanlon and Ford (1998), drove home the point that the assessment of actual samples of writing or oral presentations qualifies as performance-based assessment, but not as authentic assessment *per se.* Authenticity would demand that the writing or speaking should take place within a specific disciplinary context, or at least require documents or oral presentations to be based on work done within a particular disciplinary setting.

My agreement with arguments on the teaching and assessment of general skills put forward by the authors referred to above, gave the impetus I needed to respond to the challenge of embarking on the changes that are described in the paragraphs below.

8.3 THE ACTION RESEARCH PROCESS

In contrast to the relatively simple, solid reflective cycle of action research reported in the previous chapter, the action research mode adopted in the second year of Curriculum 2000 consisted of a series of small spirals, reminiscent of Stringer's interacting spiral ... *that includes looking, thinking and acting as a continually recycling set of activities* (Mills, 2000). Action steps and observation of the effect thereof reported in this chapter, were thus not done in a linear fashion, but rather as illustrated in Figure 8.1.

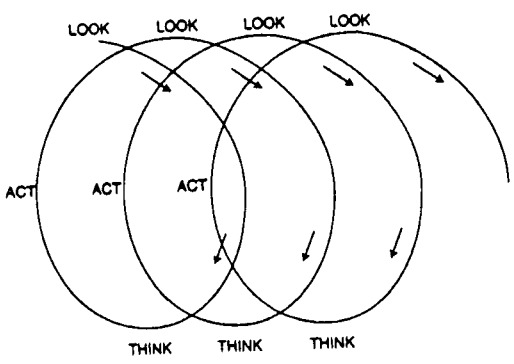


Figure 8.1 *Stringer's action research interacting spiral* (Mills, 2000)

The capturing and analysis of data which formed part of this interactive process were kept on track by regular reflection on findings with a view to using these results to inform ongoing data-collection efforts.

Sources of data included the literature, first-year medical students, module leaders in Phase I, the context of learning, my research diary, co-investigators and study leaders.

Data were gathered by means of a literature study, two questionnaire surveys, a focus group interview, half-sheet written response forms, personal interviews, informal discussions, assessment sheets and diary entries.

Data interpretation took place in collaboration with my co-investigator, Mpho Jama, members of the MEA112 module development team and my study leaders with whom I continually held discussions throughout the duration of Cycle Two.

8.3.1 Defining the field of action

The main thrust behind the modification of Module MEA112 in 2001 originated from two sources. In the first instance there was the request from the Dean at the closure of the lecturer training course on 27-28 July 2000 to draw up a proposal on how the additional 160 notional hours[20] that are embedded in core modules comprising the first year of the Programme for Professional Medicine, should be accounted for. With an accreditation visit by the South African Health Professions Education Board looming on the horizon, scheduled for 2002, it was deemed important to be fully accountable in demonstrating that the UFS School of Medicine was meeting the current expectation of developing the skills that would enable students to function effectively in the world of work after completion of their studies.

[20] Notional hours are not "real" hours. They are an informed estimate of the average time, an average learner, entering with the correct level of assumed knowledge, would take to master specific outcomes of a unit of learning. It includes time spent in a variety of ways, e.g. on learning, lectures, assignments, independent reading, assessment, etc. (*SAQA Bulletin*, 1997). In the first year of the Programme for Professional Medicine, a total of 240 notional hours are allocated for the development of general skills. Module MEA112 consists of 80 notional hours of specialised skills development. The other 160 notional hours are embedded in core modules.

This need for accountability at programme level provided me with an opportunity to initiate the change that was needed at modular level to address students' complaints on the irrelevancy of the content of Module MEA112. The Dean's request was a go-ahead signal to the development team to explore the possibilities of collaboration with subject experts, with a view to providing students with opportunities to apply their general skills in authentic disciplinary contexts. On 3 August 2000 I wrote as follows to members of Work Group C:

Dear Colleague

At our previous meeting I requested that you give written input at our next meeting (7/8/00) on the modifications you plan for your sessions. It is now clear to me, however, that this step should be preceded by a thorough rethinking of where we plan to go with MEA112, and how we can best get there. I do not want you to do unnecessary work, and thus recall my request for written inputs. On 7/8/00 we, as development team, are first going back to the drawing board.

In the end, going back to the drawing board did not lead to any dramatic structural change. In fact, apart from a few changes here and there in terms of content, method of delivery, presenters and more attention to groupwork, the basic design and structure of MEA112 remained intact in 2001. **Appendix 8A** is a copy of a letter illustrating how an endeavour was made to involve subject experts in the actual delivery of MEA112. **Appendix 8B** is an excerpt from the workbook students were issued with at the start of the 2001 academic year, giving an indication of what the module entailed.

The area in which the most far-reaching intervention took place in 2001 was the negotiation of collaboration with subject experts teaching in core modules, with a view to contextualising students' learning experiences in MEA112 in authentic contexts. The outcomes of these efforts are reported in par. 8.3.2.2.5 below.

A second major change that occurred in Module MEA112 in 2001 was fuelled by the perception that the assessment of skills outcomes in 2000 had left much to be desired for both staff and students. Assessment in 2000 had culminated in the assessment of group presentations (written and oral) of a small-scale project (read:

literature study) at the end of Module MEA112. The summative mark generated in this manner was added to a mark derived from individual students' class attendance and participation in, and completion of workbook activities. On the basis of the total mark, candidates were rated as satisfactory, unsatisfactory or excellent. For administrative purposes, this rating was quantified, using the following scale: Excellent = 85 percent; Satisfactory = 60 percent; Unsatisfactory = 40 percent (cf. **Appendix 8C**). Translated in terms of the score categories used by the UFS Central Administration Office (75 percent plus = pass with distinction; 50 percent - 74 percent = pass; < 50 percent = fail), the MEA112 results in 2000 were as follows: No one failed, 14 out of a class of 89 obtained a distinction and the rest of the class obtained a score of between 50 percent and 74 percent.

The module development team experienced the assessment procedure as cumbersome and arbitrary; the students experienced it as haphazard and unfair (cf.par. 7.3.3.1). In analysing the feedback captured from the questionnaire surveys described in Chapter Seven, I realised that the most salient concerns I had to deal with at that stage were the ones related to the imperfection of the assessment system. The following excerpt from an article jointly authored by Mpho Jama[21] and myself illustrates the centrality of our belief that assessment would have to be pivotal to the overall improvement of Module MEA112 (Beylefeld & Jama, 2002:113-121):

> *Paging through our journals, which serve as an ongoing record of the trials and tribulations of MEA112 ..., it struck us that negative entries mainly centered on assessment. A closer look revealed that the journal entries elucidated "mistakes" that have been made since the commencement of MEA112 ...*

The "mistakes" highlighted by these journal entries were as follows:

[21] Mpho Jama: Secundus module leader and co-investigator.

June 2000:

- *Learners feel "unsafe" with group assessment (revealed in questionnaire survey).*
- *Feedback on writing activities and project presentations is behind schedule and no longer relevant (there have been so many other projects in core modules already and still learners do not know how successful they were with the first try).*

July 2000:

- *In my (Beylefeld's) presentation on the integration of general skills into the curriculum, I admitted that the assessment of group projects in MEA112 was essentially flawed in the first round:*

  - *Learners knew only very vaguely what was expected of them in terms of how their oral performances would be assessed, how the written report would be scored, what weight it would carry towards the module mark.*

  - *Lack of proper and timely feedback.*

August 2000:

- *41 percent of the Afrikaans group felt that the assessments in MEA112 were not learning opportunities!*
- *Interesting - only 16 percent of the English group felt this way.*

Against this background, key changes that took place in 2001 were all assessment-related. Even the collaboration with subject experts which, as mentioned above, can be seen as a major step in the direction of real integration of skills development in learning content, was based on a joint assessment exercise.

Accordingly, the action research reported below focuses on the steps that were taken to establish (a) a trustworthy assessment system in Module MEA112, and (b) a shared meaning with subject experts on the assessment of general skills.

8.3.2 Actions taken and observations made

Two key questions guided actions and observations in Cycle Two:

- How can I convince students to accept new forms of assessment?
- How can I collaborate with subject experts to enhance embedded skills development and assessment?

8.3.2.1 Modification of assessment in MEA112

As already indicated in par. 8.2, Professor Dochy's workshop on 22 November 2000 introduced me to the newest trends in assessment. The ideas he shared with attendees challenged the methods we had used in MEA112 in 2000, which caused me to make the following observational notes in my diary:

22 November 2000

- *Assessment that will be used should be explained to students - then they are more likely to buy into it - students must feel safe.*
- *Peer assessment should be used formatively initially (e.g. in first year); thereafter, when they have learned about assessment, it can also be used summatively.*
- *When making use of students' assessment, connect the scores they give to the tutor's to avoid "friendship marking."*
- *Use a combination of group and individual assessment to enhance group learning, but make sure to acknowledge individual performance to avoid patterns where one particular student always does most of the work.*

8.3.2.1.1 Revised plans

The key question guiding the modification of assessment in MEA112, *How can I convince students to accept new forms of assessment?* stemmed from a concern that students would show resistance to unconventional forms of assessment. That this can sometimes be the case has been documented by Gibbs (1995), who found that students, especially those who have a reproductive conception of learning, are

likely to react strongly against sharing the responsibility of assessment with authority figures. On the other hand, I was painfully aware of the fact that in 2000, we had not done justice to most of the ideas on innovative assessment. Given the powerful influence of assessment on student learning, the module development team had missed the opportunity of using assessment to teach students the important life skills of judgement and self-appraisal.

Subsequently, the MEA112 module development team began the academic year 2001 by informing students profusely on the new forms of assessment they would come across in MEA112 (**Appendix 8D**). My diary entry in October 2000 proudly announced our intentions to make use of multiple forms of assessment, to establish among students the idea of collaboration rather than competition, and to introduce students to the idea that assessment should no longer be seen as the "business of lecturers/facilitators" only:

23 October 2000

- *Our document on assessment addresses all the flaws identified in 2000 - it provides details on how assessment in MEA112 will be approached, learners will know beforehand that assessment will be based on individual and group performance, it explains the rationale behind the different products that will be assessed; a variety of products are included; it explains how the grading of oral and written formats of the project will include components of self-assessment, peer assessment, group assessment; the weight each product will carry towards the module mark is indicated; dates and venues for delivery are indicated.*
- *This document will be included in the learners' module guides.*

8.3.2.1.2 Action steps

Implementation of the plans outlined above meant that members of the module development team responsible for those components of the assessment in which students' input would be taken into account, had to (a) formulate contextually relevant topics for the MEA112 project, and (b) devise instruments for capturing

lecturers' as well as students' verdicts on the quality of the written, as well as the oral product.

The following list of topics was compiled by colleagues, Professors Charles Herbst and Gina Joubert:

The effect of radiation through X-rays on the body
The effect of smoking legislation on smoking habits
The effect of steroids on the body
The effect of alcohol on the body
The medical importance of the demystification of DNA
Possible dangers of the genetic manipulation of food
The scope and incidence of cholera
The effectiveness of alternative medicine

The creation of appropriate assessment tools and deciding on the allocation of marks produced much debate and compromise among members of the module development team. After several meetings between Mhpo Jama, Professors Herbst and Joubert, and myself, there was unanimous agreement on the tools attached as **Appendix 8E.** The process that was followed to simplify these instruments and ensure that the results they rendered were as valid and reliable as possible, is evident from the different versions of the same tool in **Appendix 8E.** The E-mail communication in Exhibit 8.2 is also typical of the consultation procedure followed by the module development team:

5 March 2001

Dear Charles, Adri and Mpho

The evaluation of the oral presentations has been processed and I wish to confirm the following with you:
If a group has performed very poorly, it means no marks. Thereafter:
Poor = 1; Moderate = 2; Good = 3; Excellent = 4.

For fluency (tone of voice and tempo) I use one average mark for the group; for podium presentation (orientation, eye contact, involvement) I use one average mark. The other aspects are taken into account separately, which means that each group presentation is evaluated according to 7 components, two of which are person specific. In this manner we decrease the impact of the actual performance of the presenter chosen for the job on the group's total effort.

Comment, please.

Gina

Exhibit 8.2 *E-mail message demonstrating the interaction between members of the module development team*

As far as the incorporation of student-allocated marks for the written part of the project is concerned, the next action step (after having received students' mark allocations, which per agreement would carry formative value only) entailed (a) moderation of the student-allocated marks, (b) formulation of written feedback on why the lecturer had arrived at the mark that she/he did, and (c) inviting the students to share the summative mark allocated by the lecturer fairly among themselves (cf. **Appendix 8F**).

8.3.2.1.3 Observation

Observation of the outcome of assessment-related action steps consisted of two major moments: a quantitative analysis of the pattern of mark allocation in MEA112 2001; and a focus group interview to illuminate the findings of the quantitative analysis.

(a) Quantitative analysis of assessment results

The sample of analysis consisted of 136 first-year students: 74 from the Afrikaans class (9 groups) and 62 from the English class (8 groups). The following aspects were singled out for analysis:

- the degree of correlation between marks allocated for the different tasks;
- the degree of correlation between marks allocated by lecturers, students themselves and peers;
- the degree of correlation between the marks students obtained for individual tasks and group tasks; and
- the difference in the patterns of mark allocation between the Afrikaans and English language groups.

Results of the quantitative analysis were presented by Professor Joubert at the 33rd Faculty Forum in 2001. The following are highlights from this presentation[22]:

[22] Joubert, G & Beylefeld, A A 2001. Resultate van assessering in module MEA112 in Fase I, Skool vir Geneeskunde, UV: Patrone en verwantskappe [Results of assessment in module MEA112 in Phase I, School of Medicine, UFS: Patterns and relationships.]

In both language groups, the test and the brochure were given the highest marks, while the report, oral presentation and summary generated marks that were more than ten percent lower (Table 2.8). The marks of the brochure exhibited very little variation, as is reflected by the small standard deviations.

This state of affairs was interpreted to indicate that the students either mastered the specific task well, that the task was too easy, or that the assessment was of such a nature that no distinction could be made between the different outcomes.

The pattern that the marks followed was similar for both language groups (Table 8.3). However, the marks of the English-speaking group demonstrated a positive correlation between the different sets of marks, whereas this was not found in the Afrikaans-speaking group. As far as the correlations between individual and group tasks were concerned, there was more agreement in the English class than in the Afrikaans class.

For the written report of the literature study (a group task), each student group graded their own report before the lecturer did. The students received the following guidelines on how to grade their tasks and no further guidance was given:

Introduction	5 marks
Aim	5 marks
Methods	10 marks
Results	25 marks
Discussion	30 marks
Conclusion	15 marks
Referencing and use of literature	5 marks
Language use	5 marks

Throughout, students gave higher marks than the lecturers. The median difference was 18 percent, with variations of between 5 and 36 percent. In the Afrikaans class the median difference was 17 percent and in the English class 20,5 percent. In the Afrikaans class there was a poor positive correlation between marks given by lecturers and those given by students (.24), but in the English class there was a strong negative correlation (-0.78). Consistent with the findings of Boud and Falchikov (1989) that low achievers are prone to overrate

themselves, students who received the lowest marks from the lecturers, gave themselves the highest mark in our investigation.

Table 8.2 *Mean marks (std dev) obtained for the different performance tasks*

Performance task	Afrikaans class	English class	Total
Group tasks			
Brochure	79.4 (1.7)	81.3 (2.3)	80.3 (2.1)
Report	65.2 (9.8)	62.3 (7.0)	63.8 (8.5)
Oral presentation	67.7 (10.0)	68.8 (8.4)	68.2 (9.1)
Individual work			
Summary	63.6 (12.4)	56.2 (18.8)	60.2 (16.0)
Test	84.5 (7.0)	83.0 (7.8)	83.8 (7.4)

Table 8.3 *Rank correlation coefficients indicating the pattern of mark allocation*

Performance task	Afrikaans class	English class
Group tasks		
Report and brochure	-0.27	0.76
Report and oral presentation	0.00	0.32
Brochure and oral presentation	-0.55	0.76
Individual work		
Summary and test	0.22	0.29
Report and summary	0.48	0.54
Report and test	0.33	0.14
Brochure and summary	-0.14	0.76
Brochure and test	-0.55	0.50
Presentation and summary	-0.02	0.77
Presentation and test	0.54	0.66

In the case of the oral presentation where peer assessment was used, a different pattern emerged. The difference in marks allocated respectively by the students and the lecturers was less than the difference for the written assignments. The median difference was four percent for the class as a whole and seven of the seventeen groups obtained lower marks from their fellow-students than from the

lecturers. In the English-speaking group, six of the eight groups, as opposed to only one Afrikaans group, received lower marks from their peers than from the lecturers. The maximum difference in marks was 16 percent, with a positive correlation of 0.91 in the Afrikaans class, and 0.55 in the English class, between the marks allocated by the lecturers and the students. The process that was followed in allocating the marks for the oral presentations was as follows:

A panel of four lecturers, as well as one person representing each student group, allocated marks on a scale of 0 to 4 according to the following criteria: Speaking ability (tone of voice, pace), podium presence (orientation, eye contact, involvement with the audience), content of presentation (quantity of material, clarity and structure, level of interest) and management of environment (visual aids, handling of questions). Since the scientific content of the written report carried the most weight, the emphasis was more on presentational skills in the oral delivery. However, since it was a group assignment presented by a single member of each group, the presentation as such, rather than the presenter, received prominence. This explains why an average mark was allocated for the sub-components of the criteria, *speaking ability* and *podium presence*, as opposed to the other criteria that were applied singly.

The difference between marks allocated by the lecturers and the marks allocated by the students to their peer groups was smaller than in the case of the written reports where students had to assess themselves. For the class as a whole, the median was four marks, and seven out of the seventeen groups obtained lower marks from their peer groups than from the lecturers. In the English class, six out of eight groups received lower marks from peers than from the lecturers. In the Afrikaans class this was the case for only one group. The maximum difference in marks was 16 percent.

In reflecting on these results during an informal discussion between Professors Herbst and Joubert, Mpho and myself on 15 March 2001, we were inclined to go along with Brown and Knight (1994) who argue, (a) that the safest conclusion seems to be that there is no consistent pattern of over- or under-estimation when students' verdicts in their capacity as self- or peer assessors are compared to

lecturers' assessments, and (b) that the assumption that lecturers grade student work accurately is not necessarily correct.

At a formal meeting of the module development team on 23 April 2001, where a detailed analysis of these results were discussed, I shared Professor Dochy's statement on quality assurance with my colleagues. According to him, one should not rely on figures only when looking for quality in a new assessment system. He cautioned that, although self- and peer assessment reveal correlations not normally available from traditional marking, becoming critical should also include "going into the minds of students" by means of qualitative methods.

(b) Qualitative validation of findings

In March 2001 I made two diary entries within five days, reflecting the concerns I had about the outcome of our efforts to use self- and peer assessment in MEA112:

15 March 2001

- *Students seem to have accepted the idea of a group mark.*
- *They don't seem to take self-assessment seriously, however, as is evident in the significant discrepancy between the marks they assigned to the various categories of the group's written report and the moderated mark assigned by the assessors.*

20 March 2001

- *Without exception, all groups have decided to share the marks evenly among all the members.*
- *How is it possible that even those learners who claimed to value individual achievement, and who indicated in the questionnaire feedback on the fairness of the assessment that they feel positive towards peer assessment, colluded to give each member the same mark[?] - a focus group interview has been scheduled for 27 March.*

Shortly afterwards, students were invited to participate in the interview that took place on 27 March 2001 (Exhibit 8.3). In focus group interviewing the

composition of groups and the interviewing process can affect the quality of the data (Vulliamy, Lewin & Stephens, 1990). I thus followed a rigorous procedure to avoid some of the most common problems. First of all, students' participation was invited by means of a letter explaining the rationale for the interview (cf. **Appendix 8G**). In order to avoid bias, a randomly selected group of thirteen students were assembled, by asking the seventeen groups to elect one representative from each group to attend the interview. I received the names of seventeen representatives, but eventually only thirteen students participated in the interview (four groups were thus not represented).



Exhibit 8.3 *Module development team members listen to the students' opinions in a focus group interview*

The interview was tape-recorded. Since interviewees are usually more guarded when 0being taped, I was aware of the fact that the validity of data might be affected. However, since tape-recording produces fuller data, and the matters listed for discussion were not really sensitive issues, I decided to use this method of recording. I asked the students' permission to record the discussion and no-one expressed reservations. My co-researcher, Mpho Jama, also took notes during the interview.

I furthermore ensured validity of the data by (a) refraining from defending or explaining the stimuli that were used for eliciting discussion, and from

contradicting the viewpoints expressed by the students, and (b) triangulating the findings of the group interview with the interviewees (cf. **Appendix 8H**).

Appendix 8I contains the stimuli that were used to obtain a "snapshot view" of student perceptions on (a) the discrepancy between the marks they gave themselves and those given by the lecturers, (b) why they shared the group mark evenly amongst one another, and (c) the degree to which the achievement of general skills was measured in core modules. The last question was included with a view to informing the structured interviews with the leaders of core modules, scheduled to start in June (cf. par. 8.3.2.2 below).

Assembled data were transcribed *verbatim* and condensed into themes, related to the different stimuli. Thereafter, I returned to the literature to correlate my findings with what has already been documented, and then reverted back to the transcription when I needed specific quotes to justify my interpretations.

8.3.2.1.4 Reflection

The information that emanated from the focus group furnished valuable insights:

Stimulus 1: Discrepancy between marks allocated by lecturers and students
It became clear that there is still a lot of work to do to ensure that students know exactly what is expected of them in a research assessment task, given that research is an area in which first-year students have little or no experience. Consonant with the views of Orsmond, Merry and Reiling (1997) on the intricate relationship between clarity of assessment criteria and the "success" of the activity, students complained about the inappropriateness and ambiguity of criteria that were used to assess the written reports. One student said:

"Another problem with the mark allocation was that those lines - I mean as far as I was concerned, those topics weren't really research topics; they were more essay topics, so to break it down into methods, results, discussion, conclusion wasn't the easiest thing because the lines were blurred. So when we allocated our marks, for somebody to break our projects down into those categories was very difficult. So that was maybe another region where the discrepancies came in, because they could clearly see where each border was and we missed the borders." [sic]

The discrepancy in marks did not derive solely from insufficient clarity on the lecturers' part, though, as is clear from the following comments:

"I gave our project a low mark after having had a look at the other projects, because I realised that ours was not that good. However, then one of the other members grabbed my assessment sheet, saying, how can you give our group such a low mark? Then he handed me another assessment sheet on which all the categories had been allocated a mark of 70 percent or 80percent. He then said: this is the one that should be handed in."

"What I think the groups did - why there is a difference in the marks we gave ourselves and what we actually got at the end, because when we gave ourselves marks, we thought, give ourselves the highest marks as possible because if they see we think of ourselves as perhaps a 60, then they won't give us more than 60. And that's why most of the groups tried to give themselves as high as possible." [sic]

In referring to the problem of overmarking, undermarking, collusion and retribution in self- and peer assessment, Brown and Knight (1994) offer clear criteria as a solution, saying that open tasks requiring judgement and objectivity may be *... 'tightened up' by agreeing, disseminating and sharing the criteria that will be used to evaluate performance.*

Another valuable lesson learned was that students appreciate being guided towards more accurate self-assessment by means of formative feedback in the form of model answers enabling them to see what it is that they are trying to achieve. One student responded as follows:

"I think the reason why we gave ourselves such high marks was the fact that we had nothing to compare our own work to. The moment I saw the other groups' reports, and I had a re-look at the marks I gave our group, I realised that I had to give us a lower mark because our project was not as good as theirs. So when you sit with your own project, you think - I have gone to a lot of trouble and I would like to get good marks. However, when you compare your own work to that of others, you become aware of the fact that yours is not that good. So perhaps this is what should be done in future - first give learners a chance to compare their projects to avoid them from overestimating their own work."

This response powerfully drove home a point also made by Wiggins (1998), namely that the best kind of formative feedback is presented in terms of clear, specific and descriptive intended outcomes and standards. He tells the story of a

certain lecturer who requires the students in his welding course to weld a 90-degree corner. Once the students have finished and believe that their product is up to standard, they may bring it to the desk in front of the class and write their name on it. On the table, welds from previous years are displayed: excellent ones and awful ones. What usually happens is that students come up to the table, thinking that they have finished with the task, but quickly turn around and make adjustments after they have inspected the completed welds.

These observations served to make me aware of the potential of assessment to become a developmental activity with self-adjustment as a vital outcome, provided that students know unambiguously what is expected of them.

Stimulus 2: Equal distribution of the group mark among members

Fear of breaking group cohesion and attempts to avoid tension between group members were mentioned by most interviewees as the motive for their indiscrimination. The following statements give a general idea of student views:

"If you remember, at the beginning of the year, we had this contract and our group has decided that for every mark we give, we should share, no matter what - even if someone's performance isn't very okay - but we have to because we signed that contract." [sic]

"You're stuck working in this group for the entire year. The last thing you wanna do is piss someone off, by giving them a bad mark because then they might bear a grudge and I mean, people who are out of matric are highly competitive. They do wanna get the marks, don't want to be put down by their fellow students and now they're getting told that they don't deserve that mark and that's just going to create tension." [sic]

According to Pond and ul-Haq (1997), student ownership is a possible remedy for friendship marking. From the students' comments, however, I concluded that as long as the quality of academic performance is based on comparison of marks, and the achievement of distinctions (75 percent) is a criterion for financial assistance from the university, inflationary assessment will remain a problem.

Stimulus 3: Assessment of general skills in core modules

Analysis of a total of sixteen comments made on the assessment of general skills in core modules revealed negativity across the board. The most important observation synthesised from these responses was the students' frank admission that they do not regard the development of general skills, and most notably group-work skills, as a serious aspect of the core modules. The reasons given can be divided into two main themes, namely inappropriate use of groupwork and lack of assessment of skills. The following responses illuminate students' views on the latter theme:

"We are only assessed on communication of which for some people communication is a problem - it was the only skills that was assessed though other people had other skills - so in the future I hope that we are assessed for all skills so that when we go out here we know that we are really empowered with skills." [sic]

"I think the reason why we don't take it seriously is because in the core modules it is not being assessed."

One of the key insights that emerged from this feedback, was confirmation that students are not prepared to spend time and energy on something that does not generate a tangible reward in the form of a mark; and that therefore, ways had to be found to make skills "count." This idea is perfectly in line with Wiggins' (1998) view that if something is valued, it should be assessed. Drew and Bingham (1996) agree that the assessment of skills gives the message to students that they (the skills) form an important part of the curriculum.

Negotiations with subject experts in pursuit of this goal will now be discussed.

8.3.2.2 Collaboration with subject experts

My actions to establish collaboration with subject experts with a view to authentic assessment of general skills were based on (a) the Dean's request at the lecturer training course in July 2000 to determine the *status quo* in core modules with regard to the development of general skills, and (b) the knowledge that students had a rather negative perception of the assessment of those skills in core modules.

8.3.2.2.1 The plans

Establishing a shared understanding with subject experts on the teaching and assessment of general skills as an integral part of core modules required a dual approach. In the first place, evidence had to be gathered to demonstrate that the School of Medicine is responding to the SAQA stipulation (RSA DoE, 1997) that professional end-behaviour (resulting from the incorporation of general skills with the knowledge base of a specific learning area) should be demonstrably integrated within specific disciplinary contexts. Secondly, I had to prove to subject experts that collaboration with skills experts could, apart from contributing to the achievement of SAQA requirements, help to relieve the workload associated with alternative forms of assessment.

Action steps that were taken in pursuit of these goals were informed by Dr Petersen's advice to identify places and opportunities for skills development in core modules, to make suggestions on how general skills could be built into core themes, and to start small, in synergy with enthusiastic individuals.

8.3.2.2.2 Action step one: Determining the *status quo* in core modules

Evidence that the development and assessment of general skills were indeed addressed in core modules was sought by means of personal interviews with subject experts acting as leaders of the ten core modules comprising Phase I of Curriculum 2000. In response to the question, *What is the status quo in Phase I with regard to embedded skills development?* I compiled the semi-structured interview protocol attached as **Appendix 8J.** In compiling this instrument, I accommodated the views of Jackson (1999) on creating a more explicit environment for demonstrating and recording achievement of outcomes.

8.3.2.2.3 Observation

For the purpose of the interview, SAQA expectations regarding skills development were condensed into the following areas of focus: complex thinking; information processing; effective communication; *co-operative* learning; community contribution; tolerant, culturally diverse learning behaviour; and independent, self-regulating learning. Interviewees had to indicate which of these abilities were developed in the modules they were responsible for, how competence in the chosen areas was assessed and what would be accepted as evidence that intended critical outcomes had been achieved (cf. **Appendix 8J**).

Feedback showed that some core modules relied heavily on research activities, others on critical thinking and problem-solving, others on activities which develop individual autonomy and still others on intercultural communication skills. The overall picture, however, revealed that all SAQA's expectations in terms of skills development were being met (cf. **Appendix 8K**).

An aspect that I found disconcerting, though, was that, apart from a few exceptions, very little change was envisaged in the assessment of general skills. All module leaders claimed to be assessing high-order thinking and problem-solving skills. However, as far as other critical outcomes were concerned, there were only a few plans for making those outcomes measurable (cf. **Appendix 8K**).

8.3.2.2.4 Reflection

As I was conducting the interviews referred to above, I became increasingly aware of the fact that the lecturers were sensitive towards the requirement of testing comprehension, interpretation and application of knowledge, but that time constraints and lack of knowledge on alternative forms of assessment compelled them to cling to conventional forms of assessment. This perception was confirmed in informal discussions with key respondents. The following are excerpts from the contact summary forms (cf. **Appendix 8L**) that I used to gather observational notes. One of the self-reflective questions that appeared on the

summary form, was: *What were the things that struck me as salient, interesting, illuminating or important in this contact session?*

31 October 2001

- *"Powerlessness" of lecturers to empower students in a way that does justice to outcomes-based assessment.*
- *Subject experts feel very sensitive about what they do, given the constraints of parallel-medium instruction and scarce human resources. I should refrain from jumping the gun by suggesting assessment reform prematurely; from giving them the idea that I want to prescribe to them what to do. Teaming up with subject experts in an action learning mode will have to be a carefully staged and negotiated process.*

My reflection on the *status quo* with regard to the development of general skills in core modules was taken a step further on 2 November 2000 at a meeting of the Phase I module leaders. It had been arranged that I would facilitate a discussion on assessment with committee members before the meeting started. The probe that was used to facilitate discussion was: *Many students seem not to appreciate the idea of a group mark. How should this be addressed?*

From the comments that were made, I came to the conclusion that at that stage, the use of unconventional forms of assessment to ascertain whether skills and attitudes had been mastered, was not even considered by most of the individuals attending the meeting; that practices dominating assessment in the majority of modules seemed to contradict the aims of a student-centred, outcomes-based approach; that student-centred teaching in the new curriculum was little more than the proverbial new wine in old skins. I based this conclusion on the following observational notes:

22 November 2001

- *Attendees expressed general agreement that both the process and product of groupwork are assessed when questions in tests and examinations "cover" the work that students had to do in a group context.*

- *One attendee admitted that he was not prepared to take the risk of doing "something else" that would jeopardise students' chances of passing the examination. Subsequently he reverted back to a system of theoretical input (lecture), groupwork based on the lecture, followed by supplying students with correct answers.*
- *There was only one person in this meeting today who demonstrated a willingness to make use of innovative assessment. NB: this person requested guidelines on how to assess critical outcomes. Perhaps I should start thinking of producing such guidelines.*

8.3.2.2.5 Action step two: Collaborating with an enthusiastic subject expert

Based on the data gathered in the interviews with module leaders described above, the following self-reflective question emerged: *How can I, through the experience I am gaining with the integration and assessment of general skills in Module MEA112, help to achieve the overarching aim of the new learning programme for first-year medical students, namely to foster the development of lifelong learning skills and independent learning?*

In response to this question, I based my actions on the ideas of Nightingale et al. (1996) and Brown, Bull and Pendlebury (1997), who argue that students can be empowered to become autonomous through authentic assessment practices. Authentic assessment requires students to engage in activities that they would have to perform in a real-world context through applying content knowledge and demonstrating a number of skills such as leadership, teamwork, prioritising tasks, problem-solving and time management. Furthermore, authentic assessment gives students the message that they have a contribution to make towards their own learning, by affording them the opportunity to discover their own weaknesses and mistakes by assessing themselves and their peers. Ultimately, authentic assessment requires performance criteria to be known to students prior to learning activities.

An opportunity to collaborate with a subject expert in an authentic assessment exercise presented itself when the Phase I chairperson recommended that the leader of Module MED113, which deals with concepts of health and disease, should seek assistance from my office for the assessment of the first-year students' project-based poster presentations (Exhibit 8.4).



Exibit 8.4 *Leaders of Module MED113 (Dr Brenda de Klerk) and Module MEA112 (Mss Adri Beylefeld and Mpho Jama) in consultation*

Consistent with the Faculty of Health Sciences' commitment to address the needs of the community, module MED113 deals with the protection and promotion of health, prevention of disease and the prolonging of life through organised efforts of society. One of the major intended outcomes of the module is that students should acquire skills to educate individuals and community groups on the principles and processes of disease prevention and health promotion. Implicitly included in this subject-related outcome, are the following critical outcomes: the ability to solve problems against the background of social, political and economic realities; to communicate and interact with community members and organisations; and to function effectively within an assigned group.

A conceptual framework, as suggested by Nightingale et al. (1996), served to ensure internal consistency among the identified aim and desired outcomes of module MED113 (Table 8.4), and also to combine the efforts of subject and skill specialists to create an authentic assessment opportunity.

Table 8.4 *Conceptual framework used to plan poster presentations*

Key questions	Intedended outcomes / planned actions
What skills do we want to see in our students at the end of this module?	• Critical thinking • Problem-solving • Communication • Interaction • Group functioning
1. What teaching methods are most appropriate to develop these skills?	• Preparatory lecture on health promotion and education • Preparatory lecture on principles of communication by means of posters • Clinical learning opportunities in schools, *healthcare* agencies and organisations
2. What kind of tasks will allow students to demonstrate these skills?	• Community-based workshops to do a needs analysis at COMMTECH High School and several *healthcare* organisations • Project assignment requiring students to communicate the information they have gathered in the form of poster and/or brochure presentations
3. What kind of authentic assessment situation can be created to make these tasks look like real tasks of the community health promotion?	• Organise a health expo in the Faculty, open to the public • Invite representatives of community organisations and schools to whom students were exposed in the execution of their projects, to view the formal presentations and participate in the assessment thereof
4. What standard of performance should be required?	• Negotiate assessment criteria with students

In the operationalisation of the project, all 134 first-year students[23] worked in their assigned groups of seven to nine students per group. They had an eight-week period to carry out the investigation and produce their posters and brochures. Apart from a lecture on health promotion, students were given a preparatory lecture on the principles of poster communication, which included examples of good and bad posters. Thus it was ensured that students had clear knowledge on how to approach the poster assignment. The pinnacle of the project was an exhibition on 3 May 2001 during which students presented their posters (Exhibit 8.5).

[23] At this stage, two of the initial 136 students who enrolled for the M.B.,Ch.B.I programme had discontinued their studies.



Exhibit 8.5 *Poster display in the foyer of the UFS Faculty of Health Sciences*

Real-world circumstances were achieved by inviting the public, the staff of the Faculty and the two groups of community representatives to attend the exhibition. A brief article was published in various local newspapers, inviting the public, and Faculty members were informed of the event by means of a system-wide electronic message. The winners would receive a reward from the Dean, as well as a modest financial incentive (Exhibit 8.6).



Exhibit 8.6 *Respresentatives of the winning groups receive their awards from the Dean, Professor CJC Nel*

The lecture on the principles of poster communication that the students were given a few weeks prior to the exhibition, included examples of good and bad posters. Thereafter, in keeping with the view that ownership of marking criteria is important when using peer assessment (Orsmond, Merry & Reiling, 1996; Stefani, 1998), students were involved in negotiating appropriate assessment criteria. Two days prior to the exhibition, a brainstorming session was held to generate a list of possible criteria. Students were asked to select the criteria they wished to use and to assign a weighting to each criterion. Interestingly enough, the final list of criteria that the students agreed on was almost identical to the one that the module leaders had compiled in preparation for the negotiating session (Table 8.5). Only a few minor modifications were made, whereupon students were briefed on how to use the standard assessment sheet (containing the agreed-on criteria and weightings) on the day of the exhibition, to show their group's agreed-on division of marks for the other groups' presentations.

Table 8.5 *Negotiated criteria and standards of performance according to which academic staff and students assessed poster presentations*

Criteria		Standard of performance / evidence of fulfilling criteria
• Central focus	20	• There should be one central message which can be instantly recognised.
• Level of comprehension with regard to the target audience	20	• The intended audience should be able to easily understand the language. • The images that are used should keep their interest and inspire action.
• Creativity and originality	20	• The group should have managed to summarise complex material into an easily assimilable form.
• Academic content	15	• The academic content should be useful and correct.
• Visual impact	15	• The product should be attractive, striking, self-explanatory and neat.
• Technical finishing and style	10	• The language should be grammatically correct. • Images should be organised in a logical sequence.

The co-ordinator of community-based education[24] and leaders of modules MED113 and MEA112 (general skills) co-operated in formulating the following

[24] Professor Adri Prinsloo, leader of Module MEC113 and chairperson of Phase I, acted as co-ordinator of community-based education in the Faculty of Health Sciences.

outcome for the poster project, to be assessed by a panel of academic staff, the students themselves, and community representatives:

By the end of this project, learners should be able to demonstrate (a) understanding of the public health aspects of the topic they investigated, and (b) poster/brochure presentation skills appropriate to the context in which they have been working.

8.3.2.2.6 Observation

Observation of the outcome of action steps was guided by three key questions:

- How accurate are students at assessing their peers' work?
- What are students' views on the assessment of their poster presentations?
- How did the community health workers and pupils experience the poster presentations?

Feedback was obtained from a group consisting of thirty health workers (Exhibit 8.7) and thirty high school pupils (Exhibit 8.8), representing the community of Mangaung. Furthermore the whole M.B.,Ch.B.I class of 134 students, working in 17 groups, and a panel of six academic staff members participated in the study.

Data were captured by means of a variety of instruments, including a marking scale, a criteria checklist, a semi-structured questionnaire and an open-ended half-sheet response form (**Appendix 8M**).



Exhibit 8.7 *Community health workers who attended poster presentations*



Exhibit 8.8 *COMMTECH high school pupils who attended poster presentations*

How accurate are students at assessing their peers' work?

The marks given by staff were extremely high (Table 8.6). The lowest staff mark was 71 percent. Nine out of the seventeen (52,9 percent) posters that were presented received a mark ranging from 80 percent to 88 percent.

Table 8.6 *Posters: Marks allocated by staff and students in 2001*

Variable	*N*	Mean	Std Dev	Minimum	Maximum
Students	17	65.8	4.0	59	73
Staff	17	79.5	5.7	71	88

Calculation of mean marks given by students and those given by the panel of academic staff, revealed a discrepancy. When the students' mean mark of 65,8 percent is benchmarked against the staff's mean mark of 79,5 percent, it is clear that students underestimated their peers' work by a mean of 13,7 percent, ranging from four percent to 22 percent. Alternatively, as educational researchers such as Orsmond, Merry and Reiling (1996) argue, students' limited experience of assessment might have impaired their judgement. Data collated from students' open responses validate this perception:

"Explosive experience for those from disadvantaged schools as it was the first time we were involved in an expo."
"Difficult because of misunderstanding between group members in terms of criteria used for the allocation of marks."
"Students could have got lower marks because for one group 'excellent' meant 90percent, and for another group it meant 80 percent."

Further analysis to establish whether the marks given by staff and students went in the same direction, revealed a moderate correlation (Spearman rank correlation 0.50), indicating a possibility that students might be inaccurate at assessing what their peers' work is worth (cf. par. 8.3.2.1.3).

What are students' views on the assessment of their poster presentations?
Analysis of students' qualitative feedback which was gathered by means of a half-sheet response form, fills in the missing details in the picture painted above and gives a more complete understanding of students' experience of the assessment task.

All of the students who participated in the poster project were present when the evaluation was done. In total there were 121 half-sheets, representing a response rate of 90 percent.

Positive and negative responses were balanced. In total, 117 positive and 114 negative statements were extracted from the half-sheet responses. Examples of responses in favour of, and against the assessment process are summarised in Table 8.7.

Table 8.7 *Students' response to the assessment of poster presentations*

Category of response	Typical student comments
1. High-level support	• *Criteria used [were] the best thing ever – [they] embraced the whole presentation and made it easy to evaluate.* • *Gained added responsibility by assessing my fellow students.* • *Wonderful – but difficult.* • *Assessment was as fair as possible.* • *I find the assessment by medical students very valuable.*

2. Low-level support	• *Got to know co-students.* • *Taught us to mark critically.* • *Lecturers' assessment was fair.* • *It was fair that students' assessment counted only a third.* • *It was realistic.* • *Assessment made me feel that I had a share in the marks of other groups.*
3. High-level opposition	• *Peers' assessment was subjective.* • *Money played an important role and [affected] those without it negatively.* • *Shocking to see that staff gave such high marks to groups.* • *Wasted time by discussing issues with health care workers and scholars.* • *It was a waste of time – we could have studied rather.*
4. Low-level opposition	• *Didn't have the acquired skills to assess ourselves.* • *Students should not assess their peers in group context – it increases competition.* • *Students are hypercritical – do not know what to look for.* • *Process was tedious and unorganised.*

Eight students referred to the difficulty they had undergone in assessing their peers, owing to lack of experience. Seven responses reflected an uneasiness because the "experts" (academic staff) shared the responsibility of assessment with students. An additional 27 responses suggested that the assessment was unfair. Reasons why the students felt this way, included:

- "Reluctance of some health centres to provide relevant information."
- "The financial head start of groups who could afford to spend more than the R100-00 each group was entitled to."
- "Variation in topics – some were information-rich; others were limited in scope and resources."
- "Lack of differentiation in criteria used to assess exhibition material that belonged to different categories."
- "The use of sweets and other gimmicks to gain support."
- "Racial composition of community representatives, acting as co-assessors."
- "Collusion and inter-group retribution."
- "Misverstand onder groeplede oor die kriteria wat gebruik is en die toekenning van punte." ["Misunderstanding between group members in terms of criteria used for the allocation of marks."]
- "Onderhandeling van kriteria op 'n laat stadium" ["Negotiation of assessment criteria at a late stage."]

- "'n Gebrek aan duidelikheid oor wat verwag is." ["Lack of clarity about what was expected."]

From these comments it became clear that in future, more time and energy should be spent on establishing criteria that fulfil the requirement of fitness for the relevant purpose, as well as on preparing students to be objective in their judgement of their peers' work. Clear and consistent instructions on what is expected and on how marks will be allocated are prerequisites for effective peer assessment.

How did the community health workers and pupils experience the poster presentations?

The frequency distribution of responses given by the group of community health workers (*n* = 30) and the COMMTECH pupils (*n* = 30) was calculated to determine how well the posters were received. Not all participants evaluated all posters. The smallest number of respondents evaluating any given poster was 23.

The overall response to all three structured questions on the questionnaire was exceptionally positive for both groups (Table 8.8).

Table 8.8 *Posters: Responses of health workers and pupils to three questions*

Questions	**Frequency of positive responses (Mean and standard deviation)**	
	Community health workers	Pupils
Question 1: *Does the poster communicate a strong message to you?*	86.9 (9.1)	85.6 (10.1)
Question 2: *Would you like this poster to be exhibited at your school / institution?*	87.2 (10.1)	84.9 (10.3)
Question 3: *Do you think that the community will understand this poster?*	88.2 (10.5)	82.2 (10.4)

Correlational analysis of feedback provided by community health workers and pupils across the three response categories revealed strong consistency (0.83 to 0.95) in the case of the pupils, and a moderate to strong correlation (0.73 to 0.81)

among answers provided by the health workers. The strong correlation of pupils' responses may well be an indication of an inability to differentiate between the nuances of the different questions. Consistent with this finding, the weak to moderate correlation between the health workers' and the pupils' answers in the three different categories (Table 8.9) raises the question whether it is commendable, in terms of cost, to involve schoolchildren as co-assessors, especially since their feedback was used only formatively.

Table 8.9 *Correlation between health workers' and pupils' feedback on three questions*

Questions	Correlation coefficients
- Does the poster communicate a strong message to you?	0.54
- Would you like this poster to be exhibited at your school / institution?	0.49
- Do you think that the community will understand this poster?	0.39

The positive attitude of pupils and community health workers toward the exhibition, as expressed in quantitative terms, was validated by their open-ended responses. Clarity and understanding were recurrent themes in the community health workers' comments. These concepts were mentioned 31 times. The pupils' response consisted, for the most part, of comments on the social issues that the posters addressed, rather than on the poster presentation thereof. Even so, amongst many inappropriate answers to the question as to why they liked or disliked the poster (e.g. *Smoke can harm those around you* or *Drugs have no place in a healthy society*), the clarity and strength of the message communicated by the posters were mentioned eleven times, including responses such as:

"Pictures send a very sensible message."
"It gives us the message."

8.3.2.2.7 Reflection

Reflection on the outcomes of the project-based poster presentations, as reported above, took the form of a draft report[25], jointly prepared by Professors Joubert and De Klerk, Mpho Jama and myself. Conclusions that were drawn as part of this exercise formed the basis for further reflection with a view to providing solutions to the following concerns we had at that stage:

- Can the student marks be trusted?
- What benefit was derived from the participation of community health workers and pupils?
- Do students feel positive about their status as co-assessors? If not, what modifications need to be made?
- Overall, was the authentic assessment exercise worth the while?

Can student marks be trusted?

Authentic assessment is recognised for its high validity in meeting the quality assurance criterion of fitness for purpose. Its reliability, however, is suspect, as evidenced by the lack of correlation between students' marks and staff marks found in this study. The reason for misgiving stems from the fact that judgement of the quality of a complex performance, involving many variables, is open to subjective interpretation. However, as indicated by Speck (1998), the concept of reliability in assessment is increasingly being displaced by quality assurance measures such as procedures for ensuring that the assessment is as fair as possible (cf. Chapter Four, par. 4.4.2).

Looking back on the poster project for the purpose of my research, I could truly say that one of the most important lessons I had learned was that consistency of measurement need not be compromised in an authentic context. At the end of the project I felt confident that, apart from the fact that the negotiation of criteria took

[25] Two conference paper presentations emerged from this report: 1. Beylefeld, A A, De Klerk, B & Jama, M P 2001. "Unconventional assessment of project-based poster presentations in Module MED113. Paper presented at the 33rd Annual Forum of the Faculty of Health Sciences, UFS, Bloemfontein, 30-31 August 2001. 2. Beylefeld, A A, De Klerk, B, Jama M P & Joubert, G. "Sharing the responsibility of assessment with students and community members: Experience gained through assessment of project-based poster presentations. Paper presented by A.A. Beylefeld at the 10th Ottawa Conference on medical education in Ottawa, Canada, 13-16 July 2002.

place at a rather late stage, the assessment design and procedures we had in place did indeed ensure fair assessment:

- Performance criteria and weighting were negotiated with students.
- Students were briefed on how to use the assessment sheet.
- Students had to reach consensus within their groups on the marks they allocated to their peers' work to prevent collusion and retribution.
- The students' judgements were used summatively, but carried a weight of 33 percent only.

Furthermore, I found it reassuring to know that students do have the ability to distinguish between work of good and poor quality. In the first instance, I found it quite interesting that the list of criteria that students suggested we use, was almost the same as the one that the module leaders had compiled in preparation for the negotiation session. To me this was an indication that students had a well-developed sense of what a quality product in that specific context entailed (cf. the debate in the literature on whether students' and instructors' understandings of criteria and standards of performance correspond, Longhurst & Norton, 1997).

Secondly, the vast difference between the marks given by staff and those given by students could possibly be ascribed to an error of judgement on the staff's part. The marks given by the panel of academic staff were so exceptionally high that the students even commented on this in their open responses ("Shocking to see that staff gave such high marks to groups"). The lowest mark given by staff was 71 percent. Nine out of the seventeen (52,9 percent) posters received a mark ranging from 80 percent to 88 percent. These findings lead me to conclude that there is a strong possibility that staff members were positively inclined to the assessment exercise to the point of impaired judgement. I made a resolution to monitor the situation in the next round of poster presentations in 2002 (cf. Chapter Nine, par. 9.3.4.2).

What benefit was derived from the participation of community health workers and pupils?

Feasibility in terms of affordability is another aspect of authentic assessment that is often criticised (cf. Chapter Four, par. 4.4.2). Cost factors include time involved in developing, administering, scoring, interpreting and reporting results, as well as student time required to participate in the assessment exercise and receive feedback on results (Hart, 1994).

Involvement of the community in the MED113 poster project was based on the assumption that ... *communities have valuable resources which can be mobilized to assist in meeting the educational needs of future generations of health professionals* (Olive, Goodrow & Virgin, 1998:151). Without fear of being contradicted, I can report that if it had not been for community participation in this project, the authenticity of the whole enterprise would have been lost. However, the following problems that were identified with regard to the pupils' contribution raised the question whether it is desirable, in terms of cost, to involve them as co-assessors:

- inability of pupils to differentiate among the nuances of different questions they had to answer (evidenced by the strong consistency of 0.83 to 0.95 between three response categories);
- poor correlation between health workers' and pupils' responses;
- pupils were all from a previously disadvantaged schooling background;
- all the pupils were mother tongue speakers of an African language, receiving their schooling through the medium of English, while some of the posters were in Afrikaans.

In retrospect I argued that participation of high-school pupils should be retained in future, but with the proviso that their judgement should be used formatively only, and that the composition of this group should be more representative so as to include Afrikaans-speaking pupils.

Do students feel positive about their status as co-assessors? If not, what modifications need to be made?

The idea behind involving students as co-assessors in the project was to give them the message that they can be trusted with the responsibility of assessing their peers' work - an important skill needed for professional competence in their future working lives.

Judging from their qualitative response, the majority of students derived benefit from the exercise and did not feel disadvantaged as a result of the inclusion of peer assessment results in their summative mark, which was one of the biggest potential problems. Comments such as the following proved that the initiative had sent positive signals to the students:

"Gained added responsibility by assessing my fellow students."
"Criteria used [were] the best thing ever - [they] embraced the whole presentation and made it easy to evaluate."

On the other hand, students' lack of experience and the fact that some of them had not made a paradigm shift towards active learning became clear from comments such as the following:

"Students could have got lower marks because for one group 'excellent' meant 90 percent, and for another group it meant 80 percent." [lack of experience]
"Wasted time by discussing issues with health care workers and scholars."
"It was a waste of time - we could have studied rather."

The fact that any form of student feedback should be regarded with reservation, does not mean that their suggestions for improvement should be ignored. Therefore, the data gathered for the purpose of the research made me realise that the fairness of the exercise could be increased even further, by addressing the following major aspects, highlighted by the students as problematic:

- Unequal resources (money/information/support).
- Dissimilarity of topics identified for investigation.
- Untimely negotiation of performance criteria.
- Misunderstanding about criteria and allocation of marks (under-prepared students).
- Unethical behaviour of some groups (collusion and retribution).
- Unequal racial composition of community representatives and panel of staff assessors.

Overall, was the authentic assessment exercise worthwhile?

After this exercise, I was convinced that some aspects of the assessment should be modified in the years to come, but that authentic assessment as such should definitely not be abandoned.

In the first place, I experienced first-hand what is often documented in the literature, namely that no assessment strategy will ever be perfect and acceptable to all. On the other hand, the positive qualitative feedback received from the students convinced me that, as noted by various other researchers (cf. Cowan, in Orsmond, Merry & Reiling, 1997), the advantage students derive from authentic assessment outweighs the discrepancies in marking.

Secondly, I came to realise that the tangible evidence that the community received of their involvement with future doctors should not be underestimated. Several suggestions were received from community representatives that the project should be broadened and extended, and that the presentation should take place in a community venue to ensure that the poster messages reach their intended target groups.

Ultimately, useful concepts for action were identified which brought me to conclude, in the words of Tariq et al. (1998:221), that *[d]evising the perfect assessment strategy is an elusive pursuit, but implementing a scheme which contributes to a more student-centred ethos of teaching, learning and assessment is surely a step in the right direction.*

8.3.3 CONCLUDING REFLECTIVE THOUGHTS

Positive outcomes of initiatives that were taken within the action research framework described above suggest that professional practice can be enhanced by opting for a reflective, rather than a routine approach.

The action research conducted in the second round of skills teaching in the UFS School of Medicine contributed significantly to my professional growth. Firstly, it compelled me to explore my own understanding of the context within which I work. Secondly, input from my study leaders during this period in the form of advice on draft chapters of my thesis served to enrich and sharpen my understanding of theories influencing my practice. The following excerpt from an E-mail message sent to me by Professor Bitzer illustrates this point:

The rationale for including this chapter in the thesis is not well-related to the overall aims (research questions) of the study. Why is feedback important in this project? Why is self- and peer assessment important? Do these topics belong here? It is important not to think of your thesis as a textbook for practitioners.

Furthermore the experience I gained through my involvement in the MED113 poster project convinced me not only of the value of embedded skills development and authentic assessment contexts, but also of the value of collaboration between academic staff teaching in different modules, in the interest of students' educational experience. On the one hand, the MED113 project provided the MEA112 module development team with an authentic context for the assessment of students' communication skills. On the other hand, sheer logistics and the extra workload brought about by the authentic assessment exercise, rather than lack of expertise, made it impossible for the MED113 module leader to conduct the whole project on her own. The synergy and cross-fertilisation of ideas that were achieved by working together helped me to understand what Professor Petersen meant when he said that a student-centred curriculum "belongs" to the faculty and not to individuals within it.

In the final analysis the presentations of two students at a lecturer training course on 22-23 August 2001 contributed to my resolution to improve my practice even further in 2002. The contributions made by the students formed part of my own

presentation on general skills. I had invited the students' participation to give clout to what I had to say about students' experience of skills teaching and assessment. The following excerpts demonstrate (a) how the absence of assessment negatively impacted on students' experience of groupwork, and (b) how a real-life situation contributed towards the fostering of desired skills and attitudes.

"Seeing that groupwork is mostly not assessed, students focus on that part of the work they can do on their own and which will be examined. As a result of this view amongst students, groupwork is not successfully implemented in modules where it is extremely important to discuss and exchange ideas."

"At this point I wish to expand on the health expo where we had to introduce a health service. During the process of gathering information, groupwork played an important role. We had the opportunity to work with members of the group under favourable and unfavourable conditions. One specific group had to print photographs of the institution they worked with. A misunderstanding caused them to end up with 600 photos that had to be paid for. They had to raise funds to foot the bill - this is the kind of reality one encounters in real life, the kind of problems that need to be solved - everything does not always go according to plan!

My personal experience of the expo was very positive and one of the major advantages was the fact that I obtained new insights with regard to things such as AIDS. I had always thought that AIDS is nature's way of controlling the population explosion. My introduction to HOSPICE made me realise the full impact of AIDS. It is usually the breadwinner [who] is affected by the virus, which means that the mother must go out to work, that the children are left unattended and that the economy of the country is affected! These are insights one does not get in textbooks."

These views made me realise that the integration and assessment of general skills required further fine-tuning; that the continuation of a module on general skills running for two weeks prior to the commencement of core modules in 2002, would mean ignoring the students' voice.

The efforts of the MEA112 module development team to further integrate the development of general skills with the teaching of core content and to devise more opportunities for the type of assessment that meets the requirements of authenticity, will be addressed in the next chapter.

CHAPTER NINE

CYCLE THREE (2001 - 2002): DOING DIFFERENT THINGS BETTER

9.1 INTRODUCTION

At the end of the research conducted in Cycle Two, I felt satisfied that the MEA112 module development team had made major strides in the design of a skills template suitable for a first-year medical curriculum, and in identifying the skills inherent in core modules. However, measured against the suggestion put forward in the *New Academic Policy* document (RSA DoE, 2001:109), that ... *learners should ... learn how to conceptualise the application of knowledge and skills in ways that are appropriate to the aims and practices of a particular career or profession,* a huge amount of work remained to be done to ensure that skills were integrated into core learning material and to create authentic contexts for the assessment of general skills.

In this chapter, which describes the third round of my action research project on the integration and assessment of general skills in the learning programme for first-year medical students, I will focus on (a) the difficulties associated with the incorporation of skills development in core modules and (b) the evolution of alternative assessment in Module MEA112. By describing the process and evaluating the outcome of various initiatives that were taken, I hope to illuminate how assessment was used in 2002 as a vehicle for skills development in Phase I of Curriculum 2000.

9.2 BACKGROUND TO REVISED PLANS FOR 2002

The following excerpt from my research diary provides the background of initiatives that were taken in 2002:

4 April 2001
The bad news: Two years down the road already and once again, student feedback on the questionnaire administered at the end of Module MEA112, showed that only 57 percent of the Afrikaans-speaking students and 70 percent of the English-speaking students felt that the module had met their expectations. No less than 36 percent of the Afrikaans-speaking group made negative noises about groupwork (in the English group too few students responded to this question to make their input meaningful).

At the SAARDHE conference two weeks ago (21-23 March 2001) I learned from a colleague teaching general skills in an engineering course at the University of Cape Town that after eight years in the business of skills teaching, students still see his module as an add-on. This brought little consolation.

The good news: Seventy-nine percent of the Afrikaans class (response rate of 77percent) and 75 percent of the English class (response rate of 66percent) had a positive experience of assessment in MEA112 in 2001, as opposed to the 57 percent for Afrikaans-speaking students and 67 percent for the English-speaking students in 2000.

20 June 2001
Received results of programmatic survey from the Division of Educational Development:

More disconcerting news. Seventy-six percent of the Afrikaans class and 35 percent of the English class indicated that Module MEA112 did not stimulate their interest; 71 percent of the Afrikaans class and 33 percent of the English class doubted the relevance of this module to the practice of medicine; 68 percent of the Afrikaans class, and 22 percent of the English class felt that the module was not informative at all; 43 percent of the Afrikaans class and 17 percent of the English class felt disadvantaged by the assessment of groupwork.

The discrepancy of opinion between the English and the Afrikaans classes is striking. Another discrepancy was revealed by the open comments on the value of the computer skills. In both the Afrikaans and the English classes there were students who thought that ***basic*** *computer skills did not belong in the module; reversely, there were a substantial number of open comments stating that the computer skills were useful and that there should be more of them.*

Synthesised from these notes, four concerns dominated my thoughts when it was time to start planning for the presentation of Module MEA112 in 2002:

- Efforts to make the content of MEA112 more relevant in 2001, did not have the desired effect.
- The prevailing negativity about the assessment of groupwork.
- The striking contrast between views expressed about the inclusion of basic computer skills in the module: sincere appreciation on the one hand, as opposed to explicit frustration on the other.
- The vast difference of opinion between the English- and Afrikaans-speaking groups on key aspects of the module.

9.3 THE ACTION RESEARCH PROCESS

In describing the research process, I refer again relate to the major research questions formulated in Chapter One: Why did the MEA112 module development team do what they did? How did we go about doing it? What did we do? What was the outcome? What was learnt? In doing so, I consider the main influences that led to the various initiatives, the processes by means of which the initiatives were introduced and managed, the results obtained from formal evaluation or informal discussions, and finally, the lessons that were learned, with reference to specific examples.

Lecturers and students were the main sources of data that were captured mostly by asking questions. However, I also used information produced by key respondents and documentary evidence. True to the action research mode, I never stopped making observational notes and diary entries as I went along. Furthermore, I often expanded on existing notes to link initial ideas to information gathered at a later stage or to highlight areas that needed further exploration. Both quantitative and qualitative methods of data analysis were used. To justify my interpretation of findings, I used direct quotations from questionnaire and/or interview responses, as well as *verbatim* excerpts from documents and journal entries.

9.3.1 Defining the field of action

Two of the major concerns outlined in par. 9.2, namely the difference between the response of English- and Afrikaans-speaking groups and the different needs as far as basic computer skills were concerned, were sidelined in the action research comprising Cycle Three. The possibility that the difference of opinion between the English and Afrikaans groups could be attributed to the fact that most students from historically disadvantaged groups found themselves in the English group, caused me to accept the discrepancy in results as a given, with the prospect that this tendency would be phased out in time to come. Furthermore, the apparent difference in preparation as far as computer literacy was concerned was addressed by looking into the possibilities of recognition of prior learning. Since this issue was taken care of by library staff, research on the outcome of initiatives falls outside the scope of this thesis. This means that the other two concerns, namely the perceived contextual irrelevance of MEA112 and students' complaints about assessment were most prominent on the action research agenda in Cycle Three.

9.3.2 Revised plans

Against the background of the situation as outlined above, it seemed that improvement of practice in 2002 would imply more of what was done differently in 2001: more collaboration with subject experts and more involvement of students in the actual process of assessment.

In planning to achieve these goals, I took advantage of two dichotomies which emerged from the research conducted in Cycle Two: (a) the apparent lack of skills assessment in core modules, as opposed to the successful collaboration between skills and subject experts in the area of assessment in the MED113 poster project, and (b) students' positive experience of real-world conditions in the MED113 poster project, as opposed to their feelings of insecurity related to unconventional forms of assessment. I reasoned as follows:

- If the MEA112 module development team could replicate its collaboration with Module MED113 staff in other modules, students would benefit in terms of

more authentic assessment opportunities. Core module staff, in turn, would benefit by sharing the workload generated by authentic assessment with skills specialists.

- If students could be sensitised towards their shared responsibility for assessing not only group products, but also group processes, and, in addition, be absolutely clear about what is expected from them when they perform a skills task, they might start to (a) take groupwork seriously, and (b) feel "safe" with innovative assessment, including self- and peer assessment.

Achievement of these goals involved three major action steps: (a) modification of the structure and delivery of Module MEA112 to achieve increased integration of skills components into core learning content, (b) increased involvement of students in the assessment of group processes and products, and (c) development of clear standards, criteria and indicators for measuring performance. Details of these action steps will now be given.

9.3.3 Action step one: Modification of the structure and delivery of Module MEA112

The integration of skills development into a learning programme can be achieved in more than one way. Figure 9.1 illustrates the various possibilities, as shared with the Task Group on curriculum review by Professor Bitzer on 19 February 1997.

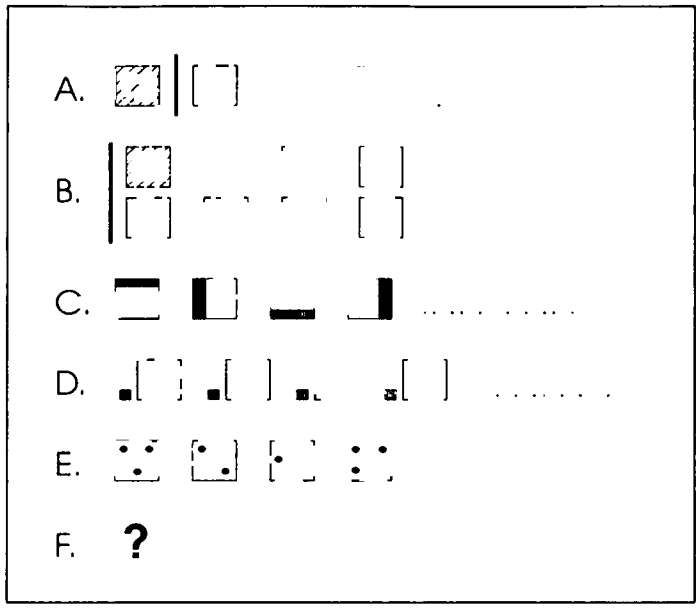


Figure 9.1 *Various models for integrating skills into learning content*

In 2000 and 2001 a modified version of example A was used for implementing Module MEA112 (Figure 9.2).

PHASE 1		
Year 1		
SEMESTER 1		SEMESTER 2
General Skills **MEA112**	Health Psychology **MEB113**	Health policy and service provision **MEG123**
	The doctor and the environment **MEC113**	Epidemiology and Biostatistics **MEH123**
	Concepts of health and disease **MED113**	Molecules of the body **MEI123**
	Tissues of the body **MEE113**	Development of the body **MEJ123**
	Structure of the body **MEF113**	Electrical systems of the body **MFK123**

Figure 9.2 *Model of skills integration initially chosen by the UFS School of Medicine*

On 23 April 2001, feedback obtained from students in the modular questionnaire and the ensuing focus group interview was discussed at a meeting of the MEA112 module development team. On this occasion the following suggestions in favour of greater integration were made:

- That the skills taught in MEA112 should be reinforced at various points after the module had been completed.
- That students do not need all the skills addressed in MEA112 immediately. The skills in which they need to be competent when performing a certain task, relevant to the work that needs to be mastered at that moment, should be taught at that very point in time.
- That the skills which are critically important right at the start of the medical curriculum should be identified and concentrated on during the first few days. Thereafter, other important themes that were formerly addressed during the first two weeks, should be "adopted" by core modules within which those particular skills are of paramount importance. Collaboration between the staff of the core module and skills development specialists should be the distinctive mode of further skills development, relevant to the outcomes specified for that module.

Implementation of these ideas to achieve increased integration (i.e. moving in the direction of example E in Figure 9.1) gained momentum at a meeting of module leaders (now referred to as the M.B.,Ch.B.I and Module Leaders Committee) on 3 May 2001. The ideas of the MEA112 module development team, as outlined above, were supported by the meeting. My proposal to approach the leaders of core modules to assess their needs and expectations as far as the development of general skills within their respective modules was concerned, was also approved. Thereafter the matter was discussed at Curriculum Committee level and on 7 June 2001 I was granted permission to start interviewing core module leaders.

In negotiating with subject experts, I used Professor Petersen's suggestions, diarised on 20 January 1999 (cf. par. 7.3.2.2), involving the following steps (cf. **Appendix 9A** for the instrument that was used for gathering information):

- take cognisance of the outcomes of the module;
- identify the tasks students are expected to perform in achieving those outcomes;
- select activities or tasks in which the skills targeted for development are prominent;

- identify a vehicle for measuring mastery of those skills.

The outcome of negotiations materialised in a proposal, submitted to the M.B.,Ch.B.I and Module Leaders Committee on 11 October 2001. At this point of my research, I had to agree with Atlay and Harris (2000:81), who conducted research on the development of students' transferable skills at the University of Luton in the United Kingdom, that ... *working with the notion of skill can cause a radical re-evaluation of the nature and structure of the higher education curriculum.* **Appendix 9B** is a copy of the redrafted content of the modules comprising the first semester of Phase I (MEA112, MEB113, MEC113, MED113, MEE113, MEF113). The components of MEA112 embedded in core modules are shaded in blue.

Distinctive features of the redrafted general skills component of the first-semester learning programme included the following:

- Condensed skills-teaching during the first two days of the module, focusing on those skills necessary for adaptation and survival.
- Thereafter, needs-driven skills development, which means that a particular skill is introduced when and where it is needed for the first time, and that the nature of skills development in a particular module depends on the content and learning activities of the module.
- Separate assessment of achievement of subject-specific and critical outcomes.

Table 9.1 is a summary of the aims and desired outcomes of skills development, as well as the methods of assessment that were negotiated with the leaders of the different core modules:

Table 9.1 *Details of skills development and assessment negotiated with core module leaders*

Module	**Aim of skills development in this module**	**Desired outcomes** *By the end of this session, learners should be able to ....*	**Method of assessment**
MEB113 Health	To empower students with the	Identify and apply criteria for peer and group assessment.	Learners' level of skills development will be

psychology	skills that will enable them to gain self-knowledge through peer and group assessment.	Learn from one another through groupwork and peer assessment. Apply study techniques to extract, note, memorise and use core factual content. Objectively and accurately compile information in the form of a report.	assessed, based on learners' own, as well as on peers' opinion of group members' contribution to group products and the group process.
MEC113 The doctor and the environment	To empower students with the skills that will enable them to utilise the opportunities for problem-solving presented in this module, through the acquisition, critical evaluation and application of knowledge.	Compile and implement questionnaires for structured interviewing. Apply study techniques to extract, note, memorise and use core factual content. Objectively and accurately compile information in the form of a report. Reason and arrange their thoughts logically. Find and critically evaluate information on the Internet. Present information orally to an audience of peers and academic staff members.	Learners' level of skills development will be assessed, based on products (assignment and report) and concomitant activities performed as an integral part of the module.
MED113 Concepts of health and disease	To empower students with the skills that will enable them to educate individuals and community groups on the principles and processes of disease prevention and health promotion.	Practically apply theoretical content, based on paper case studies. Make core summaries. Express themselves clearly and systematically. Interpret numerical data. Find and critically evaluate information (Internet). Creatively systematise information in the form of a brochure. Use a computer for word processing, database searches and communication. Visually communicate information in the form of a poster. Orally present information to an audience of peers and academic staff. Use stress management techniques.	Learners' level of skills development will be assessed, based on products (brochure, poster, oral presentation of project) and concomitant activities performed as an integral part of the module.
MEE 113 Tissues of the body	To enable students to acquire technological skills that may be used to facilitate self-learning and self-monitoring.	Use computer software (WebCT) to practise learning content and assess themselves.	Students' level of skills development will be assessed, based on information science activities prescribed by library staff.
MEF113 Structure of the body	To enable students, through word-building exercises and computerised practising of medical	Identify and use the basic building blocks (prefixes/suffixes/stems) of words commonly used in science. Identify and appropriately	Students' level of skills development will be assessed, based on the results of a conventional pre- and post-test on general

	terminology, to communicate accurately and economically about the human body. Decoding the specialised vocabulary of test and examination papers is also attended to.	respond to the different action words used in tests and examinations.	scientific terminology.

Apart from being time-consuming, the process of negotiating appropriate slots for skills development in core modules was relatively problem-free. As long as skills development would not mean less contact time with the students, lecturers were in general quite positive about the idea of integrating the content of Module MEA112 into core modules.

The difficulties that did arise were all assessment-related. In the first instance, Module MEA112 had the status of an "attendance course" during the first two years of its existence. This meant that an outstanding performance in Module MEA112 did not contribute to a student's overall academic achievement. Based on the premise that that which is valued in the curriculum should be assessed, it would be a gross injustice towards students to generate a mark, only to reduce that mark to "attendance" for administrative purposes. The integration of MEA112 into core modules presented an opportunity for labelling the achievement of critical outcomes with the same credit-bearing tag as other modules. However, the Phase I Chairperson, in her capacity as leader of Module MEC113, was adamant in her view that skills-derived marks should not form part of the mark that students earn for content knowledge. She argued that a combined mark would disadvantage students who "know their work", but lack the skills required to write coherently or speak fluently. In response to the E-mail enquiry I made in this regard, Professor Petersen suggested the following:

"In our case, we do not separate a mark for skills, but they are identified as major criteria in the assessment of the relevant piece of work with weight attached to them. **It would be a small step to separate the skills assessment into a score which might be entered into a 'log book' or 'portfolio' of students' assessed work which could be collated over a series of modules to demonstrate that basic skills have been achieved.** ... [S]hould a student not achieve a satisfactory grade in one semester they might replace the unsatisfactory work with another

piece from a suitable module in the next semester until the portfolio is complete. ...[I]n effect you create a module that is spread over many others, defined by its assessment - the presentation of a satisfactory portfolio" [emphasis added].

The short-term outcome of suggestions based on this piece of advice, was a decision by the Curriculum Committee on 4 September 2001 that students who failed to achieve the stated outcomes of Module MEA112 in the first semester, would be granted an opportunity during the second semester to better their performance. This arrangement did not only provide an opportunity for the provision of support and guidance to students who failed to achieve the desired level of competence, but also triggered the implementation of a portfolio approach to the assessment of skills. Full credit-bearing status for Module MEA112 was granted early in 2002 (cf. Minutes, Meeting of the Educational Committee, School of Medicine, 5 March 2002).

A second assessment-related problem occurred as a result of the arrangement with the development team of Module MEC113 (*The doctor and the environment*) to jointly assess one of the written assignments contributing towards the MEC113 module mark. It had been arranged that lecturers teaching in MEC113 would assess the content, whereupon MEA112 staff would assess the same product for language, style and referencing technique. When it was time to give effect to this arrangement, a misunderstanding occurred which was caused by my eagerness to capitalise on the authentic context of a community visit forming part of the MEC113 programme. My journal entry on the MEC113 case tells the story:

12 March 2002

The leader of Module MEC113 came to visit today - greatly perturbed. She wanted students to hand in a short report on their clinic visits, giving an account of what they had seen. Students, however, tried to write their reports according to the format that we (Beylefeld and Jama) had taught them. The result: they concentrated on format and technical detail and neglected the content.

What went wrong? Lack of communication seemed to be the problem. To start with, the assignment consisted of three sub-assignments, one of which lent itself to a proper report format. Since the MEC113 module leader knew that this particular assignment would not be assessed for skills, she did not discuss her expectations with us. Mpho and I, on the other hand, worked on the assumption that although we were not going to assess the assignment for skills, the assignment would make out an excellent portfolio item, demonstrating students'

authentic experience of a community visit. Subsequently we had listed the community visit assignment as a portfolio item (marked only for content). To make the situation even "more optimal", we changed the timetable so that the session on report writing would take place before the students went on community visits. This arrangement, we argued, would enable students to apply their skills of report writing to their community visit reports, leading to well-written products, which could only be a bonus to the people assessing the assignments for content. Unfortunately the timetable change was a unilateral decision.

Result? We prepared students for writing a proper report, while their MEC113 lecturer wanted only an essay. Students got upset and blamed the system for ineptness.

What did we learn? A pre-condition for embedded skills development, jointly undertaken by subject and skills specialists, is proper communication. This will ensure (a) that expected outcomes are aligned, and (b) that there is clarity on which items are targeted for inclusion in the skills portfolio, and for what purpose.

A third problem had to do with an erroneous perception that students were being over-assessed as a result of the incorporation of assessed skills outcomes into core modules.

Over-assessment presents a real danger in an innovative curriculum and, as indicated by Brown and Knight (1994), students who are faced with a whole range of different kinds of assignments may well feel overwhelmed. Consistent with this perception, the MEC113 module leader referred to in the case description above, expressed concern about the fact that students had to spend too much time on the community report assignment (as a result of the attention to technical detail), which carried a weight of only five percent towards the MEC113 module mark. What was overlooked, though, was (a) that the same assignment carried a weight of ten percent towards the MEA112 module mark, and (b) that the skills components embedded into the MEC113 programme took place within Module MEA112's own real time. Complaints from students about having to meet more requirements within the same time-span were thus invalid.

The incident nevertheless alerted those involved in joint ventures to carefully consider the time involved in the execution of performance tasks that were summatively assessed for both subject-specific and critical outcomes. My diary entry on 12 March 2002 concluded with the following reminder: *The weight that*

joint products carry, should justify the input they require. As a postscript, I quoted from Brown and Knight (1994:102) to remind me in years to come that more is not necessarily better:

12 March 2002

...[I]t is often the case that students are asked to write a very large number of essays for different elements of their courses. In this way, tutors hope to develop students' writing skills, ability to reason and present an argument and their general fluency. However, there is frequently very little liaison between subject elements within degree courses, and so learning from one element is not necessarily transferred to another. It would be better, therefore, for a wider variety of assessment methodologies to be used ... so that different competencies are developed and extended.

9.3.4 Action step two: Increased involvement of students in assessment

Contemporary life in South Africa, characterised by complex social conditions, places a high premium on the ability of citizens to relate well to others. Add to this the fact that teamwork is the key word in primary health care and hospitals, and it is clear why the MEA112 module development team could not accept the students' apparent negative sentiment towards groupwork, reported in par. 7.3.3.1 and par. 9.2, as a *fait accompli.*

The need to improve our efforts to help students appreciate the importance of learning to work together effectively and responsibly was communicated to the module development team in no uncertain terms on 22 August 2001. The student who addressed attendees at the lecturer training course (cf. also par. 8.3.3) on his experience of groupwork, made the following statement:

"Die studente is nie gekant teen groepwerk nie, baie van hulle het al gesê dat dit 'n goeie instrument kan wees waar dit reg en toepaslik geïntegreer word. Die leerders wil hê dat dit relevant ten opsigte van die werk, maar veral die uitkomste moet wees. Groepassessering kan 'n belangrike instrument wees om groepwerk te laat werk. Indien die dosent in gesprek tree met sy klas kan hy/sy waardevolle inligting kry oor die studente se houding jeens groepwerk." [The students are not against groupwork, In fact, many of them have said that it could be a good instrument, if it were to be correctly and appropriately integrated. The learners would like groupwork to be relevant in respect of the work, and especially the outcomes. Group assessment could serve as an important instrument in making groupwork effective. If the lecturer were to enter into discussion with the class

he/she could obtain valuable information on the students' attitudes towards groupwork."]

To me, this comment was the trigger to embark, not only on increased involvement of students in assessment with a view to teaching them the lifelong skills of judgement and self-appraisal, but also on the use of student-generated assessment results, in order to gain insight into the effectiveness of the teaching they are exposed to. I followed a twofold approach: involvement of students in the assessment of group processes (i.e. doing something different) and enhanced involvement of students as co-assessors of group products with specific reference to the MED113 project (i.e. improvement of different things done in Cycle Two).

9.3.4.1 Involvement of students in the assessment of group processes

In preparation for a changed approach in 2002, I compiled a proposal for the assessment of group processes in July 2001 and submitted it to the Phase I chairperson for comment. This document was discussed at a meeting of the Curriculum Committee on 4 September 2001 and the following decision was minuted: That students be trained in assessing group processes, that students and lecturers should have the same frame of reference and that the matter should be further investigated by Dr Daleen Raubenheimer[26], who is doing doctoral research on groupwork, and myself.

After a discussion with Dr Raubenheimer on 27 July 2001, it was decided that my brief would include the implementation of suggestions included in the proposal document, excluding the proposed questionnaire survey on students' experience of groupwork, lest the survey were to evoke premature expectations related to groupwork.

The proposal document suggested that:

- the goals of the assessment exercise should be clear;
- students should understand their responsibilities;

[26] Leader of Module MJR224 in Phase II.

- assessment criteria and performance standards should be known;
- assessment should give evidence of the contribution of individual students, as well as the work of the group.

The session that was scheduled to introduce students to the proposed strategy for monitoring and assessing group processes took place on 12 February 2001, as part of the first session of Module MEB113. **Appendix 9C** gives full details of how the process and expected outcomes were communicated to students, as well as the instruments that were used to gather assessment results. Table 9.2 is a summary of the items included in Appendix 9C.

Table 9.2 *Types and purposes of items used for introducing students to the assessment of group processes*

Item	Purpose
Desired outcomes and outline of information session on assessment of group process	To inform students on the rationale for and advantages of assessing group processes; to provide guidelines for implementation of the assessment system; to provide dates for submission of individual and group reports.
Questions for structuring group reports	To provide a uniform framework that makes comparison between the functioning of groups possible.
Criteria and scoring categories for assessment of leadership	To provide students with an instrument enabling them to make objective judgements.
Criteria for compilation of a group contract	To introduce students to typical elements of a group contract (example of a group contract is also attached, **Appendix 9C**).
Outline of activity and checklist used for mid-semester monitoring of group functioning	To facilitate a discussion between group members on difficulties experienced in their respective groups.
Examination questions included in the MEB113 Semester I examination paper	To demonstrate to students that the process of group functioning is valued.

A secondary aim of involving students in the assessment of group processes was to obtain information on dysfunctional group members with a view to remedial action. However, at the end of the first semester in 2002, I had to admit that putting such a system into practice would require further fine-tuning. I realised that a substantial effort on the part of Mpho and myself in the form of the design and implementation of the feedback forms had resulted in relatively little benefit

to the students. I base my presumption on the following identified shortcomings of the system:

- A huge number of confidential reports were generated, based on the belief that regular reports would ensure ongoing effective participation in groupwork. Processing the multiplicity of forms became a burden and much of the data remained unused in the sense that students did not receive feedback on their input. Only twice were students encouraged to improve their contributions to the group on the strength of feedback received from peers.
- Informal discussions with the students who came to hand in group and individual reports revealed that some students did not take the confidential individual reports seriously. They failed to complete the assessment forms on time, and when they were reminded to do so, they allocated scores arbitrarily.

A preliminary conclusion on my part was that (a) students had not yet internalised the idea that skills matter, (b) the knowledge that the self- and peer assessment reports would contribute only five percent towards their module mark did not provide the necessary motivational force, and (c) the relative immobility of subject experts with regard to the implementation of innovative forms of assessment had something to do with students' apathy towards the quality of group functioning.

On realising that the outcome of this initiative was less rewarding than expected, I could not but go back in my thoughts to the words iterated by Professor Elton at the workshop on undergraduate teaching, learning and assessment in June 2001. He said that trying to do different things better is dangerous ground. One's critics might be quick to say: "I knew it would not work - let's go back to old things."

However, despite identified shortcomings, the involvement of students in the assessment of group processes by means of self-reports served to stimulate students to reflect on their experience of participating in a group project. Reflection, as noted by Askham (1997:306), is an important skill used throughout a person's professional life: *Without reflection we might not repeat what is effective or avoid what is ineffective. It helps you build confidence and learn from*

*mistakes. It is **essential** to learning* [original emphasis]. Reflective learning is also something that is recommended by the Department of Education as a means of increasing the validity of assessment (RSA DoE, 2001).

Secondly, student feedback brought valuable insights into the effectiveness of project work as an instructional method. The group reports (cf. **Appendix 9D**) provided ample evidence that students paid attention to group dynamics, demonstrating that they had made a connection between their actual experiences and the theoretical input on group dynamics that they were exposed to on the second day of Module MEA112 (cf. **Appendix 9B**, p. 2). The following two quotes from group reports may serve to substantiate this claim:

"Daar was nie ernstige probleme wat voorgekom het nie. Omdat ons groep soveel sterk leiers het, met elkeen sy unieke interpretasie van die opdrag het dit 'n bietjie konflik veroorsaak. Dit is egter vinnig opgelos deur al die idees saam te vat en te evalueer en dan die beste een te kies deur demokraties daaroor te stem. Dit is duidelik gemaak dat die idees wat nie gekies is nie, nie slegter is nie, die ander mag net meer van toepassing wees op die spesifieke projek. Die groep het al die probleme dus voorkom, voor dit die spanwerk kon beïnvloed." ["No serious problems arose. Because our group has so many strong leaders, each with his or her own unique interpretation of the assignment, there was a certain amount of conflict. However, this was rapidly resolved by summarising and evaluating all the ideas, and then choosing the best one be democratically voting on the matter. It was made clear to everyone that the ideas that had not been chosen were not inferior; it was just that the others might be more applicable to the specific project. The group thus averted all the problems, before they could affect the team work."]

"Different attitudes and behaviours led to problems; we all pocess (sic) different temperaments and this made members to [sic] try to change the group to meet their personal needs. Conflict and some misunderstanding errupts [sic] as each member attempts to gain control. During the first weeks of our first term, others felt unidentified and felt they could "hide in the group." Others felt that they were working hard in comparison with other members. To tackle these problems, we all focused on reducing conflict and worked to develop rules to guide the member's [sic] behaviour, regardless of the different characters or personalities we have. Communication is also essential for group activities. We let everyone say out what he/she feels about any given report/assignment [and] they try to combine everything and come up with one idea."

Of course the possibility that students gave us what they thought we wanted to hear could not be ruled out. Based on these reflective thoughts on what worked

and what did not work, I journalled the following ideas for implementation in future rounds:

30 April 2002
Notes for future reference:

(a) The reflective nature of the group reports could serve to create a channel of communication between us (Mpho and I) and students, giving insight into their personalities, values and needs. This, in turn, could help us identify students who need support. Changing the group reports to an individual exercise may encourage students to show self-awareness and could also be the modest beginnings of reflective writing for the purpose of portfolio-based assessment.
(b) *To curb the inclination of some students who are strategic learners, to produce what they think we want, I shall take cognisance of Woodward's (1998) advice that the simplest strategy is to keep reminding students that authentic experience is at the centre of professional learning and that we are interested in* ***authentic accounts*** *of their unique engagement with project work.*

9.3.4.2 Involvement of students in the assessment of group products

The authentic assessment exercise in the form of the MED113 poster presentations was repeated in 2002. **Appendix 9E** gives the details, as compiled by the leader of the MED113 module leader, Dr Brenda de Klerk.

In 2001, as indicated in par. 8.3.2.2.7, negotiation of performance criteria at a late stage, misunderstanding about criteria and the allocation of marks, collusive marking, dissimilarity of topics and resources, and unequal racial composition of community representatives and the panel of staff assessors were the main complaints voiced by students. Table 9.3 gives a summarised view of how these concerns were addressed in 2002.

In order to determine whether the discrepancy between the mean marks given by students and those given by the panel of academic staff that was found in 2001 had changed in 2002, a comparison between the two sets of marks was drawn (Table 9.4).

Table 9.3 *Problems identified by students in the 2001 MED113 poster project and actions taken to address them in 2002*

Problem	Actions taken to rectify the situation
Negotiation of assessment criteria when students had finished posters already	Students were involved in the establishment of criteria and performance indicators when they started working on posters; students' ideas were assembled by means of a structured process, refined and triangulated with them (**Appendix 9F**).
Misunderstanding about the allocation of marks	Assessment sheet designed to allow separate assessment of posters, brochures and stalls; criteria broken down into performance indicators (**Appendix 9G**).
Friendship marking	A more sophisticated method of scoring and weighting was designed: the use of different assessment sheets ensured that only subject experts assessed the factual correctness of the posters (**Appendix 9H**); students' assessments carried a weight of only 5 percent.
Dissimilarity of topics and resources	The target groups of posters aimed at informing the public on health topics and those aimed at giving information on the services rendered by non-governmental organisations were clearly specified.
Unequal racial composition of community representatives and panel of staff assessors	Two schools, Navalsig (mixed racial student body) and CommTech (black, English-speaking student body), were invited to attend the exhibition; three black staff members formed part of the staff panel.

Table 9.4 *Posters: Marks allocated by staff and students in 2002*

Variable	N	Mean	Std. Dev.	Minimum	Maximum
Students 2001	17	65.8	4.0	59.0	73.0
2002	18	67.2	4.6	58.3	75.8
Staff 2001	17	79.5	5.7	71.0	88.0
2002	18	72.8	4.9	66.9	83.3

The two sets of data revealed that the marks given by staff in 2002 were significantly lower than those given in 2001 ($p< 0.0007$). The student-allocated marks in 2002, in turn, were higher than in 2001, but not significantly so ($p< 0.3603$). Compared to the mean difference of 13,7 percent between staff and student marks in 2001 (ranging from four percent to 22 percent), the mean difference in 2002 was 5,6 percent (ranging from -5,8 percent to 12 percent). Whereas in 2001 all groups received higher marks from staff than from students,

three of the eighteen groups received higher marks from their peers than from staff in 2002.

A correlational analysis revealed a poor trend of agreement (0.33) between the staff and the student marks and Figures 9.3 and 9.4 show the extent to which students' marks deviate from staff's marks in 2001 and 2002 respectively.

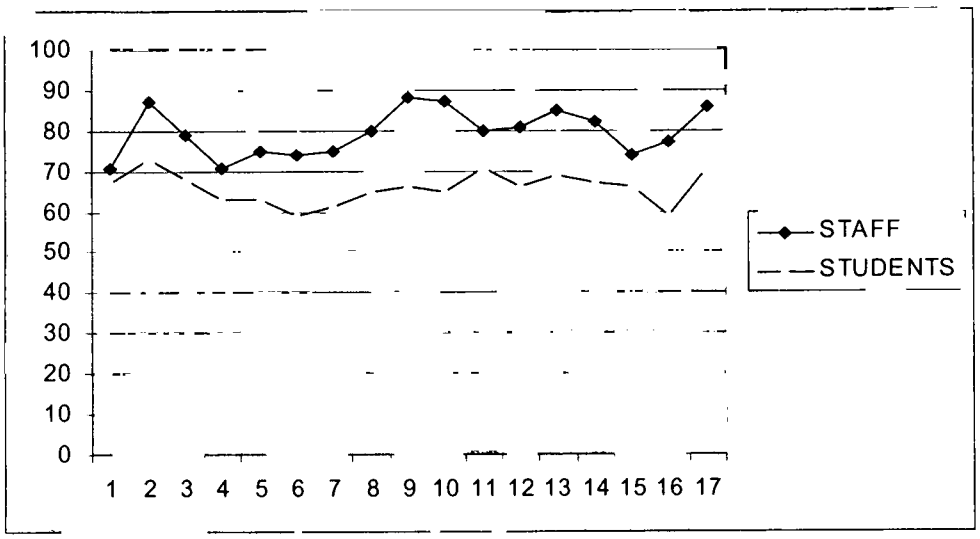


Figure 9.3 *Posters: Staff- and student-generated marks in 2001*

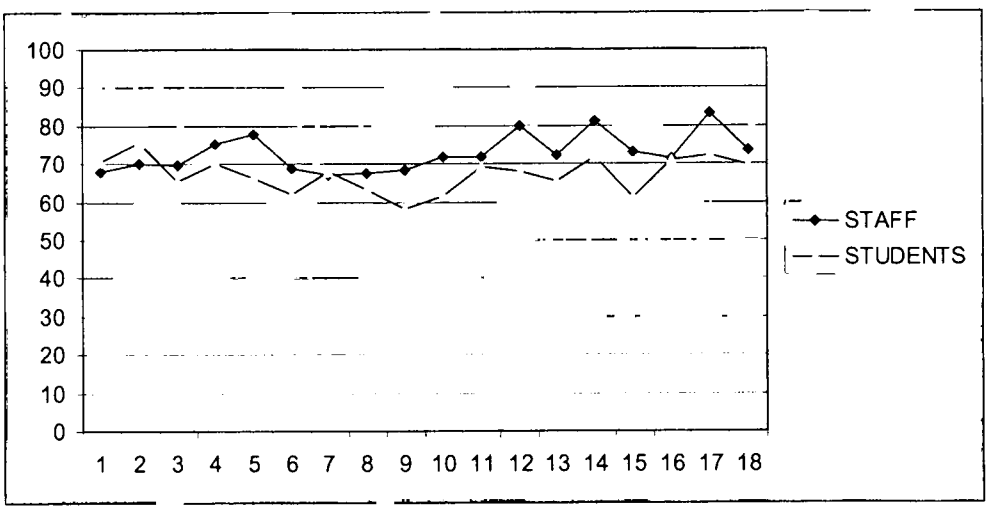


Figure 9.4 *Posters: Staff- and student-generated marks in 2002*

This difference in student- and staff-generated marks prompted further analysis, as these results, seen in conjunction with the results of the previous investigation, could be an indication that, despite the negotiation of criteria, students needed more training to prepare them for peer assessment.

Details of students' and staff's experience of the assessment exercise will be reported in par. 9.3.6.3, 9.3.6.4 and 9.3.6.5. Suffice it here to say that the 2002 MED113 experience contributed to my professional growth by helping me realise that the multi-racial and multi-lingual composition of the South African society renders *authentic assessment* a bold concept, encompassing responsibility towards both black and white, English- and Afrikaans-speaking groups. Diary entries made on 12 April 2002, after triangulating negotiated criteria with students, and again on 18 April 2002, immediately after the poster presentations, reveal my thoughts on the complexity of the situation:

12 April 2002

Afrikaans-speaking students who are entitled by the constitution of the University of the Free State to receive tuition in Afrikaans, wanted to know how the assessment results coming from English-speaking pupils and fellow-students could be regarded as reliable if these groups could not understand the language in which the posters communicate with them.

I put the matter in perspective by reminding them that the pupils' comments would be used formatively only and that their English-speaking peers' verdicts contributed only five percent towards the final summative mark.

18 April 2002

One of the staff assessors approached me, saying that the black, English-speaking students had lodged a complaint because the winners were all white, Afrikaans-speaking groups. I was reminded that the skills which white students took for granted, represented a quantum leap for most of the black students.

Authenticity to this person would furthermore imply the rendering of a service to the underprivileged society, which in this case, is mostly comprised of speakers of African languages. It was argued that in a real-world context, students who could use three languages on their posters surely deserved extra marks.

These observations sensitised me to the responsibility of higher education institutions to help students acquire behavioural skills that will equip them to play responsible and useful roles in the South African society in the long term, and, in the short term, contribute maximally to the productivity of diverse learning groups. They also paved the way for further refinement of future authentic assessment processes, as is evident from the final diary entry made on 18 April 2002:

The assessment of poster presentations should in future be preceded by a discussion among members of the academic staff panel. This will ensure inter-assessor reliability in the sense that all assessors will be working from the same frame of reference.

9.3.5 Action step three: Development of standards, criteria and indicators for measuring performance

The feedback we received in 2001 indicating that 79 percent of the Afrikaans class and 75 percent of the English class had experienced assessment in MEA112 positively in 2001 motivated me to improve the assessment system even further in 2002. Another motivating force emanated from the various policy documents emphasising the need for a paradigm shift in assessment, if the challenge of educational change is to be met. In the New Academic Policy document of the Department of Education (RSA DoE, 2001), for example, the idea of moving away from conventional forms of assessment requiring students to **write about performance**, towards the assessment of **actual performance** in real or simulated real-world contexts, is strongly endorsed. Recognition is given to the fact that performance-based assessment requires that acceptable performance should be defined. This explains the advocated movement towards criterion-referenced assessment ... *where student performance is judged against pre-specified criteria or standards* (*ibid.*:112).

The idea of using criterion-referenced assessment appealed to me for various reasons: criterion-referencing makes it possible to give students detailed and accurate feedback, which aligns well with my work as head of the Division of Student Learning Development. Furthermore, it has the potential of contributing to consistent assessment amongst different assessors (reliability), which is something that was identified as being problematic in par. 9.3.4.2. Ultimately, criterion-referenced assessment helps to increase the validity of assessment by creating an awareness in the assessor of fitness **of** purpose (are we assessing the right things?) and of fitness **for** purpose (are we assessing things right?) (*ibid.*). Without fear of contradiction, I can say that these two questions were uppermost in the minds of the whole MEA112 module development team after a module

mark for MEA112 had been generated for the second time in a manner that caused a great deal of administrative red tape and various arbitrary decisions concerning the numerical "worth" of descriptors such as "excellent" attendance or "satisfactory" completion of journal writing activities (cf.**Appendix 8C**).

Towards the end of Cycle Two, I came across an article on the Internet, entitled *Assessing and accrediting key skills* (CDELL, 2000). The idea of performance assessment is put across very convincingly in this article: *The key to successful assessment of key skills lies in the* ***evidence*** *produced by the student. There is* ***no other basis*** *upon which you can assess the student's achievement* [original emphasis].

A subsequent in-depth study of the literature on assessment (cf.Chapter Four) introduced me to the work that researchers such as Mabry (1999), Siebörger and Macintosh (1998), Wiggins (1998), and McMillan (1997) had done on educative assessment. From Wiggins *(ibid.)* I learnt that central to the issue of generating evidence of the achievement of intended outcomes, is the setting of standards; that specific guidelines on what counts as important demonstrations of achievement may contribute towards high-quality outcomes.

Secondly, I learnt that general verbs or action words forming part of outcome statements set no standard; and that' standards are set when the conditions that any performance must meet to be successful, are defined. Thirdly I learnt from McMillan (1997:63) that, in sharp contrast to the traditional view of assessment as something that "was done" to a student by a lecturer, scoring criteria should be known to students, preferably prior to instruction. And finally, I learnt that the completion of performance tasks identified as demonstrations of skills acquisition, should be mandatory. Against this background, adopting a portfolio-based mode of assessment, which is recognised as an authentic assessment procedure (Woodward, 1998), increasingly seemed to be the way to go.

The immediate problem we had to face was to know what would count as evidence and when the assessment should actually take place. An overview of the literature (Dent & Harden, 2001; Mabry, 1999, Scanlon & Ford, 1998, Wiggins,

1998; Brown, Bull & Pendlebury, 1997) helped me to realise that portfolio-based assessment could be approached in more than one way, but that certain basic requirements need to be met, including the following:

- The lecturer/facilitator has to provide a range of different learning activities and experiences from which the students can derive their evidence.
- The students must be provided with clear guidelines on what to include in their portfolios and how this evidence will be assessed.
- It is imperative to set criteria and standards to form a framework according to which portfolio items should be judged.

Armed with this theoretical knowledge, Mpho Jama and I started our journey to portfolio-based assessment by compiling a document entitled *Guidelines for the compilation of a skills portfolio* (**Appendix 9I**), for inclusion in the Module Guide that students are issued with on the first day of the academic year. The next step involved the compilation of what we called "assessment schedules" (**Appendix 9J**), indicating the criteria that would be used for judging the students' performance, as well as the possible levels of achievement. The purpose of these schedules was to give students feedback on the quality of the various tasks they had to perform, including an interview on cultural differences, a written assignment on work done in module MEC113 and an oral presentation of MED113 project work. The next step was to compile level descriptors or rubrics and conversion tables (**Appendix 9K**) to help us to judge the students' work objectively. Ultimately we converted the "performance profile", included in the guideline document, into a checklist (**Appendix 9L**) for the purpose of assigning an overall grade to the portfolio as a whole. In the compilation of these instruments we borrowed from criteria and guidelines used by Scanlon and Ford (1998).

The account of the strategy that we followed might give the impression that the process from the initial introduction of the portfolio guidelines to the final assessment was plain sailing. On the contrary, I discovered that implementing an alternative form of assessment is not an easy, straightforward task. I tend to agree with Hart (1994:84) who describes it as a ... *messy, time-consuming process.*

There exists no neat blueprint or one-size-fits-all-plan. Some of the questions and concerns that formed part of the process are discussed below.

The first problem we had to deal with centred round the issue of whether we should demand the inclusion of specific items for inclusion in the portfolio (over and above an identification of compulsory assessment episodes), or whether we should allow students to decide what should "count" for them as evidence that they had achieved a certain skill outcome. A literature search helped me to distinguish between portfolios constructed for the purpose of instruction and learning or for assessment. Among the various standpoints advocated in the literature, I opted for using Wiggins' (1998) approach, which required that the content of the portfolio, as well as the performance standards, should be specified (cf. Chapter Four, par. 4.5.4.2).

This theoretical knowledge brought me to the issue of whether the portfolio-based assessment results would be accepted by the faculty as valid and reliable. I took cognisance of the whole debate about validity and reliability, and was relieved to learn from authors such as Gipps (1994) and Siebörger and Macintosh (1998) that the psychometric connotations of validity, reliability and generalisability are increasingly being displaced by the concepts of trustworthiness, authenticity and quality assurance measures, emphasising the need to design **procedures** (rather than tests) that will ensure assessment that is as fair as possible. I find it also reinsuring to know that fairness implies, amongst other things, that there should be clarity on what will be assessed and how it will be scored, because the idea of being transparent corresponded with the requirements for using a portfolio-based assessment system (cf. Chapter Four, par. 4.4.2). I also felt more "safe" with our plans for implementing a portfolio system when I learnt that the trustworthiness of authentic forms of assessment increases when the process and results of the assessment are open to scrutiny through, for example, a process of moderation (Erwin & Knight, 1995).

The second difficulty we had to deal with was the formulation of transparent standards against which assessment judgements could be made. To substantiate the fact that this was a real challenge, I quote at length from my research diary:

22 April 2002
Today Mpho, Rika[27] and I sat down today to discuss the rubrics I had compiled for marking the essay and interview report.

I had chosen the easy way out by using only the categories "Achieved Beyond", "Achieved" and "Not achieved" because I found it so difficult to describe the quality of a performance that is only "Partly Achieved."(!)

Initially Mpho did not agree with the way in which I had described the different levels of achievement. She wanted to use more simplistic words such as "excellent", "fair", etc. I explained to her that, according to Wiggins (1998), such rubrics may go through as praise or blame, but definitely not as effective feedback. The reason: these words provide no insight into the characteristics that led to such value judgements. For rubrics to be effective, concrete performance indicators and traits unique to each level should be used.

When we reached the point where we had to decide what numerical value to ascribe to each level, Rika felt strongly that there should be a clear distinction between the categories "Achieved" and "Achieved Beyond" so as not to demotivate students who had gone to a lot of trouble to produce an excellent product. In order to give effect to her suggestion, we brought back the "Partly Achieved" category.

At this point, I experienced an uneasiness. I felt that we were working in an arbitrary manner and wished we could have had some guidelines from some kind of authority "out there."
[Note added later: Of course Rika's argument about rewarding excellence was in line with the views expressed by the Department of Higher Education in the NAP (New Academic Policy) on holistic criterion-referencing. On 22 April 2002, we were applying, unwittingly, a holistic approach to criterion-referenced assessment by using our professional educational judgement for establishing the criteria and later on, when we marked the assignments, for matching the evidence against the criteria.]

23 April 2002
We have had a second round of discussions and have come up with a new instrument [cf.Appendix 9K]. It was a battle to decide what numerical value to allocate to each level of performance, but finally incremental distinctions of ten, fifteen, and 20 percent between the different levels ensured an acceptable product.

14 May 2002

The past few days I have been marking assignments, using the rubrics we had developed. To my disgust, there were many shortcomings. I have this feeling that I need something in between - not just the one or the other level.

[27] Ms Rika van Schoor was employed at the time in my office in the capacity of lecturer, teaching general skills to first-year students in the School of Allied Health Professions.

I suppose that as we move on, I will refine these rubrics until they meet our needs. Take for example the one developed for marking the interview on cultural issues. I thought the marking was going to be straightforward, because the assessment schedule was so simple [cf. **Appendix 9J**].

In the end the instrument proved to be so "straightforward" that it was completely useless. I had to go back to the drawing board and came up with a new instrument, distinguishing between criteria and performance indicators [cf. **Appendices 9J** and **9K**].

[Note added later: The reason why the instrument proved to be useless was because I had mistaken criteria for indicators [cf. Chapter Four, par. 4.4.1). Apparently, according to Wiggins (1998), this is a common mistake leading to poor assessment. The definition used by Wiggins (1998:129) makes it clear: An indicator is a behaviour or trait that is typical of a particular performance that is to be assessed. It is a concrete sign or symptom of a criterion that is being met and thus makes assessment and self-assessment easier. An indicator thus gives more information than a criterion.]

Another difficulty we had was to find a balanced way of responding to the call for qualitative assessment judgements while the university system still requires numerical reporting of assessment results. I experienced feelings of "guilt" each time the design of an assessment schedule was followed by the design of a conversion table for the purpose of reducing the feedback to a grade, expressed in terms of percentages. This feeling was exacerbated when I read the work of Mabry (1999:35), who asserts that the majority of institutions embarking on curriculum innovation choose a combination of descriptive and numerical reporting of assessment results. This implies forcing new measurement techniques through the ... *rusty old sieve of the psychometric paradigm* ... in the name of standardisation. Mabry (*ibid.*:34) aptly refers to this situation as follows: *So trends in student assessment exhibit something like schizophrenia.*

These feelings were attenuated by the view expressed in the NAP document (RSA DoE, 2001) that criteria-graded assessment is regarded as a pedagogically justifiable way of marrying numerical and descriptive reporting of assessment results.

In the final analysis there was the issue of the imposition of a penalty for not completing or submitting portfolio items (cf. Appendix 9I, items 11-15 in par. 3).

In the literature I came across O'Rourke's (1998:409) viewpoint that users of authentic assessment methods are often tempted to approach assessment on the basis of whether or not procedures have been carried out. She argues that when this happens, the qualitative value of the assessment is compromised. Imposing a penalty for missing items is thus no different from grading according to the psychometric paradigm.

In contrast to this viewpoint, feedback from key respondents[28], gathered by means of an electronic survey[29] (cf. **Appendix 9M**), showed strong support for the idea of penalising incomplete portfolios. The following are *verbatim* excerpts from the responses I received, on the basis of which the penalty items remained:

"I can see why you have chosen some items as "penalty" items where students lose marks if they are not done. This allows the full 100 percent to be distributed between the remaining items and so mitigates the problem of low individual weightings. It also sends a psychological signal as negative marks are much more potent than positive areas in changing student behaviour. Still however, I am concerned that this may lead to "strategic" behaviour - students judging that they can afford to lose five percent and therefore not bothering with an important task. I would again take a hard line and make the penalty for not completing much higher."

"Ek stem saam dat daar negatiewe assessering vir voltooiingsitems moet bestaan." [I agree that negative assessment of items listed for completion should be retained."]

"Verhoog die negatiewe assessering na vyf persent vir gedeeltelik voltooi, en tien persent vir onvoltooid." ["Increase the penalties to five percent for partially-completed items and ten percent for items not included at all."]

9.3.6 Observation

Observation in Cycle Three consisted mainly of asking questions. At the end of Module MEA112 I asked students once again to evaluate the content and presentation of the module; prior to the poster presentations I asked students about their feelings on being involved as co-assessors in the project; and after the June vacation I asked students about their experiences of the portfolio-based

[28] The Dean of the UFS Faculty of Health Sciences, Professor CJC Nel, the Head of the UFS School of Medicine, Professor GJ van Zyl and Professor S Peterson, Head of medical education at the Leicester Warwick Medical School in the United Kingdom.
[29] I intended to make use of the Delphi technique, but abandoned the idea after the first round.

assessment system applied in Module MEA112. Lecturers participating as assessors in the MED113 poster presentations were asked to reflect on their experience of the authentic assessment exercise; Professor Driekie Hay, associate professor and senior researcher at the UFS Centre for Higher Education Studies and Development, was asked to give her views on the legitimacy and fidelity of the portfolio-based assessment exercise in the form of a moderator's report; ultimately, four members of the top-leadership team of the UFS Faculty of Health Sciences were interviewed on fundamental issues relating to the assessment of general skills.

9.3.6.1 Student perceptions of Module MEA112

On Monday, 20 May 2002, during the last session of MEB113 before the June examination, the first-year students were asked to evaluate Module MEA112.

The questions that were of particular relevance to an estimation of students' overall satisfaction with the module were:

1. *Did Module MEA112 meet your expectations?*
2. *Did Module MEA112 help you adapt to the new learning environment?*
3. *Do you feel that the assessment of skills outcomes in the form of portfolio-based assessment, instead of tests and examinations, is fair?*
4. *Do you think that Module MEA112 will help you become a lifelong learner?*

A total of 65 Afrikaans-speaking and 57 English-speaking students completed the questionnaire. Students' satisfaction was calculated by totalling the number of positive responses and expressing this sum as a percentage of the maximum possible total score, which varied for the different questions.

In order to establish whether the attempts of the module development team to bring about changes had had a positive effect on students' experience of the module, a comparison between different sets of data captured in 2000, 2001 and 2002 was done for questions one to three. Figure 9.5 (Afrikaans-speaking group)

and Figure 9.6 (English-speaking group) give an indication of how students' perceptions varied over the three-year period.

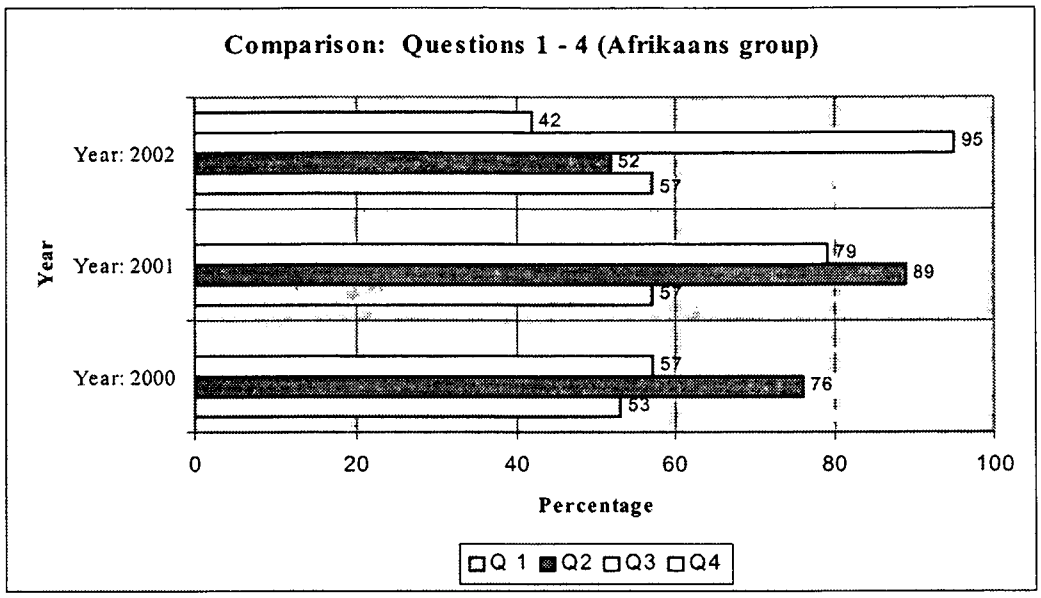


Figure 9.5 *Afrikaans-speaking students' perceptions on the effectiveness of Module MEA112*

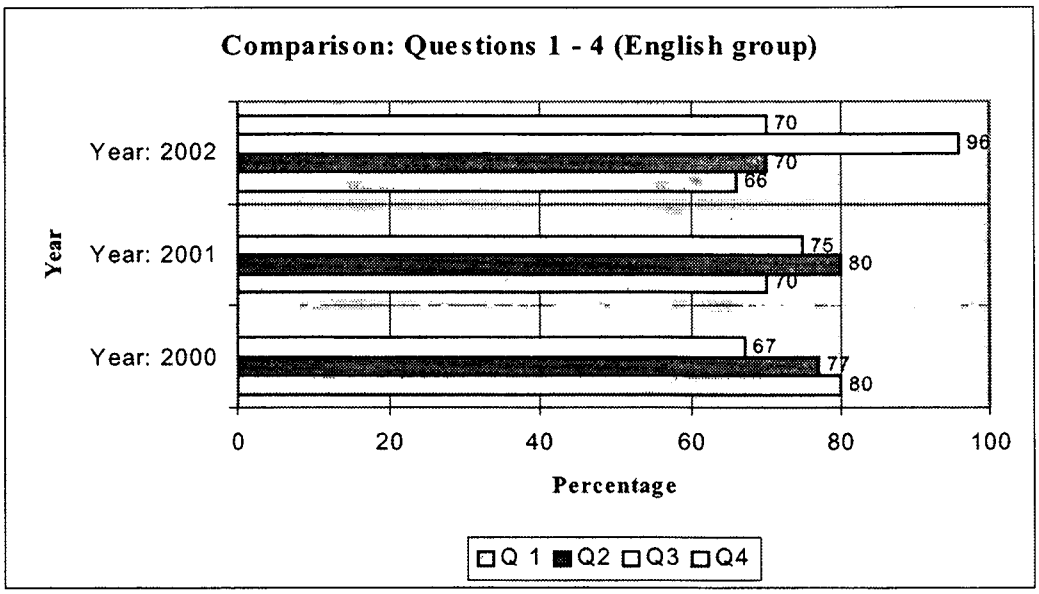


Figure 9.6 *English-speaking students' perceptions on the effectiveness of Module MEA112*

Noticeable variations in responses occurred in question one where the indicated satisfaction of the English-speaking group decreased from 80 percent positive responses in 2000 to 66 percent in 2002. With regard to question two, both the

English- and Afrikaans-speaking groups were more positive about the contribution of MEA112 to their ability to adapt to the learning environment in 2001. However, a significant variation in responses occurred in 2002 when the level of satisfaction in the Afrikaans-speaking group dropped from 89 percent to 52 percent. The opinion of the English-speaking group showed a similar downward tendency, albeit much less so (ten percent) than in the Afrikaans-speaking group. In question three there was an incremental tendency noticeable in the positive opinions of both the Afrikaans- and English-speaking groups. A significant 22 percent of the Afrikaans-speaking group were more positive about assessment in MEA112 in 2001 and an additional 16 percent were more positive in 2002. In the English-speaking group the increments were respectively eight percent in 2001 and 21 percent in 2002. With relation to question four, asked for the first time in 2002, the vast discrepancy between the opinions of the English- and Afrikaans-speaking groups is striking. Seventy percent of the English-speaking group felt that MEA112 would contribute to their lifelong learnership, while only 42 percent of the Afrikaans-speaking group held a similar opinion.

The data showed that the increased integration into core modules has not caused significant change in the perceptions of students. On the contrary, the decrease in positive sentiment among the English-speaking group in relation to both questions one and two, and the remarkable decrease in the positive inclination of Afrikaans-speaking students evident in question two, were reasons for concern.

Further scrutiny of the open comments revealed that two important factors in the negative feedback on the ability of MEA112 to meet their expectations were (a) the fact that the skills taught were mostly a duplication of what they felt they had already mastered at school, and (b) that the skills teaching took up too much time. The following comments were chosen to be illustrative rather than representative of these perceptions:

"Reeds die werk in die laerskool gedoen." ["Have already mastered the work in primary school."]
"Ek sou meer gevorderde aspekte van byvoorbeeld rekenaars wou leer." ["I would have liked to learn more about the advanced aspects of computers."]

"I was expecting to be taught something that I don't know but to my surprise I was introduced to things that I already know."
"Although there were certain skills that I learnt it took up way too much time for what was taught to us!!"

In the open comments five students admitted that they did not know what to expect, and others clearly had unrealistic expectations:

"Ek het aanvanklik gedink dat dit voorbereiding van kliniese vaardighede gaan wees - dat ons in hierdie module meer in die hospitaal sal wees - bloed trek, bloeddruk, ens.". ["Initially I thought that it was going to be clinical skills - that we will spent more time in the hospital in this module - to draw blood, measure blood pressure, etc."]

Still others clearly still held the view that study time equals memorisation of facts and writing examinations:

"This module was a waste of time. It took a lot of my study time. Most of the things I already knew from school, although it helped me with learning techniques".
"[D]ie module is uiters frustrerend en het te veel werk vir 'n nie-eksamen vak." ["The module is utterly frustrating and encompasses too much work for a subject in which there is no examination.']

And finally, a comment such as the following clearly demonstrates that student feedback should not be interpreted in isolation:

"Meeste vaardighede is reeds vroeër in my lewe bekom. Wat van nuwe, cool, oulike, interessant, state-of-the art, effektiewe, alternatiewe werkswyses en idees?" ["Most of the skills I have mastered earlier on in my life already. How about new, cool, clever, interesting state of the art, effective, alternative methods and ideas?"]

Among the most prominent aspects mentioned by those students who believed that MEA112 had helped them to adapt to the new learning environment, were the sessions teaching them to use information technology and how to write a scientific report. Computers were mentioned 37 times, and learning how to write assignments, 33 times in the Afrikaans-speaking group. In the English-speaking group, the frequency of references to these aspects of MEA112 was respectively 22 and 17 times.

With reference to questions one and two, significantly more English-speaking students indicated that their positive disposition was related to an increased cultural awareness brought about by Module MEA112. Cultural sensitivity was mentioned only twice by the Afrikaans-speaking respondents as a positive outcome, as opposed to 30 times by the English-speaking group. In the light of this finding it is not surprising that the opinions expressed in relation to question four (concerning the contribution of MEA112 to lifelong learnership) differ so remarkably between the two groups, a typical comment from English-speaking respondents being:

"Yes, it helped me to change my learning skills for future use. It has made me more culturally sensitive."
"Yes it will help me to come level because I've learned a lot of very important aspect[s] which I never took note of before like cultur[al] diversity which will help me not to be prejudice[d,] not discriminating in my practice."

The high frequency of positive responses to question three can be taken to indicate that our intentions to improve the assessment system had been successfully realised. However, further analysis showed that some students approved of the portfolio system for the wrong reasons:

"Ja, aangesien dit nie 'n prioriteit is nie, is dit beter om meer aandag te skenk aan die belangrike vakke." ["Yes, since general skills are not a priority, it is better to pay more attention to the important subjects."]
"Yes. We have enough tests already."
"Yes, MEA112 isn't a module that is easily examinable, but I believe it would take up further valuable learning time that could be spent on more medically orientated subjects/modules."

Some students, albeit the minority, recognised the positive features of the portfolio system and judged it positively on the basis of the benefits pointed out by specialists in innovative forms of assessment. In response to question three on the fairness of the portfolio system, the following remarks were typical of the responses that were received:

"Ja - hoekom kan dit nie wees nie - veral omdat net sekere items en nie al die items ingesluit hoef te word nie - so kry 'n mens 'n tweede kans (soort van) waar

'n eksamen glad nie floppies toelaat nie." [Yes - why can't it be - especially because only certain items, and not all the items, need to be included - in this manner one is given a second chance (sort of), whereas no mishaps are tolerated in an examination."]
"Ja, dat mens kan sien uit die werk wat jy alreeds gedoen het, dat jy iets geleer het." ["Yes, because on can see the work one has done already; that one has learnt something."]
"Yes, because it's an integration of different modules."
"Yes. It reduces pressure placed on us. It also teaches us good filing and organisational skills. We are taught to be responsible for our own lives and work."

I had expected that, conditioned by years of having been assessed by means of standardised tests and examinations, students would be negative. The exceptionally high level of agreement on the use of portfolio-based assessment (Afrikaans-speaking group - 95 percent; English-speaking group - 96 percent) thus came as a surprise to me. To establish whether students were simply reacting to the novelty of the situation or whether they really saw the benefit of the portfolio system, I decided to triangulate[30] the questionnaire results by means of individual interviews.

9.3.6.2 Triangulation of students' perceptions of portfolio-based assessment

The reason why I chose to use personal interviews in the third round and not another focus group interview as I had done in the previous rounds, merits some explanation:

Through the course of the research it became clear to me that I instinctively practised what has been described by Vulliamy, Lewin and Stephens (1990), namely the variation of the parameters for data collection over the duration of a comprehensive piece of research. In alignment with what they experienced, I found it necessary in the early stages (Cycle one) of the research to take a broad view on how students experienced the teaching of general skills, mainly to avoid excluding opinions that could lead to improvement of the module. In the middle stages (Cycle two) of the research I could consciously focus the interview on

[30] Triangulation is understood here to mean obtaining data at different times and in different ways to build up a richer and more convincing set of evidence.

issues that had emerged as central in the previous round. In the final stage (Cycle three), however, I realised the need for a sharp focus on perceptions that would directly influence the final outcome of the study. As a result, I decided on individual interviews to produce data of particular significance to the use of a portfolio-mode of assessment, the assumption being that students would reflect on their experiences and share their honest opinions without being subject to group thinking.

Against this background, I conducted individual interviews with a purposive sample of first-year students after the June holidays. I also used the interviews as an opportunity to give effect to the suggestion of the Department of Education (RSA DoE, 2001) that the validity of assessment can be increased by being transparent and by making the assessment accessible to all stakeholders, including the students. I accommodated the views of Linn, Baker and Dunbar (1991) by focusing on issues impacting on the validity of performance-based assessment: consequences of the assessment, its fairness, transferability and level of complexity, the quality of the portfolio content and the cost-effectiveness of the exercise.

In conducting these interviews, I used a standardised open-ended approach (Patton, 1980). This means that I asked each interviewee the same questions in the same way and order, accompanied by a minimum of probing. The interview protocol was trialled amongst three first-year students in the learning programme leading to a B.Med.Sc. qualification. This cohort of students was considered suitable for the trial run because they followed a similar module on skills development and were also subjected to a portfolio-mode of assessment.

The trial revealed a number of shortcomings. In revising the interview protocol, I re-worded some of the questions to eliminate ambiguous words such as "meaningful experience," duplicating questions and double-barrelled questions (e.g. "Would you say that the items in the portfolio were worthwhile and do they give a complete picture of your skills development?," was changed to "Would you say that the items singled out for inclusion in the portfolio say something about your development as a student?"). During the pilot interviews I also realised that

although I asked the students not to provide answers they thought would be agreeable to me, they were influenced by the fact that I had taught them general skills. So, in order to avoid bias, I trained a colleague, Ms Daleen Struwig,[31] as a fieldworker. She was the only fieldworker, which ensured consistency of results.

The sample consisted of 25 students who were selected randomly, taking into account the variables of race, gender, language, age and previous qualifications. The rationale for distinguishing between graduate and undergraduate students stemmed from the belief that students who have a degree already would have more experience in self-managed learning and would therefore be able to identify shortcomings in the portfolio system that would go unnoticed by novices.

Seeing that the sample was relatively small, I manually analysed the content. The frequency distribution of students' "agree/disagree" responses to the different questions was calculated, while qualitative comment was used to illuminate and support the quantitative results.

Table 9.5 shows that the students generally agreed that the criteria for validity had been met by the portfolio system.

Table 9.5 *Frequency distribution of positive responses to questions in the protocol used for interviewing students on portfolio-based assessment*

Question	Response
Did the compilation of a portfolio at all influence the way in which you approach your work?	68% agreed
Were the expectations set to students fair? Motivate.	92% agreed
Was the compilation of a portfolio meaningful to you in the sense that you had to apply skills that you could use in other instances of your academic work, or in your personal life?	80% agreed
Would you say that portfolio items contributed towards stimulating high-order skills such as problem-solving and critical thinking in you?	68% agreed
Did the items that were included in the portfolio give a complete picture of your development as a learner?	60% agreed
6(a) Did you use the directed-learning time to work on your portfolio items? 6(b) Was the time that you spent on this realistic? 6(c) Was the money spent on the portfolio realistic?	32% agreed 80% agreed 92% agreed

[31] Ms Daleen Struwig is employed as a senior medical scientist in the Department of Medical Microbiology. She is also leader of Module MJR224 (Infections) in Phase II of the new curriculum.

Apart from the fact that the graduate students' "agree/disagree" responses were mostly very positive, there were no other discernible differences between their open comments and those made by the rest of the respondents. Issues raised included the following:

A positive outcome expressed by four interviewees was that the portfolio process had forced them to be more organised and to plan ahead. The concept of fairness was purposefully not defined, but left open for students' own interpretation. Consistent with an earlier observation that students do not trust their peers with their marks (cf. par. 9.3.4.2), four students mentioned that the expectations regarding the performance tasks that were set were fair, but that they had had a negative experience with collusive peer assessment. Two students expressed provisional agreement. The first one suggested that fairness could be enhanced by providing feedback on low marks; the second reported that she had experienced the integration between Modules MEA112 and MEC113 as "interfering."

Students provided widely divergent answers to question three, relating to the transferability of skills applied during the preparation of products and the performance of tasks targeted for inclusion in the portfolio. The strongest agreement seemed to focus on the value of information technology skills, which were mentioned six times. A similar diversity was noticeable in the answers to question four, relating to the degree of high-order thinking stimulated by the portfolio process. The fact that three out of the eight graduate students did not regard the portfolio process as cognitively challenging, is understandable and a comment such as the following from one of them puts the matter into perspective: "Uncertain. Yes/No. I had skills like problem-solving before, but I'm sure other students have learned a lot."

Six respondents (24 percent) disagreed with the proposition in question five that the portfolio gave a complete picture of their development as learners for reasons that are compatible with earlier observations that students have not yet accepted the idea of a group mark. Two students were quite open about their lack of enthusiasm for group assessment:

"Baie goed is maar by mekaar afgeskryf; groeppunte weerspieël nie my persoonlike ontwikkeling nie." [Much of the work was copied from other students; group marks do not reflect my personal development."]
"I got a very high mark, but I didn't develop as expected. The mark doesn't reflect that I have improved - there are still areas in which I need some improvement, like computer skills, making a brochure - other members of [the] group did it and I still don't know how to make a brochure."

With regard to the cost-effectiveness of the portfolio exercise, the majority of opinions were favourable, with a few students suggesting that they are inclined to "go overboard" with assignments, of their own accord. The majority of respondents (68 percent) admitted, however, that they do not use the time reserved for self-study (directed-learning time) in MEA112 for the purpose of preparing items for the portfolio.

Overall, I found it heartening to learn that first-year students' attitude towards the portfolio-based assessment in MEA112 was relatively positive. The favourable feedback convinced me that the introduction of portfolio-based assessment in MEA112 was the right thing to do. The less positive comments served to reinforce the idea that ongoing refinement of both the process and the product of portfolio-based assessment was necessary.

9.3.6.3 Students' comments prior to the MED113 poster presentations

As outlined in par. 9.3.4.2, the MED113 project-based poster presentations were repeated in April 2002. Observation as to whether attempts to refine the assessment process had rendered any tangible evidence of improved satisfaction among students was done by eliciting written commentary from them on two occasions: first students were asked to express their individual feelings in the form of a written "short comment" prior to the actual presentations (**Appendix 9N**); a second round of commentary was gathered immediately after the poster presentations by means of a semi-structured questionnaire, consisting of nine open-ended questions (**Appendix 9O**).

A total of 124 short-comment forms were received, representing a response rate of 89 percent. The purpose of gathering short comments from students was to

stimulate them to reflect on the new learning experience of acting as co-assessors. In following the notion of Woodward (1998) that reflection on action seldom becomes explicit unless specific processes are put into place to encourage this to happen, I purposefully formulated the questions on the short-comment form in a way that would appeal to the students' private feelings ("How do you feel about ...?" "Do you think ...?").

In describing their feelings about having a say in the criteria and weights that would apply in the assessment of the posters, all of the following words, indicating positive feelings, were recorded: "happy", "motivated", "appreciated", "honoured", "respected", "pleased", "important", "empowered", "blessed", "involved", "responsible", "privileged", "proud", "glad", and "part of the system". Only three students expressed doubtful feelings, relating to the inexperience of students in formulating appropriate criteria and weights.

In expressing their feelings about the prospect of having to co-assess their peers' work, by far the majority of students were satisfied with the idea. However, 40 students (32 percent) indicated a preference for assessment by the lecturers themselves, for fear of retribution, collusion or subjectivity. Students' trust in the judgement of lecturers was also evident from the majority view that the marks given by students should carry a weight of no more than one third. In relation to question four on the anticipated benefit of acting as co-assessor, a substantial number of students were able to make the connection between their involvement in assessment and their own development, typical comments being:

"Ja, leer myself om krities te dink en in die toekoms my eie werk beter te evalueer." ["Yes, [it] teaches me to think critically and to be able to evaluate my own work more precisely in the future."]
"Ja, verbeter 'n mens se kennis. Moet kennis hê om te kan assesseer." ["Yes, [it] improves one's knowledge. One must have knowledge to be able to assess."]
"I will be able to improve on future projects, as I can learn from other groups."
"It instills the instincts of judgement in me - which I will definitely need in future."

9.3.6.4 Students' comments after the MED113 poster presentations

My purpose in using the questionnaire survey immediately after the poster presentations was to verify whether the positive sentiment expressed by students prior to the poster presentations was reinforced by the actual presentation. Table 9.6 is a summary of data most relevant for the purposes of improvement, captured from the 62 questionnaires that were returned, representing a response rate of 44 percent. As a result of this low response rate (caused by a misunderstanding about whether the survey was aimed at capturing the views of individuals or groups), the data do not meet the rigorous standards of reliability and validity for the evaluation to be considered as research (Hutchinson, 1999). The opinions expressed are nevertheless informative and useful for planning further improvement.

Table 9.6 *Questions, level of response and typical responses captured from students in the questionnaire survey after the 2002 poster presentations*

Question	Level of response	Typical responses
How do you feel now about having fulfilled an active part in establishing criteria for the assessment of expo presentations?	94% of Afrikaans-speaking group and 74% of English-speaking group were positive	Positive comment: - *Dit was duidelik dat ons voorstelle vir kriteria gebruik is.[It was clear that our suggestions for criteria were used.]* - *Het baie onduidelikheid/verwarring uitgeskakel. [Much confusion was eliminated.]* - *Aangesien ons besluit het wat belangrik is, was ons meer gemotiveerd om moeite te doen. [Seeing that we had decided what was important, we were more motivated to do good work.]* - *We knew exactly what was expected.*
Would you say that the aims of authentic assessment* have been achieved through this exercise? Motivate your answer.	74% of Afrikaans-speaking group and 68% of English-speaking group were positive	Positive comment: - *Ja, want die temas is werklike dinge van ons alledaagse lewe. [Yes, because the themes comprised real-life things.]* - *Enabled us to put to use our communication/report writing/computer/analytical skills.*
Did you experience the assessment process as fair, or unfair? Motivate your answer.	55% of Afrikaans-speaking group and 36% of English-speaking group were positive	Negative comment: - *Ek dink dit was bietjie onregverdig dat Engelse mense ons Afrikaanse goed moes assesseer, want hulle kon niks verstaan nie, maar het wel 'n punt gegee. [I think it was a bit unfair that English-speaking people had to assess the work of Afrikaans-speaking students, because they gave a mark, despite the fact that they could not understand anything.]* - *Beoordelaars het slegs algemene indrukspunte*

		gegee - baie min wou werklik weet wat daar aangaan. 'n Algehele gevoel van gejaagdheid is ervaar en dat die mense nie regtig belangstel nie. [Assessors gave marks based on general impressions - only a few really wanted to know what the topic was all about. A general feeling that assessors were in a hurry and that they were not really interested, was experienced.] *- Perhaps the judges should consider having conversations with target audience in order to determine the effectiveness of the display.* *- Feel that perhaps the judges tend to look only at the "window-dressing" of the projects, based on the fact that only two asked questions and assessed our level of understanding.*

*Assessment embedded in learning experiences that enable learners to demonstrate learning by integrating and applying knowledge and skills to real-world tasks.

Overall, the students' comments were very supportive of the modifications that were made to improve the quality of their participation in the assessment process. In the final analysis, the main criticism related to the staff assessors' perceived "lack of interest." A comment such as the following also created the impression that some students perceived language to be a barrier to objective judgement (cf. par. 9.3.4.2):

"The fact that no English group or NGO [non-governmental organisation] came into the top three could be seen as unfair."

9.3.6.5 Lecturers' reflections on the MED113 poster presentations

A questionnaire consisting of five reflective questions was administered to the panel of staff assessors immediately after the poster presentations. A pattern of agreement on the issues outlined in Table 9.7 was found in the answers of the six respondents who returned their completed questionnaires, respresenting a response rate of 67 percent.

Certain salient issues raised by the staff merit comment. In the first place, the involvement of students in an authentic assessment exercise met with overwhelming approval, as is borne out by the following statement:

"Studente vertoon amper matelose kreatiwiteit - dit maak die beoordeling op 'n BAIE positiewe manier BAIE MOEILIK - ek is beïndruk." ["Students demonstrate excessive creativity - this makes judgement VERY DIFFICULT in a positive sense - I am impressed."]

Table 9.7 *Reflective comments on the MED113 poster presentations made by the panel of staff assessors*

Aspect commented on	Response
Aspect of the assessment process which made the staff feel extremely positive	The effort, insight, creativity and enthusiasm of the students
Aspects of the assessment procedure they would like to change	More time should be allowed for assessment
Complaints/objections raised by students that they know of	Cursory style of assessment used by staff Disappointment of not having won
Suggestions on improvement of assessment instrument	Use a simple, more holistic tool Use fewer criteria Exchange detailed rubrics for simple descriptive categories such as excellent, good, poor
Suggestions for overall improvement of the poster presentation event	Improve logistics: more time, more space, another venue, a different arrangement of stalls

For staff who were used to years of conventional modes of assessment, the excellence demonstrated by students in a real-world situation undoubtedly made a deep impression. The favourable comments from staff should not simply be brushed aside as subjective, as they were perfectly in line with a comment made by a member of the visiting accrediting panel of the South African Professions Council, Professor Klopper, who said:

"After only three months in the new curriculum, first-year students seem to be able to do things that one would normally expect from post-graduate students."

Secondly, it became clear that the frustration experienced by the students as a result of the cursory style of some of the assessors, was a mutual experience brought on by time constraints. The comments of two respondents to the question on what changes they would suggest, illustrate the point:

"The time allocated to assess each group was about 4 minutes which was too little to concentrate on some aspects I think the students worked very hard on."

"Niks - dalk meer tyd om bietjie meer met die studente te gesels - mens sou selfs die persoonlike kommunikasie ook kon assesseer." ["Nothing - perhaps more time in order to engage in conversation with the students - one would even want to assess personal communication [skills] as well."]

A positive sequel of this time-related shortcoming is that it sensitised me to the fact that assessment of students' verbal communication skills and ability to handle questions, should not be neglected.

In the third place, the suggestion made by one of the respondents to change detailed rubrics to simple, one-word descriptive categories deserves consideration, given the relatively short time-span set aside for the assessment of poster presentations. Seen from this point of view, it makes sense to practise the KISS principle that we teach: Keep It Short and Simple. However, if staff are serious about using the assessment exercise as a learning opportunity and wish to provide effective feedback, this suggestion cannot be put into effect. Alternatively, allowing more time for assessing products that, as one of the respondents mentioned, demanded significant input from students in terms of time and effort, should be considered, even if it means that the prize-giving ceremony has to be postponed to await the convenience of the Dean or Head of the School, both of whom work on a tight schedule.

In the final instance, the fact that staff members' suggestions for overall improvement focused on logistics (nobody referred to fundamental issues such as the aims and methods of the assessment or the possibility that marks might be "skewed" for some reason), indicates that staff are not sensitised to the issues involved in authentic assessment to the point of being critical. This state of affairs works against innovation and should be addressed in staff development programmes.

9.3.6.6 Opinion of significant others

The position taken by the Department of Education in the *New Academic Policy* document (RSA DoE, 2001) is that the design and marking of assessment in higher education should remain the responsibility of those who teach. On the reverse side of the coin, there are two matters that need further exploration within the context of this study. One of these relates to the view endorsed by the Department of Education that local assessment of student performance should be

comparable, dependable, transparent and accessible to all stakeholders. In response to this call for accountability, the opinion of a moderator on the outcomes of the portfolio-based assessment was deemed necessary.

The second issue relates to the fact that although assessment is seen as the most powerful tool for effecting change in higher education, favourable assessment results do not prescribe the course of action that institutions take. As noted by Brown and Knight (1994:145), *[assessment] provides imperfect data which are to be **interpreted**. Policy decisions are then negotiated around the interpretations* [emphasis added]. Against this background, it was thought appropriate to gather more information on the priorities that the leaders of the UFS School of Medicine have identified as far as the assessment of general skills is concerned. Observation in respect of (a) whether the outcomes of the portfolio-based assessment would be acceptable to the external higher education community, and (b) whether the interventions relating to assessment of general skills are in alignment with the agenda of the management team, will be reported in the two paragraphs below.

9.3.6.6.1 A moderator's view on MEA112 portfolio-based assessment

On 12 June 2002, the day before the moderation of the MEA112 portfolios by Professor Driekie Hay was scheduled to take place, my diary entry read as follows:

12 June 2002

We are busy preparing for the moderation session with Professor Hay. Mpho has prepared a structure showing the following items: certificate recognising completion of IT component, certificate recognising students' achievement in written and oral communication skills, compilation of group marks, assessment criteria for oral presentation, assessment results of MED113 poster project, assessment sheet we used for final marking, conversion tables.

I am worried about the fact that there might be a discrepancy between the marks of the English- and Afrikaans-speaking groups. There are a few B's (Achieved Beyond) in the English class (assessed by Mpho), but none in the Afrikaans class (assessed by me). On the other hand, Mpho has more P's (Partly Achieved) and I have more A's (Achieved). Can it be that I was strict at the top and lenient at the bottom and Mpho the other way round?

I had a talk with Rika and Mpho, explaining to them that I thought that we were moving in the direction of increased "objectivity" when we started using well-defined criteria and rubrics, but now it seems not to be the case. We came to the following conclusion: students do not rote learn and regurgitate in our module - they produce "something" and that something is assessed by another human being, which means subjectivity. In future we should just make sure that we work from the same frame of reference by sharing with each other what we expect within the parameters set by the criteria and rubrics we use; perhaps even use sample marking to ensure the validity and reliability of our assessment.

Note added later:
[Speck (1998:17): "... to criticize subjectivity in toto is to undercut professional judgement itself ..."; p.25: "... subjectivity could be extended to any assessment of student performance."
RSA DoE (2001): "... assessment should be understood as an interpretative, human exercise based on professional dialogue and judgement rather than on objective measurement."
Solution? Bullock, in Speck (1998:25): "... student assessment 'cannot rest on a single reading by an isolated teacher ..."]

Appendix 9Q is composed of Professor Hay's narrative in the form of expectations she held prior to the moderation, as well as her subsequent views on what she had found.

The general disposition of the report was extremely positive. The fact that Professor Hay participated in my research as a co-study leader might detract from the value of the moderator's view. However, I had enough faith in her integrity as an accomplished educationist and researcher in the higher education community to use her as in the capacity of moderator. The fact that she identified and commented on two vital shortcomings in the portfolio system, namely the lack of evidence of formative assessment and the absence of visible opportunities for students to document their development by replacing poor products with better ones, provides proof of sound judgement.

9.3.6.6.2 A top-management view on the assessment of general skills

In October 2002, I interviewed the following people who form the top-leadership structure in the UFS Faculty of Health Sciences: the Dean, Vice-dean, Head of the School of Medicine and the Manager of the Programme for Professional Medicine

(Curriculum 2000). My aim with regard to these interviews was (a) to uncover the perspectives of those who held positions of influence and responsibility and (b) to see what the views of these role-players had in common and if there was a discernible strategic plan for the development and assessment of general skills in the UFS School of Medicine.

In choosing a strategy, I decided to use a non-standardised approach, described by Patton (1980) as a general interview-guide approach. This means that I approached the interviews with a list of important areas that I wished to discuss, supported by a few pre-conceived open-ended questions. I anticipated, however, that in each interview, depending on the interviewee's frame of reference, additional questions and probes, differing in number and nature, would form part of the dialogue.

In preparing for these interviews, I made a rough list of important areas that I wanted to discuss. Thereafter I consulted the literature to find out what issues have been identified, indicating that management can make a difference. Ultimately I ended up with the list of issues outlined in **Appendix 9R**.

On Friday, 4 October 2002, I piloted this questionnaire with a lecturer teaching in one of the core modules in Semester II. Table 9.8 is a summary of the comments gathered and my interpretation thereof.

In order to give greater legitimacy to the composition of the target group of the real investigation, I started the interviews with the most senior respondent, namely the Dean, and concluded the interview with him, and with each of the consecutive respondents, by asking her/him who else she/he thought I should interview. However, the following respondents, elected by the interviewees mentioned above, were excluded for the reasons indicated in brackets, and also because the point of diminishing returns was reached very soon: the Phase I chairperson (I collaborate with her in her capacity as leader of Module MEC113); the Semester I chairperson (I collaborate with her in her capacity as leader of Module MED113) and the Semester II chairperson (I collaborate with him in his capacity as co-study leader of my research project).

Table 9.8 *Interpretation of comments on a trial version of the interview protocol used for interviewing members of the top-leadership team in the UFS Faculty of Health Sciences*

Comment	Interpretation
Question 1[32]: Formulation is very wide. Every respondent is going to say "yes" to the idea of innovative assessment. "Innovative" should be qualified to ensure that the answer I get is applicable to general skills.	The fact that this person wants me to qualify the concept of innovative assessment indicates to me that he, too, does not think of the assessment of general skills as part of assessment.
Question 2: Instead of referring to "departments" I should ask what they plan for energising "modules". I should be very sensitive when referring to departments.	I realised once again, that because modules span departmental boundaries, I should work with individuals if I want to link skills development to learning content.
Question 3: Instead of referring to the "contribution" that MEA112 had made, I should rather refer to the "reinforcement" of changed assessment in other core modules.	Subject experts are sensitive when it comes to their autonomy. In trying to synergise efforts with a view to authentic assessment opportunities, I should beware of treading on toes.
Question 4: Interviewee did not seem to understand what I meant by saying that innovative assessment needs a budget.	A further confirmation that academic staff teaching in core modules do not always realise what innovative assessment entails, owing to sheer lack of technical expertise.
Question 5: Suggestion that staff development should take on the form of support for module development was received favourably.	Staff are no longer impressed with expert-centred, lecture-format staff development sessions. Nor do I think they realise what the alternative is - action research. Interviewee agreed that critically looking at current practice is something that has always been done by "good" lecturers - however, "time constraints do not permit this to be done in a rigorous, systematic manner."

In order to keep the dialogue flowing between the past (rationale for general skills development), the present (what has already been achieved thus far) and the future (strategic moves that the respondent might have in mind), I followed a specific pattern in formulating the questions. The opening statement, claiming that innovative assessment is a whole-school matter, was followed by a suggestion that innovative assessment in core modules thus far had taken place as a result of discrete arrangements between individuals. Next I probed the issue relating to the fact that innovation implies costs that are sometimes hidden in the form of staff who sacrifice leisure time to take on new challenges. Ultimately, I implied that curriculum innovation goes hand-in-hand with innovative forms of staff development.

[32] See Appendix 9R for full details of the questions comprising the interview protocol.

The interview data were manually analysed, the following being the most salient issues that emerged:

There is general agreement on the desirability of implementing innovative assessment within a school-wide framework. However, considerations of time, cost and situational constraints determine the pace of progress. Implementation of innovative assessment is seen as a leadership issue, which should not, however, be forced upon people in a top-down manner. It is envisaged that feasible, sustainable innovation and the energising of people to support the innovation, might include the following steps:

- Consider various models of alternative assessment, taking into account development work that has been done already.
- Do not stifle the creativity of enthusiastic individuals, but steer them to work incrementally according to a common development framework.
- Select modules in which a specific mode of innovative assessment would be appropriate and allow people involved in those modules to take ownership of the process by inviting their input.
- Market "success stories" to a small enthusiastic core group and provide proof that innovative assessment can yield trustworthy results.
- Provide the core group with need-driven staff development, a frame of reference customised for the context of the UFS School of Medicine, mentorship if necessary and funding for initiatives aimed at the development of innovative assessment strategies.
- Motivate staff members to do assessment properly by re-deploying time and human resources.
- Once initiatives undertaken by the core group (critical mass) yield legitimate outcomes, embark on a general implementation plan, involving decisions on (a) where to make use of innovative forms of assessment (in Phase I? Phase I and II?, etc.) and (b) whom to focus on (on students who demonstrate skill deficiencies or on all students across the board?).

Information gathered in this round, and triangulated with the interviewees (**Appendix 9S**), confirmed my expectation that the action research conducted on the development and assessment of general skills over the past three years might contribute significantly to the implementation of the "common development framework" envisaged by the respondents.

9.3.7 Reflection

Looking back on the interventions that took place during Cycle Three of the action research spiral, as well as on the research process itself, I wish to make the following retrospective comments:

9.3.7.1 Listening to the students' voice

Student feedback obtained in the questionnaire survey on the effectiveness of MEA112 suggested that the module should be presented within the first week of the academic year, and that there should be more practical application of skills and integration into core modules, more clarity on areas of integration, less assessment and more advanced computer skills. Consistent with current thinking on total quality management, the satisfaction of students is one of the most important criteria by which the quality of an institution's learning programmes is judged. Against this background, it would be unwise not to pay attention to these suggestions. Plans for addressing some of these issues are already under way for the new year. However, after three years of experience, I tend to agree with Atlay and Harris (2000:81) who say that *[n]o change would be accomplished if all eventualities needed to be catered for at the outset; a commitment to learning through doing and a culture which strives to improve the learning environment for the benefit of students and staff is essential for the successful implementation of change.*

Since I have a reflective professional disposition, I intend to continue making modifications based on students' performance and attitude, but in an incremental way, taking small steps at a time.

9.3.7.2 The road ahead

I honestly believe that the intervention in the form of introducing portfolio-based assessment in Module MEA112 is justified, because it offers an enabling form of assessment. However, now that a basic template exists, the challenge will be to continue the process and to refine both the portfolio process and products.

Based on the knowledge that I have now, I plan to address the shortcomings of the current model by using the portfolio not only as an assessment tool, but also as a learning tool. This will be achieved by

- giving students clear instructions on what is expected from them by means of explicit communication of standards and performance criteria;
- reducing the number of portfolio items, thus allowing time for giving formative feedback;
- requesting students to include items reflecting growth;
- requiring the inclusion of reflective writing;
- expecting students, for the purpose of end-assessment, to answer questions and discuss their portfolios before a panel of academic staff.

Needless to say, mastering the time-consuming tasks of giving formative feedback and end-assessment might prove challenging. However, following the advice of Rowntree (1987), I will refuse to let perfection be the enemy of improvement.

Another insight that came during the course of 2002 was that most of our original outcome statements were vague and vacuous. I say this because the MEA112 module development team knew, for example, that we would like the students to be able to communicate effectively. Thus, one of the outcome statements on this theme read: *By the end of this session you should be able to apply the principles of effective communication to both written scientific reports and the oral presentation thereof.* However, it was not until we tried to assess students for effective oral and written communication that we realised the implications of that intended outcome; and that we came to see that we needed clearly defined

standards, indicators and rubrics if the aims and objectives of the module were to be fully met.

Against this background, one of my major goals for 2003 is to develop guidelines for linking the development of intended critical outcomes with standards of performance, enabling lecturers to observe students' performance with the precision that is needed to make the assessment valid enough for summative purposes.

9.3.7.3 The research process

One of the most painful things I had to learn during the course of the past three years, and especially in Cycle Three, was the skill of discrimination in terms of deciding when to stop gathering data and what to leave out. I definitely suffered from what Vulliamy, Lewin and Stephens (1990:139) describe as ... *over-ambitious plans and unbridled curiosity.* Add to this my desire to conduct a comprehensive piece of research that would justify a postgraduate qualification, and it becomes clear why I conducted various loosely structured and, for the purpose of the study, irrelevant investigations. Examples include: a questionnaire survey in November 2000 on students' experience of the different types of assessment that were used during that year to measure their performance; a focus group interview with second-year students in September 2001 to find out if they thought that Phase II was preparing them for lifelong learning. I abandoned these investigations when it became apparent that the interpretation of these sets of data would take me away from my research questions. However, the worst misdirected effort was still to come. During September 2002, I implemented a questionnaire amongst all staff members teaching in Phase I. At this point the urge to expand the scope of the research beyond the original boundaries was strong. I wanted to include lecturers teaching in Phase I in my study, arguing that doing so might render valuable insights as far as existing assessment practices were concerned. Professor Joubert, member of the MEA112 module development team and also Head of the Department of Biostatistics, came to my rescue by suggesting that I postpone an extended investigation until a later stage, with a view to completion of the products of the current study.

In the years to come, I will continue collecting data to monitor the effect of my teaching, and undoubtedly there will be some aspects demanding systematic inquiry. However, I can honestly say that I am resolute in my decision to gather only relevant and usable data.

9.3.7.4 My own professional development

Keeping track of how I went about improving my practice during the third year of the new curriculum, contributed to my professional competence. In the first place, I have learnt a great deal about assessment. Secondly, the portfolio system enhanced my awareness of the students as individuals, which directly influences my core business, namely academic development and support of struggling students. Finally, I would like to believe that I have enhanced the research-based approach to self-development that I have been following since 2000 - an approach which is promoted in the literature as the most powerful means of staff development.

In the next and final chapter I will share with the reader some of the insights I have gained in the form of recommendations.

CHAPTER TEN

END-REFLECTION ON THE SIGNIFICANCE OF MY WORK, SUMMATIVE CONCLUSIONS AND PRACTICAL CONSIDERATIONS

Strategic action, then, is what distinguishes action research from the reflective practitioner model of teaching and learning ... Reflective practice can be used to identify problems, action research can seek to provide solutions.

(McMahon, 1999:168)

... best practice appears to be a commitment to thoughtful struggle rather than attainment of perfection.

(Mabry, 1999:72)

10.1 INTRODUCTION

The first part of this chapter, under the heading *End reflection*, serves to conclude the reflective dimension of the action research reported in this thesis. True to a qualitative, action research reporting mode, a retrospective overview of the significance of the work is provided by answering a series of self-reflective questions, in order to justify what was done, how the researcher went about doing it; and what has been achieved.

The second part of the chapter, cast in a style that is reminiscent of the conventional research reporting mode, is a response to the question, *Of what significance is this research to others?* It focuses on the implications, at modular and programme levels, of adapting a skills-recognising curriculum. Recommendations are made relating to action steps that need to be considered if the process of integrating and assessing critical outcomes in the UFS School of Medicine is to move forward. These recommendations are framed against the background of the call from the Health Professions Council of South Africa (HPCSA, 1999) to teach and assess general skills, and will hopefully also find application in other medical schools in South Africa that have recently started to give effect to this call.

10.2 END-REFLECTION

Carrying out an action research project brought two powerful insights. Firstly, I came to realise, through the theoretical component of my study, that there is no tailor-made model for the development, assessment and recording of general skills in higher education learning programmes. Secondly, three years of experiential learning convinced me that if a school or institution wishes to demonstrate that it values the development of general skills, definite structures and processes need to be in place to ensure that intentions are carried out in a manner that warrants official recognition. As long as these measures are absent, general skills development will remain a low-status, fringe activity.

The model of skills development that is currently used by the UFS School of Medicine has the potential of being taken up by other institutions. Moreover, it is envisaged that the next few years will bring further refinement. However, ongoing blending of theory and practice is necessary in order to achieve optimal development and assessment of general skills. An optimal situation would imply that the achievement of critical outcomes is pursued explicitly, not only in the first year of the Programme for Professional Medicine (currently conducted at the UFS School of Medicine), but throughout the five undergraduate years of study leading to an M.B.Ch.B. qualification.

The recommendations below will hopefully help to further this vision of expanding the development of general skills throughout the undergraduate learning programme, in keeping with the spiral curriculum[33] concept. The idea of revisiting, not only subject knowledge and clinical skills, but also general skills throughout the undergraduate years, is endorsed by the World Health Organisation (Dent & Harden, 2000). In the WHA48.8 resolution (*ibid.*) it is stated that a doctor should fulfil the roles of care-provider, decision-maker, communicator, community leader and manager - all of which presuppose competence in general skills such as communication, information retrieval,

[33] A spiral curriculum, one of the basic tenets of Curriculum 2000, refers to an iterative revisiting of topics throughout a learning programme at levels of increasing difficulty or sophistication .

problem-solving, self-awareness and lifelong learning. Although these role-allocations have always been addressed to a greater or lesser extent in the clinical years, the act of doing so should henceforth become more explicit[34].

In the meantime, taking stock of the outcome of my action research might help to further the process of establishing a style of teaching and assessment that encourages the development of appropriate general skills.

10.2.1 Was my chosen research approach, the right one?

In 1999, when I received the brief of designing and implementing a module on general skills to form part of the newly introduced Curriculum 2000, I considered action research a suitable strategy. The reason for this was that I realised that the integration and assessment of critical outcomes in a medical learning programme was not going to be a simple matter. Action research held the possibility of experimenting with ideas and making modifications throughout the process, as problems were encountered.

Action research also seemed to be appropriate because reflection on practice forms the backbone of this approach. Reflection, in turn, is promoted in the literature as the way to go if one has to deal with "messy problems" (Kember et al., 2001:xiii). As a result, I became a reflective practitioner, which means that I regularly collected evidence, reflected on it and incorporated progressive developments in an effort to encourage the integration of general skills with subject content, and to support subject experts in their efforts at authentic assessment.

[34] It is acknowledged that the process of explicit skills development is already under way at the UFS School of Medicine in the form of the special study modules (GSM202 - 2nd year and GSM302 - 3rd year) in Phase II of Curriculum 2000 which address the use of information technology, teamwork and communication skills.

10.2.2 How do I know that the evaluation of my practice was indeed action research?

Action research is described by Krathwohl (1998) as one of several orientations to evaluation. Evaluation of an educational intervention, in turn, can be considered as **research** when ... *rigorous standards of reliability and validity ... [are] applied regardless of whether qualitative or quantitative methodologies are used.* Benchmarked against the critical-interpretive and holistic features of action research, as outlined in Chapter Five, the evaluation I undertook met the standards of valid and reliable action research methodology. Table 10.1 provides a retrospective overview of how I responded to the challenge of doing more than just reflecting spontaneously on my day-to-day action with a view to improvement.

Table 10.1 *Retrospective overview of how the criteria for action research were met*

Did I	Validating evidence
Demonstrate a critical attitude?	- A thorough literature and documentary review helped me to understand the relationship between Curriculum 2000 and the socio-economic and political forces demanding a change to student-centred, outcomes-based higher education (cf. Chapters One, Two and Seven). - Diary entries exposed the relationship between relevant theories in the literature and my subjective thoughts on what should be done to give effect to curriculum goals and to the purpose of current-day higher education, as explicated in the above-mentioned documents and literature (cf. Chapter Seven, Chapter Eight and Chapter Nine). - The interviews I conducted with academic staff members (cf. par. 8.3.2.2) and the top-leadership team (cf. par, 9.3.6.6.2) helped me to appreciate the correspondence between the purpose of education and the policy decision to include general skills in the medical curriculum, on the one hand; and, on the other, I came to understand the disparity between stated curriculum goals and the reality of financial constraints, conservative attitudes, lack of time, resources and technical expertise.
Demonstrate a holistic, interpretive understanding of the reality of general skills development?	- By generating student feedback on their experience of Module MEA112 after each round of implementation, and by reporting the most frequently mentioned complaints, I uncovered first-year medical students' understanding of general skills development (cf. par. 7.3.3.1, 9.2 and 9.3.6.1). - Throughout the research process I showed how my understanding of student views influenced my own actions, within the specific context of the UFS School of Medicine (cf. Chapters Seven, Eight and Nine). - A holistic view was achieved by taking **all** evidence into account in

	evaluating the effectiveness and validity of actions taken. The evidence included measurable data (marks given by lecturers and students, frequency distribution of responses), students' subjective opinions and self-reports on their experience of general skills development (open responses obtained in questionnaire surveys, presentations at lecturer training courses), interview data (focus-group interviews and in-depth interviews with staff and the leadership team), opinions of expert judges (moderator's report and critical feedback from study-leaders) (cf. Chapters Seven, Eight and Nine). - Holism was furthermore pursued by showing how the **process** of skills development took account of the fact that the broad context of South Africa's political past has caused some students to need more attention than others. This was done by taking action steps which made provision for this broader context (e.g. implementation of a portfolio-based assessment system which makes allowance for formative feedback and flexibility in the time allowed for developing competence) (cf. par. 9.3.5).
Enhance the quality of my practice?	- I did not consider the counting of the number of students who claimed to have benefited from Module MEA112, according to a standardised scale, as reason enough to maintain the original format and mode of delivery. Supplementary to quantitative findings, I concerned myself with detail, with subtle, unique factors (see evidence of student appreciation) and individual comments that gave nuance to the skills development experience. According to Patton (1987), such detailed observations cannot but lead to quality enhancement (cf. par. 5.5.2). - The actions I took in each successive cycle were decision-driven and not hypothesis-driven. I did not, for example, hypothesise that a portfolio-based assessment system would cause students to be more satisfied with Module MEA112. Instead, I took a conscious decision to implement this mode of assessment because it held the promise of giving formative feedback to students and of increasing student self-awareness. According to Krathwohl (1998), conscious decisions about the value and appropriateness of an action spell quality (cf. par 5.6.1).
Use a scientific method of gathering data?	- Justification for, and appropriateness of the study design that was used, are explicated in Chapters Five and Six. - Details of the action research methodology I followed, with specific reference to the processes and instruments that were used to organise and interpret the data, are provided in Chapters Five and Six. Par. 6.3.4, 6.3.5 and 6.4 demonstrate the scientific rigour with which I approached my investigation. - The questionnaire surveys and interviews were deliberately planned and systematically undertaken (cf. par. 8.3.2.1.3, 9.3.6.2 and 9.3.6.6.2). - Triangulation of data and methods was performed (cf. par. 7.3.3.1 and 9.3.6.2). - Measures were taken to meet the requirements of ethical behaviour and to ensure the validity of survey instruments and procedures (cf. par. 8.3.2.1.2 and 9.3.6.2; cf. also Table 6.3). - No assertions were made without supporting them by either quantitative or qualitative evidence (Chapters Seven, Eight and Nine).

Collaborate with others in a participatory way?	- As explained in par. 5.7.3, to me, collaboration meant giving weight to the understanding of every contributor to the research in order to counterbalance my own subjective assumptions and interpretations. Evidence of having met this requirement includes: close collaboration with individual staff members teaching in core learning modules; the cognisance that was taken of directives from the curriculum management team and other key respondents (cf. par. 9.3.5 and Appendix 9M); deconstruction of the contributions made by fellow-module team members (cf. par. 8.3.2.1.2) and co-researcher, Mpho Jama (cf. par. 9.3.5); and finally, incorporation of expert advice from study leaders in the rewriting of manuscript versions of my thesis (cf. par. 8.3.3).
Contribute to emancipation of some kind?	- The design and implementation of a module on skills development, *per se*, are emancipatory in nature because of the goal of redressing educational disadvantage through skills development (cf. par. 7.3.1). - By showing how the concept of outcomes-based education is linked to arguments and pressure for wider access to higher education, the theoretical part of my work helped to develop a context conducive to change (cf. par.2.4). - The research also served to emancipate members of the MEA112 module development team and myself from the habitual use of traditional forms of assessment (to my disgrace, I must admit that a computer-based test on the **content** of Module MEA112 formed part of the assessment in 2001) (cf. par. 8.3.1). - Judging from feedback from members of the School's management team, it is clear that the action research process has contributed to creating a climate for enhanced development and assessment of general skills (cf. par. 9.3.6.6.2). - In a medical context, the qualitative, action-research mode I followed in evaluating my practice may be seen as a response to the challenge of casting off epistemological bias (cf. par. 10.2.2). - By drawing on students' experiences and comments in evaluating and changing my practice, I demonstrated a democratic attitude.
Develop as a professional?	- As a result of my research, I have developed an understanding of the rationale for educational change. I came to understand that learning skills and the development of competencies useful for work and life in general, are compatible; and how the process of higher education can help to create the end-product (doctors) that will be able to respond appropriately to the demands of health service delivery in the 21st century. - I have developed the competence and skill to deal with the incorporation of general skills into a medical curriculum, a process which is described in the literature as a "long and hard road" (Jenkins, 2000). - Input from my study leaders resulted in the modification of my perspectives at crucial points during the research. - By attending and participating in the many meetings, Faculty retreats and training workshops, and by making observational notes as I went along, my educational actions became praxis (i.e. critically informed, committed action).

	- Through exchanging ideas and sharing the findings of my research and planned actions with colleagues, I learned to adapt to the complexity of the rapid change that is currently taking place in South African education. - The critically-informed nature of my actions gave me the confidence to speak out on matters relating to the improvement of skills development. I was "heard" in the forums where my input could make a difference, which made me a real "owner" of curricular reform in the UFS School of Medicine. I can truly say that all traces of a "what-is-in-it-for-me-doing-all-this-hard-work?" attitude which I might have had, have disappeared.

On the strength of the evidence outlined in Table 10.1, I would like my research to be judged, first of all, on the degree to which it has been successful in leading to improved practice through critical analysis of interventions, based on evidence transcending "common-sense" or low-level knowledge (test and examination results) of student performance.

In the second instance, the emphasis on my epistemological stance, my role and presence in the research setting and details of how my views and assumptions were affected by the data, should be judged against the requirement of reflexivity, which is one of the hallmarks of action research.

Furthermore, I wish to reiterate that the theoretical explicitness which characterises Chapters Two, Three, Four and Five should be seen against the background of my standpoint (cf. Chapter Five, par. 5.7.2) that best evidence in educational research is not free of theoretical views.

10.2.3 Is action research a justified methodology in the context of medical education?

In the world of medicine "common-sense" or "hard-science" approaches to educational research have predominated for many years. Currently, however, qualitative or so-called "soft-science" approaches are increasingly being recognised. This is confirmed by the current emphasis on the concept of evidence-based medicine, premised on the idea that epistemological biases should

no longer be tolerated; that medical practice should be informed by research, based on contrasting philosophies. And, as Campbell and Johnson (1999) aptly argue, medical education is part of medical practice.

Seen from this point of view, my study will hopefully contribute to sensitising practitioners of medical education to research approaches that fall outside the positivist paradigm. That this is an area in need of progressive thinking, is clear from the Campbell and Johnson (1999:1274) article on "fashions"[35] in medical education. In exploring the research approaches that had been followed in studies on multiprofessional learning, published between 1985 and 1998, the authors came to the conclusion that 77 percent of the articles were quantitatively orientated. They commented as follows:

> *This predominance represents a lost opportunity. ... The lack of critical analysis and questioning is remarkable. How can the concept of multiprofessional learning become robust if we don't know what it means, cannot agree [on] its goals, and do not seem able to report the weaknesses and problems encountered and the lessons learnt?*

The same can be said of integrating general skills into a medical curriculum. In thus taking stock of the research process that I followed to evaluate and improve my practice, I assume that the evaluation was sufficiently rigorous to be seen as real action research; as a stepping-stone in the process of building a respected position for action research methodology in the UFS School of Medicine; and ultimately, as a contribution towards pleading the cause of creating an evidence-based medical education system - a system that ... *is sensitive to the many dimensions of medical education ... [a] system [that] ... [goes] beyond ensuring a minimum standard of practice, to facilitate a quest for excellence in medical education* (*ibid.*:1275).

[35] A "fashion" is defined by Campbell and Johnson (1999:1272) as ... *an approach to education that is based primarily on social influences, in contrast to approaches based on established educational principles and theories, critically evaluated experiences, or the results of valid research.*

10.3 SUMMATIVE CONCLUSIONS AND PRACTICAL CONSIDERATIONS

Analysis of Module MEA112 in action, led to conclusions in several major areas on the basis of which the recommendations below may be considered. It is emphasised, however, that suggestions concerning aspects that fall outside the parameters of Module MEA112 should not be interpreted as destructive criticism of what has already been achieved since the inception of Curriculum 2000. Within the critical framework of the action research approach that was followed, these suggestions flow from a desire to improve existing practice and from concerns that continue to be relevant.

10.3.1 Development of a contextually relevant framework for skills development

One of the recognised benefits of outcomes-based education is that it encourages a more systematic approach to curriculum development. This means, *inter alia*, that learning experiences and curriculum content are planned so as to correspond to expected learning outcomes. From a critical-outcome point of view, this means, that if general skills are declared important enough to form an integral part of the core curriculum, a school has an ... *obligation to ensure changes in the curriculum to facilitate learning of these outcomes* (Dent & Harden, 2001). However, in reality, various factors have a restraining impact on this obligation, including the design of a curriculum before the outcomes have been specified and the absence of a suitable "map" or framework that not only identifies the list of outcomes to be achieved, but also shows **how** these should be achieved.

"Dropping" time from a core learning component in order to fit in time for skills development is just not good enough. Transformation of the curriculum, in the sense of allocating time for skills development in the design of the curriculum, and, like the UFS School of Medicine has managed to do, interspersing core learning components with fundamental learning components (MEA112 and Special Study Modules GSM202 and GSM303 in Phase II), is certainly an important step on the road to the ideal situation. The goal that should be pursued, however, is a curriculum in which the development and assessment of skills are

intentionally planned for in the way that materials and learning contexts are structured. This process requires deliberate and systematic thought.

The concession made in the *New Academic Policy* (RSA DoE, 2001:41) document that fundamental[36], core and elective learning components should be applied flexibly in higher education learning programmes, should not be seen as a condonation of structural lawlessness, to which the myriad of models for skills development available in the literature, could easily contribute.

Recommendation 1.1

Once the decision has been taken by a school that general skills will be developed as an integral part of the curriculum, an essential first action step should be to **devise a contextually relevant conceptual framework**. Such a framework should reflect, not only the skills and attitudes that the school wishes to develop, but also the "position" of general skills as a fundamental learning component, in relation to core learning components and authentic or simulated real-world contexts.

Figure 10.1 is a schematic presentation of a conceptual framework that may serve to transform curriculum goals into practical actions. The framework is a combination of three different models, adapted from Bennett, Dunne and Carré (2000), Laybourn et al. (2000) and Barnett (1994), and it reflects the insights that were gained in this study. **Appendix 10A** provides an elucidation of the features of this framework, as well as suggestions on how the framework may be used.

10.3.2 Embedded versus stand-alone development of general skills

Another important decision facing a school that has decided to recognise the development of general skills as part of a learning programme, relates to the tension between embedded and stand-alone models.

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[36] *Learning which forms the grounding or basis needed to undertake the education, training or further learning required in the obtaining of a qualification* (RSA DoE, 2001).

A factor working against innovation in the area of general skills development is the perception that a "bolted-on" fundamental learning component will suffice. However, experiences reported in this thesis has confirmed claims in the literature that teaching and learning aimed at encouraging lifelong learning habits should comprise much more than "bolting" general skills onto subject learning content.

Recommendation 2.1

A **balanced approach** to the development of general skills in the first year of medical study is recommended.

Firstly, a purpose-built module such as MEA112, with specialised staff members assigned to its delivery, should be retained in order to (a) give skills development structural prominence; (b) overtly encourage students to become aware of their competence in the skills they need in order to learn and work as autonomous, lifelong learners; and (c) allay the fears that academic staff members might have concerning the sacrifice of their teaching time and the division of marks between knowledge and skills outcomes.

In the second instance, skills-related experiences in disciplinary contexts should be encouraged by focusing on general skills that will help students to successfully complete discipline-related tasks.

10.3.3 The mapping of skills development in core modules

Apart from its many benefits, the integration of fundamental and core learning after the initial induction period also holds a real danger, namely that of "skewed" development and over-assessment of general skills (cf. Minutes: Meeting of the Educational Committee: School of Medicine, 5 March 2002, par. 11.2). This problem is the unintentional outcome of the modularisation of higher education programmes which occurs when the development teams of core and fundamental modules strive to put SAQA recommendations regarding the development of general skills into effect.

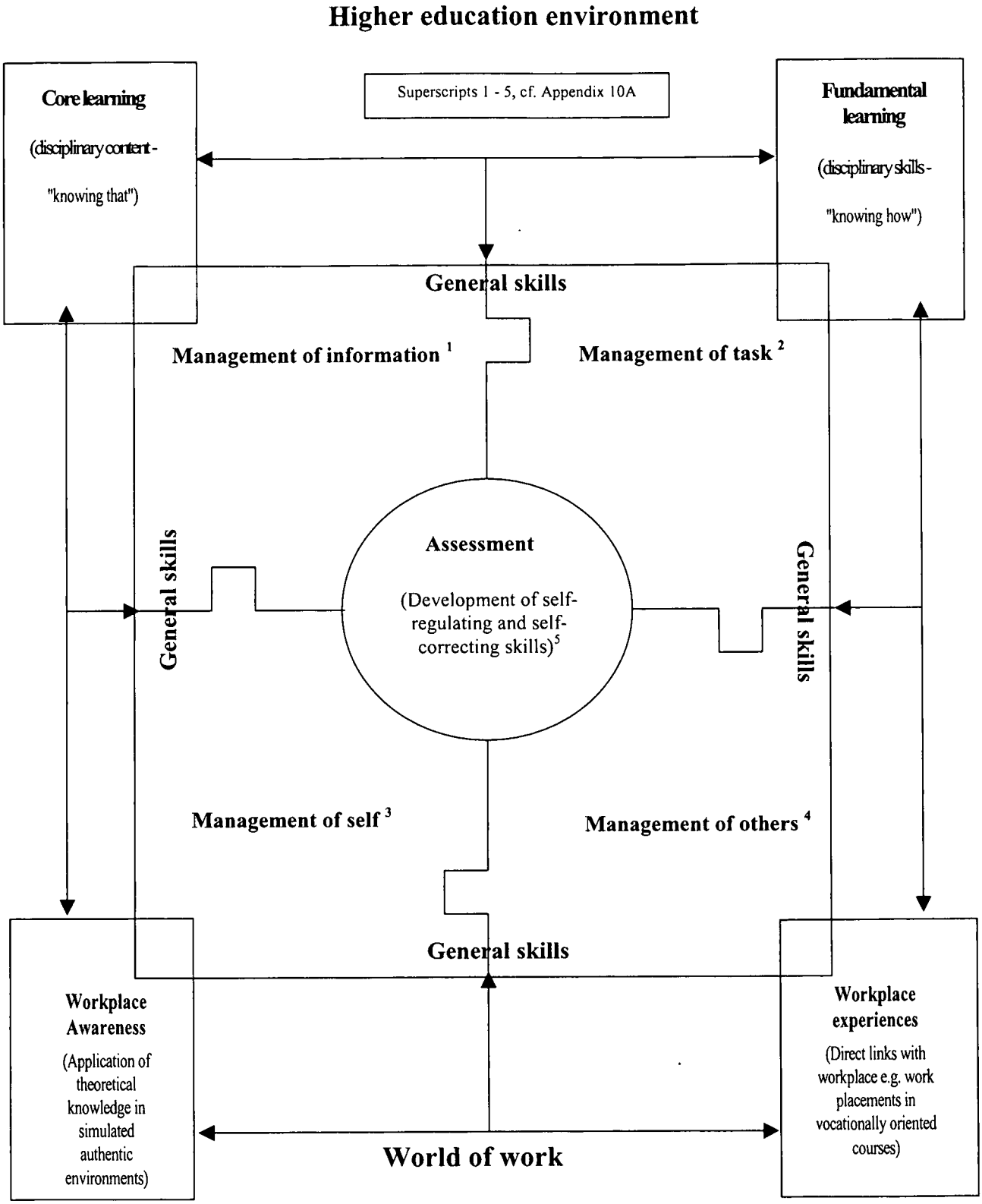


Figure 10.1 *Conceptual framework for the development of general skills* (adapted from Bennett, Dunne & Carré, 2000, Laybourn et al., 2000 and Barnett, 1994)

A possible solution might include (a) agreement between leaders of core and fundamental modules on what skills will be developed where, and (b) identification of assessable activities and products within core modules. This would be more effective than creating separate assessment activities for the purpose of generating an exclusive skills mark.

Recommendation 3.1

To put this suggestion into practice and ensure that the overall skills development profile within a particular learning programme conforms to critical outcomes required by SAQA, it is recommended that a **matrix of performance genres and expected evidence of competence be constructed.** Table 10.2 is an example of such a matrix. The left column lists the modules that form part of the first-semester programme of the Learning Programme for Professional Medicine of the UFS School of Medicine. The skills areas that are addressed in these modules are plotted against five critical outcomes.

The purpose of such a matrix would be twofold. First it would help to (a) identify gaps in the provision of opportunities for skills development, (b) avoid duplication of effort[37], and (c) limit tasks targeted for assessment of both content **and** skills to manageable samples of performance. In the second instance, it could be used to increase accountability by giving an indication of (a) what critical outcomes are valued in a particular learning programme, (b) opportunities that are provided to enable students to achieve those outcomes and (c) the nature and variety of evidence that students will be expected to produce in order to demonstrate that desired outcomes have indeed been achieved.

[37] Ideally, skills development should be embedded in several modules and take place on a number of occasions to ensure that skills are well developed. However, human resource restraints do not permit such a situation at the UFS School of Medicine.

Table 10.2 *Example of a matrix providing an overall view of skills development in authentic disciplinary contexts*

Module theme	Communication	Teamwork	Cultural sensitivity	Research	IT
Doctor and environment	Written report on community visit		Written report on community visit	Interview protocol	
Concepts of health and disease	Poster presentation Oral presentation			Written assignment	Brochure
Health psychology		Group contract Confidential checklists on individuals' group behaviour Report on group functioning			
Tissues of the body					Computer-assisted self-tests
Structure of the body					Computer-assisted self-tests

10.3.4 Assessment of critical outcomes

As is evident from the outcome of the action research reported in Chapter Nine, assessment is fundamental to the development of general skills. The following assessment-related recommendations are seen as important determinants of the successful integration of critical outcomes into an undergraduate learning programme.

Recommendation 4.1

It is recommended that general skills should be **assessed throughout, and not just in the early stages of the medical curriculum,** similarly to the situation in the more advanced years of medical study where clinical skills are assessed continually.

It is further recommended that general skills should be **assessed explicitly**. The fact that most general skills do not lend themselves to neat definition should not give rise to a situation where these skills are assessed only implicitly as part of other assessments.

Finally it is recommended that, in order to give students the message that general skills form a valued part of learning programmes, the results of explicit assessment of critical outcomes should be **accredited** by the institution.

Recommendation 4.2

Given the complexity of assessment, it is recommended that a **holistic plan,** including a definite strategy and methodology for "measuring" the achievement of critical outcomes should receive attention **in conjunction with the design of a new learning programme**. A plan giving clarity on the nature of assessment data that will be sought, as well as on how these will be gathered, interpreted and used, is considered essential for preventing the assessment from becoming a time-consuming exercise without the desired recompense. A holistic plan prevents implementers of innovative assessment from attempting too much at once.

Recommendation 4.3

On the basis of the positive feedback elicited from students regarding the portfolio system used in Module MEA112 (cf. Chapter Nine, par. 9.3.6.1 and 9.3.6.2), it is also recommended that **portfolio-based assessment** be used for gaining an overall view of students' efforts and progress as far as the achievement of critical outcomes is concerned, with the proviso that:

- The system is introduced by means of explicit guidelines on the rationale, goals and objectives thereof, as well as criteria for its preparation and presentation.
- Portfolios are used not only for summative assessment purposes, but also to demonstrate development. This means that if the level of a student's competence is unsatisfactory, formative feedback should be provided for the purposes of improvement. This notion is particularly relevant within a higher education system where all students do not start their higher education careers at the same level of academic preparedness.
- Ipsative[38] elements of assessment are introduced by requiring students to include self-selected examples of their best work, as well as reflection on their work (i.e. personal stock-taking of their level of competence).
- Explicit criteria and rubrics are used for assessing products targeted for inclusion in the portfolio in order to avoid bias and increase inter-assessor reliability.
- Assessment results are credit-bearing, to ensure that students perceive the assessment of skills through the use of portfolios as an experience that is worth their time and effort.
- The overall assessment of the portfolio content is carried out by means of normative grading.
- Moderation of the assessment procedure and results takes place to ensure external validity.

Recommendation 4.4

Postgraduate education is moving towards becoming more competence-based (Leung, 2002; HPCSA, 1999). The danger exists that doctors whose experience has been limited to traditional assessment methods in the early years of medical education might be unable to adapt to the new learning styles and assessment methods used in later years. It is thus recommended that **innovative modes of assessment**, complementing traditional forms of assessment, should be used in **all modules forming the undergraduate component of the curriculum**.

[38] Ipsative assessment is assessment that compares a person's current performance to her own past performance.

Recommendation 4.5

In order to give effect to the call for students to become more autonomous and self-regulating, it is recommended that **students be empowered through self- and peer assessment** to develop a more autonomous attitude towards their learning. However, if peer and self-assessment are to be of benefit to students, the latter should feel positive about the assessment process and its outcomes.

The research reported in this thesis revealed that students experience feelings of insecurity if they suspect that the assessment is inconsistent or inaccurate (i.e. unreliable) (cf. Chapter Eight, par. 8.3.1). On the other hand, some advocates of alternative forms of assessment claim that the validity (i.e. appropriateness) of assessment is more important than its reliability (consistency) (cf. Chapter Four, par. 4.4.3). However, since both these constructs serve as quality-assurance devices, it is recommended that both the concepts of **validity and reliability be honoured** when students are used as co-assessors. Over and above the clarity on standards and performance criteria which will be ensured in this manner, the problem of "friendship marking" may be restricted by giving students increased ownership of criteria, by giving them guidance and practical training in their new role allocations as co-assessors, and, in extreme cases, by appointing an independent referee to act as arbiter in disputes.

Recommendation 4.6

Team effort forms an important hallmark of Curriculum 2000. However, from the research reported in this thesis, it became evident that an inability to organise all group members in such a way as to ensure that they contribute fully to group-based assignments remains a problem, and that group marks have the potential of evoking feelings of insecurity and resistance (cf. Chapter Seven, par. 7.3.3.1 and Chapter Nine, par. 9.2).

Apart from explicit communication during the induction period of the rationale for, and the operational procedure of groupwork, it is recommended that (a)

procedures be put in place to **monitor group processes**, (b) a balance be maintained between **individual and group assessments**, and (c) individuals be motivated to contribute fully to group tasks by the setting of **questions in tests and examinations** which require individuals to build on the skills gained in the execution of these tasks.

10.3.5 Academic support of students who need more time to become competent in applying general skills

Within the wider framework of outcomes-based education, the development of general skills is primarily directed at helping students to mobilise the particular cognitive processes and skills that are required to deal successfully with the demands of higher education. A comment such as the following (cf. focus group interview, 27 March 2001) emphasises the need to support students in their zones of proximal development:

> "Just want to find out - as we see now that there is a problem. Is there anything from your office that can be done now about the problem that we had? Because now MEA is over, we have marks, some of us have marks of which we are not satisfied. Is there anything we can do, say maybe the groups that performed lower, they are given a second chance to improve with topics that there are information that we can use?"[sic].

Recommendation 5.1

It is recommended that **portfolio-based assessment be used as a diagnostic tool** for identifying skills-related difficulties and for directing support activities.

10.3.6 "Marketing" the idea of general skills development and assessment

Student feedback generated in this study has confirmed the perception that many students still harbour the idea that to study medicine means to memorise an overwhelming amount of factual content. They find it hard to relate the need to develop general skills to success in modules dealing with core content. As a

result, the importance of inducting first-year students to the demands and rewards of a student-centred, outcomes-based curriculum, and hence the necessity of developing and honing the general skills they bring to their higher education study careers, should not be underestimated.

Recommendation 6.1

Prospective students should be primed on what to expect by "marketing" the idea of general skills development prior to enrolment by means of written material (e.g. in the form of a concise "Did-you-know?" pamphlet).

Recommendation 6.2

A **short, consolidated induction period**, prior to the integration of skills development with core module content, should remain an essential feature of the skills development programme. The rationale for general skills development, details of how the module will articulate with the rest of the programme, the method of assessment that will apply and guidelines on the compilation of portfolios, should be highlighted during this period.

Recommendation 6.3

To further combat student resistance to general skills development, marketing of the idea of **peer teaching** among newcomer students should be considered. An initial assessment of skills on entry[39] is recommended to identify and effectively target students who need remedial assistance, on the one hand, and, on the other, involvement of students who need enrichment as peer tutors to keep them interested.

[39] As explained in par. 9.3.1, recognition of the skills and experience students bring with them when they enroll has thus far been addressed only in the library component of Module MEA112 and thus falls outside the scope of this thesis.

10.3.7 Staff development implications of innovative assessment

Interview data gathered in the first cycle of the action research (cf. par. 8.3.2.2.3) revealed that in most core modules, transformation as far as assessment is concerned, is in the beginning stages of what might become an evolutionary process. Given that in the past, a background in education was not considered a prerequisite for teaching in medicine, it would be unrealistic, on the one hand, to expect that many lecturers teaching in the Programme for Professional Medicine at the University of the Free State should have a thorough understanding of the conceptual and technical aspects of alternative assessment. On the other hand, the enthusiasm demonstrated by the staff members with whom I collaborated during the course of my research was remarkable. The enthusiasm of individuals alone, however, is not enough to bring about reform.

Recommendation 7.1

To cultivate a positive inclination towards innovation among a greater number of people, it is recommended that just as students need guidance and training in accepting their new roles as co-assessors, **staff should be supported** in reconceptualising their roles as subject experts to include a focus on the development of general skills through authentic assessment endeavours. Development activities in the form of seminars or presentations could be used to enhance lecturers' awareness of conceptual issues related to skills development. However, where a lack of technical expertise prevents staff from paying attention to the integration of skills into their modules, individual support from an educational consultant is recommended. Support of this kind could include discussions to decide which skills are most appropriate in their modules and how to teach and assess those skills; assistance with the development of teaching and learning materials; discussions on how to record and report the achievement of critical outcomes; and also the evaluation of the success of their endeavours.

10.3.8 Managerial responsibilities related to the assessment of critical outcomes

The research reported in this thesis revealed that a large proportion of students studying in the UFS School of Medicine are still resistant to the idea of general skills (cf. Chapter Nine, par. 9.2). Furthermore, given the widely-held belief that academics do not change easily, the enthusiasm of individuals or a selected few module teams (referred to in par. 10.3.7; cf. also par. 8.3.2.2.5) is not enough to promote the integration and assessment of critical outcomes.

A school-endorsed statement on (a) the exact skills that will form a common thread of students' skills-related experiences throughout the five years of their undergraduate studies, and (b) the levels of performance that will be required at different stages of the learning programme, may serve to attenuate both these manifestations of resistance to change.

Recommendation 8.1

To ensure that academic staff members do not take the easy way out by avoiding unconventional methods of assessment, it is recommended that a **general directive from management** should be put in place in order to give more prominence to the assessment of critical outcomes.

In providing such direction, the management team should, on behalf of the school, commit themselves to a general disposition regarding what is considered valuable in terms of student performances.

Recommendation 8.2

To ensure that the managerial commitment referred to in Recommendation 8.1 is converted into action, it is recommended that an **overall framework for gradual assessment development** (as mentioned by the Dean and the Head of the School of Medicine during my interviews with them – cf. par. 9.3.6.6.2) be compiled. Such a framework should allow time for module development teams time to

capitalise on emergent experiences and "success stories", and should contain explicit statements on the aspects itemised below:

- The kinds of general skills that the school seeks to develop in its students, and the year of study during which they are to be developed.
- The kinds of performances that will be assessed.
- Assessment standards that will apply and how these will be ensured.
- Evaluation of the effectiveness of the assessment system and its outcomes.

10.3.9 Quality assurance

Apart from transparency on school-wide expectations, the implementation of alternative assessment procedures of a high quality is furthermore dependent on well-designed and well-evaluated heuristics (Dochy & McDowell, 1997:293). Current developments at national level endorse the need for intensifying the focus on the development of standards that will facilitate the assessment of critical outcomes on a school-wide basis.

However, collaboration with various subject experts during the course of the action research reported in this thesis, revealed that a lack of time and expertise, as well as the scarcity of availability of models present a serious obstacle to assessment reform.

Recommendation 9.1

In a curriculum that is corporately owned by the Faculty, the idea is not that everyone should invent every assessment they use. Therefore, to provide academic staff members with a heuristic tool that can help them to design and implement high-quality procedures once they have decided to make use of alternative forms of assessment, it is recommended that a **template document, containing easy-to-use techniques** and **criteria for the assessment of a variety of performance tasks should be compiled**. Exemplary material of this kind may

help to prevent needless duplication and "redesign-of-the-wheel" activities by supplying information on aspects such as the following:

- Assessment strategies typically used for the assessment of difficult-to-measure skills and attitudes (e.g. portfolios, reflective journals).
- Typical performance tasks that permit demonstration of the achievement of critical outcomes (e.g. poster presentation, written report).
- Standards of performance in the form of criteria, performance indicators and level descriptors or rubrics that are general enough to be applicable in a variety of learning contexts.
- Responsibilities of the different role-players (subject experts, skills specialists, students) regarding the assessment of content, skills and end products.
- Administrative procedures of assessment activities (e.g. collection and return of products; recording and reporting of results).
- Measures for validating staff-designed assessment instruments and processes.
- A procedure for formative feedback and remedial action.
- Duties and responsibilities of moderators.
- Procedure for monitoring the operation of the assessment system.

Recommendation 9.2

In order to motivate more staff members to experiment with alternative forms of assessment and to reduce needless inefficiency, it is recommended that an easy way of sharing work be developed by establishing an **electronic database of approved tasks and rubrics.**

10.4 NEXT ACTION STEPS IN ONGOING ACTION RESEARCH

As is characteristic of action research, educational interventions undertaken by practitioners who are concerned about quality, are based on concerns that are still outstanding once other concerns have been resolved. The action steps itemised below represent possible solutions to issues that, according to my enhanced understanding of my brief as leader of Module MEA112, need further attention in

order to take the evolutionary process of developing and assessing general skills forward. As such, these envisaged action steps also point towards the shortcomings and limitations of the previous round(s) of action research reported in this thesis:

(a) To ensure that the development of general skills becomes a fully-fledged, high-status component of the Programme for Professional Medicine at the UFS School of Medicine, it is vital that assessment reform should continue. Action steps that need to be contemplated, include:

- Refinement of the portfolio-based assessment system through the development of clear directions and checklists to guide students through the process of selecting evidence of competence in the application of general skills.
- Reinstatement of reflective writing to enhance students' self-awareness.
- Enhanced use of formative assessment to support students with academic backlogs.

(b) To further the integration of skills development in core modules, the inclusion of explanatory notes and brief guidelines on, for example, how to write a report or how to write coherently, in core module workbooks, should be negotiated with subject experts.

(c) To relieve staff, to some degree, of the increased workload brought about by alternative forms of assessment, increased involvement of students in the actual assessment process, and peer mentors in remedial action based on formative assessment results, should be considered.

(d) To alleviate the task of lecturers who implement innovative forms of assessment, academic development staff responsible for the development of general skills should synergise their efforts with those of subject experts.

(e) To determine whether students "get better" at using general skills acquired in the first year of their academic careers, feedback related to students'

performance in special study modules should be obtained. Questionnaire and interview data, as well as direct observation of the students' project presentations, should become an additional source of information with a view to inform future action plans.

(f) To enhance the process of action research, care should be taken to plan activities meticulously, so as to avoid the gathering of useless data; while the narratives of "inner explorers" participating in the research should receive more emphasis.

10.5 CONCLUDING COMMENTS

This study has documented accomplishments in Module MEA112 and it has illuminated some of the problems related to the implementation of the policy decision taken in 1998 that general skills would be included in the learning programme for first-year medical students.

In her work on the use of qualitative research methods for the purpose of policy formulation in education, Finch (1986) comes to the conclusion that it is not so much the presentation of factual findings which influences policy decisions, as the kinds of reconceptualisations brought about as a result of the research. By reporting my action research, I hope to have contributed towards "easing the journey" of other skills specialists who need to carry policy decisions on the development of general skills into effect.

In illuminating the features of skills development and assessment in general, and in an undergraduate medical learning programme in particular, this study will hopefully contribute to the discourse on the development and assessment of critical outcomes. Through the diary entries focusing on my thoughts and experiences in this regard, I hope to enrich the thinking of other educators.

If, however, as a final outcome, decision-makers in the UFS Faculty of Health Sciences responsible for the successful delivery of Curriculum 2000, find the

recommendations of this study useful to the extent of implementing some of them, I will be content that my action research has been instrumental in facilitating the achievement of skills development as an overall objective.

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SUMMARY

It is currently a time of great change throughout medical education, as well as in the wider higher education context within which it operates. The problems generated by changed approaches to the delivery of curricula need to be addressed in innovative ways if educational outcomes of a high quality are to be ensured. Critical inquiry into one's own teaching practice is one of the most significant ways in which this goal may be achieved.

The purpose of this study was to improve the integration and assessment of critical outcomes in the first year of the Programme for Professional Medicine, currently conducted at the UFS School of Medicine. The focal point of the research was Module MEA112, which has the development of general skills as its theme, with a view to giving effect to the government and public demand to equip students at all levels of their higher education careers with employment-related, lifelong learning skills.

In order to evaluate the effectiveness of interventions that took place in Module MEA112 over a period of three years, an action research was adopted. This means that actions taken were critically explored, evidence was gathered and perceptions were considered in order to develop an understanding of how critical outcomes could best be integrated and assessed within the parameters of the first-year of the Programme for Professional Medicine. Features of the original Module MEA112 that demanded modification were pinpointed (cf. Chapter Seven); changes were described, and finally, the lessons learned were reflected on, with a view to re-planning and improvement of practice (cf. Chapter Eight and Chapter Nine).

Three cycles of action research were completed. In Cycle One (1999-2000), the focus was on the design and implementation of a purpose-built module on general skills development that would be appropriate for the UFS School of Medicine

context. The inference was drawn that the original model should be further contextualised to help students to see the relevance of general skills in a medical learning programme; and that general skills development should form an integral part of core modules and not be confined to a stand-alone period of orientation.

In Cycle Two (2000-2001), the potential for close collaboration between subject and skills specialists, with a view to encouraging the development of general skills inherent in performing authentic discipline-related tasks, was explored. The idea that a professional healthcare practitioner should be able to appraise her own work and that of others - a skill that is at the centre of professional medical practice - was instilled by introducing students to self- and peer assessment. The introduction of this skill at a relatively early stage of their study careers was premised on the belief that students should be skilled in the habits and attitudes that prepare them for a student-centered curriculum; for functioning as lifelong learners in their future careers, and also as responsible citizens, while they are still receptive to such influences.

In Cycle Three (2001-2002), the difficulties associated with the incorporation of skills development in core modules and the evolution of alternative forms of assessment formed the focal points. Efforts to establish a portfolio-based assessment system featured most prominently, in furtherance of the idea that assessment strategies should reflect the educational aims of an outcomes-based learning programme.

The value of the research rests on its emancipatory nature in the sense that it helped to redefine the relatively narrow boundaries that were initially set for general skills development in 1999. In reporting the evolutionary process, credibility was pursued by documenting actions and their outcomes in a rigorous and systematic manner; and by giving an honest, autobiographical narrative on the laborious process of improvement.

OPSOMMING

Geneeskunde-onderwys, sowel as die groter hoëronderwyskonteks, beleef tans 'n tyd van groot verandering. Ten einde leeruitkomste van 'n hoë gehalte te verseker, moet die probleme wat voortspruit uit veranderde benaderings tot onderrig en leer op 'n innoverende wyse benader word. Kritiese self-evaluering van onderrigpraktyk kan 'n beduidende bydrae lewer om hierdie doel te bereik.

Hierdie studie was gerig op die verbetering van die integrasie en assessering van kritiese uitkomste in die eerste jaar van die Program vir Professionele Geneeskunde aan die Skool vir Geneeskunde, Universiteit van die Vrystaat. Module MEA112 het die fokuspunt gevorm. Hierdie module het die ontwikkeling van algemene vaardighede as tema, ten einde uitvoering te gee aan publieke en regeringsaandrang op die voorbereiding van studente op alle vlakke van hoër onderwys vir die arbeidsmark en lewenslange leer.

'n Aksienavorsingsbenadering is gevolg om die effektiwiteit van ingrepe wat oor die afgelope drie jaar in Module MEA112 plaasgevind het, te evalueer. Hierdie proses het behels dat aksiestappe krities ondersoek is aan die hand van bewyse en persepsies van wat gedoen is. Sodoende is insigte bekom om die integrasie en assessering van kritiese uitkomste, binne die parameters van die eerste jaar van die Program vir Professionele Geneeskunde op die bes moontlike manier aan te pak. Die kenmerke van die oorspronklike Module MEA112 wat verandering geverg het, is uitgewys (vgl. Hoofstuk Sewe), en die veranderings wat aangebring is, is beskryf. Besinning op grond van lesse wat geleer is, het voortdurend plaasgevind met die oog op herbeplanning en verbetering van bestaande praktyk (vgl. Hoofstukke Agt en Nege).

Drie siklusse van aksienavorsing is voltooi. In die eerste siklus (1999-2000), het die klem geval op die ontwerp en implementering van 'n module vir die ontwikkeling van algemene vaardighede, doelgemaak vir die behoeftes van die Universiteit van die Vrystaat se Skool vir Geneeskunde. Die afleiding is gemaak

dat die oorspronklike model nog meer konteksgerig behoort te wees ten einde die relevansie van algemene vaardighede in 'n geneeskunde-leerprogram te beklemtoon; asook dat die ontwikkeling van algemene vaardighede 'n integrale deel van kernmodules moet uitmaak.

In die tweede siklus (2000-2001) is die moontlikheid van noue samewerking tussen vak- en vaardigheidspesialiste ondersoek, met die oog op die ontwikkeling van vaardighede wat inherent deel uitmaak van outentieke dissipline-verwante werkopdragte. Studente is blootgestel aan die praktyke van self- en eweknie-assessering, om hulle bewus te maak van hierdie allerbelangrike vaardigheid wat 'n integrale deel vorm van professionele gesondheidsorg. Hierdie vaardigheid is relatief vroeg in die studente se studieloopbaan aangespreek, op grond van die aanname dat studente voorberei moet word vir die eise van 'n student-gesentreerde kurrikulum, lewenslange leer en verantwoordelike burgerskap op 'n stadium dat hulle ontvanklik is vir nuwe denke, gewoontes en houdings.

In die derde siklus (2001-2002) het probleme wat verband hou met die inkorporering van vaardigheidsontwikkeling in kernmodules en die evolusie van alternatiewe vorme van assessering aan die orde gekom. Pogings wat aangewend is om 'n portefeulje-gebaseerde assesseringsisteem tot stand te bring, het die fokus gevorm, in ooreenstemming met die gedagte dat assesseringstrategieë die onderwyskundige doelwitte van 'n uitkomsgebaseerde leerprogram behoort te weerspieël.

Die waarde van die navorsing is gesetel in die emansieperende uitwerking wat dit gehad het op die relatiewe eng grense wat aanvanklik in 1999 vir die ontwikkeling van algemene vaardighede in die vooruitsig gestel is. Geloofwaardigheid is nagestreef in die verslagdoening oor die evolusionêre proses, deurdat aksiestappe en die uitkoms daarvan nougeset en sistematies gedokumenteer en weergegee en die moeisame proses van praktykverbetering op 'n eerlike, outobiografiese wyse opgeteken is.

KEY TERMS

Action research

Alternative assessment

Authentic assessment

Critical cross-field outcomes

Fundamental learning

General skills

Medical education

Outcomes-based education

Professional development

Quality assurance

APPENDICES

SAQA's critical cross-field outcomes

APPENDIX 2A

SAQA's critical cross-field outcomes

In the SAQA Bulletin (1997: 6-7) the set of general skills listed below was identified as a requirement if the knowledge and understanding of a particular subject field are to be used appropriately and effectively at work, and in collaboration with others.

THE SEVEN TRUE CRITICAL OUTCOMES

- Identify and solve problems in which responses display that responsible decisions using critical and creative thinking have been made.
- Work effectively with others as a member of a team, group, orginisation, community.
- Organise and manage oneself and one's activities responsibly and effectively.
- Collect, analyse, organise and critically evaluate information.
- Communicate effectively using visual, mathematical and/or language skills in the modes of oral and/or written presentation.
- Use science and technology effectively and critically, showing responsibility towards the environment and health of others.
- Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation.

THE FIVE NICE-TO-HAVE CRITICAL OUTCOMES

In order to contribute to the full personal development of each learner and the social and economic development of the society at large, it must be the intention underlying any programme of learning to make an individual aware of the importance of:

- reflecting on and exploring a variety of strategies to learn more effectively;
- participating as responsible citizens in the life of local, national and global communities;
- being culturally and aesthetically sensitive across a range of social contexts;
- exploring education and career opportunities; and
- developing entrepreneurial opportunities.

Documentary data pointing towards the necessity for the design and implementation of a module on general skills

DATE	SOURCE	SCENARIOS/RECOMMENDATIONS/ DECISIONS
13-02-1996	Report: Workshop on the process of curriculum review	▪ *Growing diversity of student body necessitates an increased focus on academic support.*
12-03-1997	Letter from member of the CRC to members of a sub-group	▪ *A basic course focusing on the development of student learning and support will be established. This course will be emphasised in the pre-clinical phase, but will span the total period of 5 years (our student profile and their learning needs will change drastically in the future).*
19-03-1997	Minutes: CRC	▪ *A basic course on academic development should be a compulsory course.* ▪ *It should not be referred to as a basic course.* ▪ *It should be credit bearing.* ▪ *Students should be able to exit the course at different points in time.* ▪ *It should be a modular course, facilitating self-study at own pace and completion according to ability.* ▪ *Group work should play an important role.*
18-06-1998	Report: Faculty Retreat, Clarens	▪ *Wanted in the new curriculum: inter alia, students who are motivated self-learners, logical built-up and growth of knowledge and skills.* ▪ *Phase I should focus on growth and preparation of student; emphasis at beginning on preparation, at end on basic medical science.* ▪ *Phase I should prepare student as a person, as a future professional practitioner and should help student to successfully continue her studies* ▪ *Learning content with a view to preparation may include skills such as: language, basic management, communication, team work, group functioning, socialisation and motivation.* ▪ *Interaction between the natural sciences and the human science part of the curriculum is recommended. Example: Language and communication skills should be built around aspects of science content.* ▪ *Flexibility of modular system should be used to provide for more preparatory time at the beginning.*
09-03-99	Preliminary course document: submitted by the Phase I Chair at a meeting of the Phase I Committee	▪ *Skills will be contextualised and integrated into modules.*
08-10-1998	Information document on programme development: Division of Educational Development	▪ *NQF goal: To contribute to the complete personal development of each learner and the social and economic development of the nation at large.* ▪ *SAQA requirement stipulated in the Green Paper*

		(1998): "Fundamental" learning forms the grounding or basis needed to undertake the education, training or further learning required in obtaining a qualification. Typically: Communication and language outcomes/competencies (min. 20 credits out of 72): use of mathematical, technological and life science-related outcomes/competencies: use of "critical outcomes" abilities; use of "life skills', e.g. ability to learn.
03-08-1999	Minutes, Faculty Board Meeting - Submission of Programme for Professional Medicine to SAQA	▪ *Exit level outcomes: A willingness to be a lifelong learner.* ▪ *Specific outcomes: The overarching outcome of medical education and training is to deliver medical practitioners who can render a professional service to the community, that is, on completion of the programme students will demonstrate that they have acquired the necessary knowledge, skills, professional thinking, behaviour and attitudes in all the ramifications of medicine and health care to be able to pursue a profession as doctor and manager of health care.* ▪ *Skills outcomes: On completion of the programme, the students will demonstrate a proficiency in the essential skills required for medical practice, including the following:* ▪ *Basic clinical skills: to take a history; to perform a physical examination; to assess the patient's mental state; to interpret findings and make a diagnosis; to formulate a plan for treatment and management.* ▪ *Basic clinical procedures.* ▪ *Basic management skills.* ▪ *Basic computer skills.* ▪ *Communication skills and language proficiency.* ▪ *The ability to work in a multi-disciplinary team.* ▪ *Referral skills.* ▪ *Attitudinal and behavioural outcomes: On completion of the programme, students will demonstrate attitudes and behaviour essential to the practice of medicine, such as:* ▪ *Respect for patients and colleagues, without prejudice with regard to background, race, culture, gender, way of life, etc.* ▪ *Recognition of human and patients' rights.* ▪ *A positive approach to self-directed lifelong learning.* ▪ *A positive approach towards primary health care.* ▪ *An awareness of moral and ethical responsibilities.* ▪ *A desire to ensure patient care of the highest possible quality.* ▪ *An awareness of personal limitations and a willingness to seek help when necessary.* ▪ *A willingness and the ability to work as a member of a multi-disciplinary team.* ▪ *A positive attitude towards change and functioning within the uncertainties of our times.* ▪ *A positive attitude towards continuing professional development.* ▪ *A positive attitude towards the advancement of medical knowledge, i.e. a research approach.*

Correspondence between members of Work Group C

16 March 1999

Dear Colleague

MEETING: WORK GROUP C - 18 March 1999, at 09h30 in A112

With a view to the above-mentioned meeting, I wish to make the following suggestions:

1. That you familiarise yourself with the Minutes of the Phase I Committee meeting, held on 9 March 1999.

2. That you take notice of the case studies included in the minutes for the purpose of vertical integration. The idea is that you identify "gaps" in these case studies where you would be able to integrate the specific skill area you are responsible for. Most probably the Chairs of Work Groups A and B have already contacted you in this regard.

3. That you work through the included copy of the University of Leicester's *Induction Week Workbook* to get an idea of what their orientation programme looks like. Please keep in mind that we have two weeks at our disposal.

4. That you make definite suggestions regarding the inclusion of sessions in your area of specialisation for inclusion in the orientation programme.

The next Phase I Committee meeting will take place on 19 March 1999 and I will be obliged if we could by then already present them with Work Group C's recommendations.

Yours sincerely

ADRI BEYLEFELD

LEADER: MODULE MEA112

Translated verbatim version of a letter from one of the Module C Workgroup members

17/03/99

Dear Adri

I regret that I could not attend the meeting – I hope you don't see my absence as an unwillingness to cooperate!

Hannes Steinberg and I met recently to talk about the module on epidemiology and biostatistics which fits in the second semester of Phase I. I am excited about what we plan for this module. The focus will be on numerical and research skills.

As far as the two weeks of orientation are concerned, i like the Leicester idea that an assignment should lead to a presentation. In order to address the numerical skills (of lack of them) and technology, I think there should be a second assignment requiring students to find information, summarise, interpret and present it. Prior to the assignment they should be exposed to an introductory session on the use of computers. Once they have finished with the assignment, input (by me or Charles) on calculations, transformations, graphic portrayals, different types of data and summarising in the form of a formal session should follow.

What bothers me about the orientation is that some students will need much more orientation than others. There are those who do not know a computer and others who are more skilled than us! How do we ensure that no one becomes bored?

Regards
Gina

PS: I wish to suggest that formal sessions on communication, the use of media and study skills are presented after the first assignment has been completed.

Content and structure of Module MEA112, submitted to Phase I Task Team on 25 November 1998

ORIENTATION

1. RATIONALE

Outcomes-based education represents a radical change in the style of education most current school leavers are used to. To ensure success, it is important that the new curriculum is launched with the maximum of goodwill. For this reason it is necessary that entering learners become familiar, as soon as possible, with their surroundings and the demands of the new 5-year outcomes-based medical curriculum. Furthermore, they need to be aware of what they come in to and the philosophy behind it.

The first week of Phase I will be set aside for a range of orientation activities presented in the form of a workshop.

2. ACTIVITIES

2.1 Orientation to the Faculty

- Welcome by the Dean
- Address by the Head of the School of Medicine

2.2 Orientation to the new 5-year curriculum

- Orientation to SAQA's requirements (what knowledge counts as valuable in society)
- Orientation to the goals, objectives and structure of the 5-year outcomes-based curriculum
- Introduction to different teaching strategies
- Discussion on the role of learning facilitators
- Explanation of assessment and evaluation methods

2.3 Orientation to teaching facilities

- Guided tour of
  - lecture theatres
  - skills lab
  - small group facilities
  - Anatomy study centre
  - Frik Scott library
  - hospital
  - primary health care facilities

2.4 Orientation to support services

- Divisions of Student Learning and Educational Development
- University Counselling Service

- University Health Service
- Kovsie Support Services
- Tutors
- Mentors
- Health Sciences Students Management Council
- Other student organisations

2.5 Social orientation

- Various social functions will be organised providing opportunity for learners to meet one another as well as significant others.

2.6 Introduction to basic skills needed for survival in new curriculum

- Basic computer skills
- Using the library
- Coping skills (time-management, problem-solving, financial management, stress management, cultural sensitivity)

2.7 Project

The workshop will be concluded by a small project that demands of learners to work in groups, consult different resource people on campus, use the library and computer centre, make an oral presentation of results.

/c:comski.doc
AB:20-11-98

Content and structure of Module MEA112, presented at the Curriculum Review Workshop on 20 January 1999

CURRICULUM SKILLS – PHASE I

Module type:	A skills domain, integrated within Modules I and II
Module length	Phase I
Semesters:	One and two
Timetabled hours:	?
Self-study hours:	?
Domain manager:	A.A. Beylefeld
Team members:	?

****

1. INTRODUCTION

Communication encompasses a wide range of skills required to study, work and live in a multi-cultural, information-based society. It refers to a learner's capacity to communicate in standard Afrikaans and English in academic and employment-related settings in the context of health care.

Communication skills are fit for development within three broad categories, namely:

- basic/generic communication skills
- academic/discipline-specific communication skills
- professional communication skills

In the development of learners' communication skills, all of these categories will be focussed on incrementally throughout the three phases of the curriculum, culminating in a graduate learner, capable of:

(a) recording and articulating his/her understanding of learning content, both orally and in writing

(b) disseminating new knowledge with clarity and precision to a variety of audiences;

(c) communicating with patients and their families in a correct, sensitive, caring, non-judgemental way.

2. RATIONALE FOR THE DEVELOPMENT OF COMMUNICATION AS A SKILLS DOMAIN

Modules I and II in Phase I of the new 5-year medical curriculum carries the responsibility to develop learners' knowledge, skills and attitude with regard to basic communication because it can help learners perform better conceptually and critically, thus making them less dependent and more self-directed in their learning.

3. AIMS

The broad aim of the communication-skills domain in Phase I, is to produce learners who are fluent in articulating what has been learnt. This will be achieved by developing learners' capacity to accurately record and clearly convey information to others in verbal

and written form. While the importance of academic and professional communication is acknowledged, the focus in Modules I and II of Phase I will be on basic literacy. Specified aims are:

- To develop the ability to read effectively and purposefully
- To develop the ability to write clearly, concisely, and logically
- To develop the ability to become attentive and receptive listeners
- To develop clarity, correctness and confidence in speech

4. OBJECTIVES

Objectives in the areas of reading, writing, listening and speaking include a range of knowledge, skills and attitudes:

Knowledge
By the end of Phase I, learners will:

- Apply the principles of .....
- Know the difference between .....
- Know the meaning of different action words .....

Skills
By the end of Phase I, learners will be skilled at:

- Choosing appropriate forms of reading skills for a variety of purposes
- Expressing themselves accurately – in everyday language as well as subject terminology
- Listening and carrying into effect verbal instructions
- Interpreting and responding appropriately to test and examination questions
- Attending to information presented by means of a lecture, on video or audio cassette and use ideas for a specific academic purpose
- Making accurate, well-organised notes
- Structuring and organising information (making summaries)
- Writing grammatically correct sentences and paragraphs
- Writing stylistically appropriate reports, short and long essays
- Writing an academic essay using appropriate forms of referencing and quoting
- Giving a clear exposition of a problem in numerical terms
- Presenting results of a project to various audiences (in pairs/to whole class/to superiors)
- Preparing and presenting an oral tutorial paper
- Listening and answering questions related to the presentation

Attitudes
By the end of Phase I, students will demonstrate the following attitudes and behaviour:

- Demonstrate an understanding of the importance of dealing effectively and systematically with overload of factual material

- Listen to oral presentations with enough confidence to make accurate notes
- Read, speak and ask questions spontaneously in front of others
- Maintain a commitment to write and speak correctly and clearly
- Display willingness to correct and learn from mistakes
- Accept responsibility to follow rules with regard to plagiarism
- Demonstrate a positive attitude to self-evaluation by monitoring own progress in the acquisition of communication skills
- Acknowledge own strengths and weaknesses recognising when to seek help

5. STRUCTURE OF THE COMMUNICATION-SKILLS DOMAIN

Integration of communication skills into core Modules I and II will depend on the subject-specific needs as identified by subject experts. The following formats might apply in an inter-related manner:

- General introductory sessions where overviews can be given of areas in which some learners lack background and therefore need some guidance to get their skills acquisition started.

- Fixed resource sessions (scheduled to take place in the afternoon) which learners who need "catch-up" sessions can attend on a drop-in basis.

- Lectures, whole class seminars.

- Small group "hands-on" sessions that form an integral part of mainstream sessions.

- The above activities can be supported by student-centered, do-it-yourself workbooks containing self-assessment activities (skills packs).

- Computer-assisted learning consisting of language exercises based on in-text materials.

6. TIMETABLE OF ADDITIONAL "CATCH UP" SESSIONS

A separate timetable will be issued to learners at the beginning of the academic year.

7. ASSESSMENT OF SKILLS ACQUISITION

Evidence that a learner has attained a skill objective is demonstrated when the learner is able to perform the steps involved in "doing" that skill.
Learners will be classed as satisfactory, unsatisfactory or excellent on the basis of four pieces of written work and four oral presentations during the year.

Final version of Module MEA112

General skills

Module code: *MEA112*
Module type: *Fundamental*
Semester: *First*
Contact time: *55 hours*
Directed learning: *25 hours*
Module leader: *Ms AA Beylefeld*

Aims

The aims of this module are to help students (a) adjust to their new learning environment and (b) meet the expectations and demands of a learner-centred, outcomes-based medical curriculum, designed to be relevant to the needs of the society it serves.

Pre-requisites

Before starting this module, students should have made a well-informed decision to study medicine (i.e. identification with the policy, procedures and requirements of the medical curriculum), display tolerance towards other cultures and language groups, and have a willingness to take responsibility for their own learning.

Outcomes

By the end of this module, students should be able to:

- find their way around the Faculty of Health Sciences, and use administrative and support structures available within the Faculty of Health Sciences and on the campus of the University of the Free State
- state the principles of learner-centred education which underlie Curriculum 2000
- handle cultural diversity with sensitivity and tolerance
- function as a member of a group
- apply personal, financial and time management techniques to maintain academic momentum
- use general scientific terms as well as medical terminology related to the structure and function of the human body in health and disease
- use a computer and access internet for educational purposes
- find and use resources in the library
- use databases to retrieve relevant information
- look at research and numerical data critically
- use acquired skills to become life-long learners.

Structure and outcomes of the module

This module forms an induction course during the first two weeks of the first semester of Phase I, and will run on consecutive days.

Session 1: **Physical arrangement, administration and management of the Faculty of Health Sciences**

By the end of this session, students should be able to:
- participate in the orientation programme with confidence
- recognise the Dean of the Faculty of Health Sciences
- find and utilise the different administrative and support venues in the faculty and on campus
- recognise various other key role players involved in the management of the faculty and/or in the development and presentation of Phase I of the programme
- relate to the small group of students with whom they will be working
- refer to and interpret the rules and regulations of the faculty
- reflect on and synthesise activities engaged in during the day.

Lecture (30 min): Orientation to induction programme.
Lecture (30 min): Address by the Dean of the Faculty of Health Sciences.
Directed Learning (3 hours): Visit resources in faculty and on campus.
Group work (1 hour): Feedback/quiz/problems experienced.
Directed learning (1 hour): Introduction to Heads of Schools in Faculty of Health Sciences. Module Leaders. Head of Skills Laboratory, and Administrative staff.
Group work (1 hour): Get to know one another.
Directed learning (1 hour): University and Faculty rules and regulations. Journal writing on "What I have leam today".

Session 2(a): **Medical education in the UFS Faculty of Health Sciences**

By the end of this session, students should be able to:
- identify the learning situations they prefer
- name the various instructional methods and techniques used in the faculty
- find their way to the different teaching and learning venues in the faculty
- refer to and use the course document of Phase I
- state the principles of learner-centred education which underlie Curriculum 2000
- go out in the community feeling confident and focussed
- identify with resource-based learning as a method of instruction
- reflect on and synthesise activities engaged in during the day.

Directed learning (2 hours): Learning preference inventory. Video on "Teaching and learning in the Faculty of Health Sciences". Guided tour of teaching facilities.
Lecture (25 min): Course document, Phase I.
Lecture (25 min): Curriculum 2000 at the Faculty of Health Sciences of the University of the Free State.
Lecture (25 min): Learning in the community.
Lecture (25 min): What is resource-based learning?
Directed learning (20 min): Journal writing on "What I have learnt today".

Session 2(b): **Inter-cultural etiquette and non-verbal interaction**

By the end of this session, students should be able to:
- show goodwill across cultural barriers
- recognise and respect the variety of norms for good manners and etiquette in the multicultural South African context
- handle low-level conflict proactively

- approach interpersonal interaction with greater sensitivity
- interpret non-verbal behaviour
- reflect on and synthesise activities engaged in during the day.

Lecture and group work (2 hours): Intercultural etiquette.
Lecture and group work (1 hour 40 min): Non-verbal interaction.
Directed learning (20 min): Journal writing on "What I have learnt today".

Session 3(a): Group functioning

By the end of this session, students should be able to:
- recognise the importance and value of team work and collaborate with fellow students.

Lecture (1 hour): Introduction to group functioning.
Group work (2 hours): Learning to work in groups.
Lecture (1 hour): Factors influencing group functioning.

Session 3(b): Presentation skills

By the end of this session, students should be able to:
- present information orally to an audience of peers and academic staff
- reflect on and synthesise activities engaged in during the day.

Directed learning (1 hour): Video on presentation skills - "The floor is yours".
Lecture (30 min): The art of public speaking.
Lecture (30 min): General principles of information projection.
Group work (1 hours): Evaluation of an oral presentation.
Directed learning (1 hour): Written reflection. Journal writing on "What I have learnt today".

Session 4: Self-regulation: Personal, financial and time management

By the end of this session, students should be able to:
- focus on what they want from their study career and how they intent to get it
- take their personal learning preferences and personality traits into account
- apply techniques that will help them maintain momentum in their studies
- construct a plan for managing their time
- apply simple techniques to create financial peace of mind
- apply critical thinking and problem solving skills to distinguish between fact and opinion
- reflect on and synthesise activities engaged in during the day.

Directed learning (1 hour): Discover yourself.
Group work (1 hour): Time management.
Group work (1 hour): How to take charge of my life.
Group work (1 hour): How to maintain momentum in my studies.
Group work (40 min): Problem solving.
Group work (30 min): Money in, money out.
Lecture (30 min): Management of personal finances.
Lecture and group work (1 hour): Personality dynamics: medicine for the "third ear".
Lecture (30 min): Management of personal financial needs.
Group work (30 min): Making ends meet.
Directed learning (20 min): Journal writing on "What I have learnt today".

Session 5: **Discovering computers**

By the end of this session, students should be able to:
- use the mouse in order to access databases to find information
- use the keyboard in order to type in search strategies and access computer programmes
- use MS Word to prepare an elementary document
- access the World Wide Web
- successfully send and receive e-mail messages
- subscribe, lurk and unsubscribe to a listserver
- demonstrate the ability to subscribe, lurk and unsubscribe to a listserver
- discuss the value of electronic mail for physicians
- apply netiquette at a basic level.

Group work (1 hour): Using the computer mouse.
Group work (1 hour): Using the keyboard.
Group work (1 hour): Elementary principles of MS Word.
Group work (1 hour): General background of the WWW.
Group work (1 hour): Using electronic mail.
Directed learning (3 hours): Exploring computers.

Session 6: **Subject-specific communication**

By the end of this session, students should be able to:
- use general descriptive terms to describe the colour, shape, length, weight, volume, quantity, and quality of a biological specimen
- identify and describe the basic building blocks (prefixes/suffixes/stems) of words commonly used in science
- recognise recurring word elements which serve to make clear the meaning of medical terms
- interpret the meaning of "action" words commonly found in assignments, tests and examination questions
- reflect on and synthesise activities engaged in during the day.

Directed learning (1 hour): Basic language proficiency.
Group work (30 min): Reading and identification of "strange" words.
Lecture (30 min): Learn the language of higher education. Words to watch for.
Lecture and group work (2 hours): Elementary trans-cultural linguistic empowerment.
Group work (2 hours): Look, read and complete. Computer-assisted instruction on word building.
Directed learning (2 hours): Figuring out the meaning of unknown medical terms and verification of answers in medical dictionaries. Memorisation of vocabulary. Computer-assisted self-evaluation.

Session 7: **Introduction to information technology and research**

By the end of this session, students should be able to:
- construct a search strategy in order to find information
- combine search terms to expand or narrow a search
- undertake information searches with the aid of search engines
- recognise the limitation of search engines
- find resources available via the library's home page
- Evaluate the application of basic research principles.

Lecture (45 min): Constructing a search strategy.
Lecture (45 min): Introduction to search engines.
Group work (2 hours 30 min): Using search engines.
Directed learning (2 hours 30 min): Finding health information by using search engines.
Lecture and group work (1 hour 30 min): Looking at research critically.

Session 8: **Finding and evaluating information**

By the end of this session, students should be able to:
- demonstrate knowledge of the value of books and how to handle them
- know the library's layout, services, resources and hours
- find information by using the library's catalogue
- use shelf numbers logically
- demonstrate knowledge of the role and value of information in the community
- distinguish between the different forms of information, information sources and their databases
- evaluate sources and information
- evaluate numerical data critically.

Lecture (1 0 min): Book etiquette.
Lecture (20 min): Theoretical aspects of information.
Video (30 min): Types of information sources.
Lecture (1 hour): Sources and their databases.
Group work (1 hour 30 min): Using Kovsiekat.
Group work (30 min): Virtual library tour.
Directed learning (1 hour 30 min): Finding information on Kovsiekat and relevant books in the library.
Lecture and group work (2 hours 30 min): Looking at numerical data critically.

Session 9: **Database searching and bibliographic reference technique**

By the end of this session, students should be able to:
- execute the basic steps of searches on databases, understand these steps and apply them to certain databases
- use the subject headings and textword/keyword searches effectively
- take informed decisions to find the most suitable databases for a specific information need
- print out full-text articles that are available on databases
- discuss the purposes for which references and bibliographies (source lists) are given in an assignment or scientific report
- use the Vancouver style correctly for documentation purposes
- quote a variety of sources correctly
- compile a bibliography or source list correctly
- distinguish the bibliographical elements of sources and illustrate the function and use of each
- use obtained information skills to prepare a project for evaluation.

Group work (30 min): Using Kovsidex.
Group work (45 min): Using Medline.
Group work (45 min): Using Academic Search.
Directed learning (2 hours): Finding articles by making use of different databases.
Lecture (1 hour): Processing of information.

Lecture (30 min): Documentation.
Group work (30 min): Documentation.
Directed learning (2 hours): Bibliographic description and processing of information.

Students will be given a topic on which to find information, evaluate the information, write a short assignment including correct bibliographic description of the sources they have used. An oral presentation of this assignment will be evaluated on the scheduled date.

Session 10: **Presentations (Evaluation of Module MEA112)**

Student feedback.
Project presentations as scheduled.

Closely related modules

Further reinforcement of skills touched on in this module will depend on the subject-specific needs as identified within core modules. Acquisition and application of skills will be evaluated as an integral part of core modules.

Evaluation

At the end of the two-week induction period, students will be classed as satisfactory, unsatisfactory or excellent on the basis of participation in and completion of programme activities and assignments.

Module development team: Ms AA Beylefeld, Prof CP Herbst, Dr FJW Calitz, Ms G Joubert, Ms H Lombard.

Questionnaire used for gathering student feedback on effectiveness of Module MEA112

UNIVERSITY OF THE ORANGE FREE STATE
FACULTY OF HEALTH SCIENCES
SCHOOL OF MEDICINE

MEA112 - LEARNER FEEDBACK FORM

Directions:

- Please answer the following questions truthfully.
- You will remain anonymous.
- Your responses will help us improve the module on general skills to better meet the needs of learners.
- Feel free to add comments / suggestions as you desire. If you need more space, use the back of this form or add another sheet of paper.
- Thank you for your cooperation.

---

1. Did Module MEA112 meet your expectations?

   _____Yes _____No

   If yes, how?

   If no, what were your expectations?

2. What was the most helpful part of MEA112?

3. What was the least helpful?

4. Did the module coordinating team (i.e. staff of the DSLD) assist you through MEA112 appropriately and in a timely manner?

_____Yes _____No

If yes, how?

If no, what could have been done differently?

5. In your own words, briefly share what your experience of MEA112 was like:

   a. Did it enhance your ability to adapt to a new learning environment? How?

   b. Has it helped to build your self-confidence? How?

   c. Have you detected any changes in your behavior or attitudes as a result of MEA112?

6. Do you feel that the process by which your performance is measured (attendance, participation, group project, written assignment, oral presentation) is fair? Motivate your answer.

7. Which sessions were most beneficial? (✓ all that apply)

_____ Session 1: Physical arrangement, administration and management of the Faculty
_____ Session 2a: Medical education in the UOFS Faculty of Health Sciences
_____ Session 2b: Inter-cultural etiquette and non-verbal interaction
_____ Session 3a: Group functioning
_____ Session 3b: Presentation skills
_____ Session 4: Self-regulation: Personal, financial and time management
_____ Session 5: Discovering computers
_____ Session 6: Subject-specific communication
_____ Session 7: Introduction to information technology and research
_____ Session 8: Finding and evaluating information
_____ Session 9: Database searching and bibliographic reference technique
_____ Session 10: Project work

Follow-up questionnaire used for triangulation purposes

APPENDIX 7G

Die Universiteit van die Oranje Vrystaat

The University of the Orange Free State

Afdeling Ontwikkeling van Studenteleer
Division of Student Learning Development

Dekaanskantoor / Office of the Dean
Fakulteit Gesondheidswetenskappe / Faculty of Health Sciences

339 (G13) BLOEMFONTEIN 9300
- 27 (051) 405 - 3395 / 4
- 27 (051) 444 - 3505
GNDKTLR@MED UOVS AC ZA

Dear Learner

Thank you for the comment on MEA 112 you have already articulated by filling in the questionnaire administered on 1 March 2000.

Hereby I wish to enquire whether you would be prepared to help me even further by commenting on **the enclosed report**. This report is a summary of all M.B.Ch.B. I learners' feedback on MEA 112.

If you are prepared to be of help, please use the form below to give your comment.

Thank you for you cooperation.

COMMENT ON REPORT: MEA 112

1. On what aspect of the report do you wish to comment?

.....

.....

.....

2. Why do you single out this aspect to comment on?

.....

.....

.....

3. What exactly is your comment (*-I am listening attentively!*)

.....

.....

.....

.....

SUMMARY: EVALUATION OF MEA112

1. INTRODUCTION

Curriculum 2000 started with a module on general skills (MEA112). The module consisted of ten 8-hour sessions, presented over a period of two weeks.

The aim of MEA112 is to:

- Familiarise learners with the physical environment and administrative procedure of the Faculty of Health Sciences
- Serve as an introduction to the way in which learners are expected to function within the new curriculum
- Develop the basic skills and competencies that are needed to support learning

It was attempted in the development and presentation of MEA112 to cultivate in learners specific attitudes, the most important of which are:

- The ability to relate to the small number of learners that make up a group
- Insight into the importance and benefits of cooperative learning
- Willingness to enhance existing knowledge, skills and attitudes
- A positive attitude towards self-evaluation and monitoring of own progress so that areas needing extra work can be identified

As such MEA112 can be seen as a key element of the M.B.Ch.B.I program, seeing that it provides the basis for a resource-based approach to teaching and learning in the nine remaining core modules.

2. STUDENT FEEDBACK

During the tenth and last session of MEA112 (= 1½ weeks after commencement of core modules) students were requested to evaluate the module. A total of 58 Afrikaans-speaking and 30 English-speaking students completed the questionnaire.

Feedback was as follows:

2.1 Did Module MEA112 meet your expectations?

LANGUAGE GROUP	YES	NO	NOT SURE
Afrikaans (n = 58)	53% (31)	47% (27)	-
English (n = 30)	80% (24)	13% (4)	7% (2)

	(beneficial to only 9%)	
2.	Medical education in the UOFS Faculty of Health Sciences (beneficial to only 10%)	2. Medical education in the UOFS Faculty of Health Sciences (but still beneficial to 37%)

2.4 Did the module coordinating team (staff of Division of Student Learning Development) support you appropriately and in a timely manner?

	POSITIVE	NEGATIVE
Afrikaans (n = 58)	100%	-
English (n = 30)	100%	-

Reasons given for experiencing the support of the Division of Student Learning Development positively (according to frequency):

Afrikaans: (n=58)

1. Helpful (x 27)
2. When we had questions, they were always there and our questions were answered effectively (x 14)
3. Friendly (x 9)
4. Explained, for example where to find resources (x 8)
5. Assisted us with project presentation (with stiffies, binding, transparancies) (x 6)
6. Always punctual (x 5)
7. Were always there when we needed them (x 4)
   Always came prepared to the venue (x 4)

English: (n=30)

1. Helpful (x 9)
2. Were always there when I needed them (x 8)
3. They explained unclarities (x 4)
   I felt free to ask questions / received adequate and cordial assistance / advice (x 4)
4. They were friendly, patient, tried their best to keep us all satisfied, especially with the groups (x 3)
5. "It seems as if they knew there was a person like me" (x 1)

2.5 Did MEA 112 help you to adapt to the new learning environment?

	YES	NO	NO RESPONSE
Afrikaans (n = 58)	76% (44)	22% (13)	2% (1)
English (n = 30)	77% (22)	10% (3)	13% (4)

- "Attendance is not a criterion of productivity"
- "Attendance is not fair – first-years have many obligations"
  one cannot attend everything"

- "Orals took up too much time which caused us to neglect our academic work - rather administer a written test"

English:

- "I do not like group work" (x 4 = 13%)
- "I am an individualist and prefer to work on my own. We have different learning styles and learn at different paces"
- "I pay my class fees and expect my marks to be my own"
- "Groupwork limits me as an individual".

2.7 General evaluation:

	LEARNED A LOT	LEARNED A LITTLE	LEARNED NOTHING	NO RESPONSE
Afrikaans (n = 58)	19% (11)	76% (44)	2% (1)	3% (2)
English (n = 30)	57% (17)	43% (13)	-	-

2.8 Suggestions for improvement of MEA 112:

Afrikaans:

- Shorten the module (x 7)
- Select better presenters; make it more interesting / exciting (x 4)
- Shorten the lectures (x3)
- Include a tour through the hospital (x 3)
  Give more attention to group work so that groups can learn to cooperate (x 3)
- Include a session on study methodology (x 2)
- A laboratory and museum visit – things that are more appropriate (x 2)
- Make it more medically oriented (x 2)
- Some lecturers were difficult to listen to
- Constantly shift groups so that one gets to know everbody
- Use another method to form the groups – it is too serious a decision to pick group members now for the next 5 years
- Introduction to lecturers and their expectations - to prepare us for examination subjects
- New things can receive more attention
- Give a break of 15 minutes after each hour
- Make it more practical

Themes discussed at focus group interview

FOCUS GROUP INTERVIEW: 25 JULY 2000

FACILITATORS: Ms M.P. Jama
Ms A.A. Beylefeld

VENUE: Seminar Room A112
Division of Student Learning Development

1. Group work

The first questionnaire survey indicated that many students were negatively inclined towards group work. In the follow-up survey, more than half of the class said that group work demands adaptability and sacrifice.

1.1 Briefly describe how you feel now after having experienced how group work is used in core modules.

1.2 Comment on the way in which you were grouped.

1.3 Also comment on the interactive processes and general functioning within your group.

2. Method of assessment

At the end of the first semester results were published according to classification, i.e. *excellent, satisfactory* and *unsatisfactory.*

2.1 Briefly describe how you felt when you saw the results.

2.2 Comment on this method of indicating achievement.

3. Attendance

According to regulations, attendance is compulsory. Minimum attendance of contact sessions is 80 percent.

3.1 How do you feel about the fact that your attendance is monitored while the rest of the campus is not subjected to such measures?

3.2 How should students who do not achieve 80 percent attendance in MEA112 be penalised?

4. Suggestions for improvement of MEA112

Paper presented by Mpho Jama at the 32nd Annual Forum of the Faculty of Health Sciences

EVALUATION OF THE GENERAL SKILLS MODULE (MEA 112) IN THE NEW M. B,. Ch. B. 1 CURRICULUM WITH THE AIM OF IMPROVING IT.

Jama M.P., Beylefeld A.A. & Joubert G.

Division of Student Learning Development and Department of Biostatistics.

1. INTRODUCTION

The module under scrutiny in this presentation is a module on general skills, MEA 112, which is an introductory module of the new educational programme, also referred to as curriculum 2000 of the University of the Free State's School of Medicine.

From the early design and planning stage of the curriculum, the importance of a solid induction period was recognized. First of all the new programme represents a radical change in the style of education most school leavers are used to. Secondly learners start their study careers at different levels of competency in the area of personal transferable and organizational skills. Subsequently it was anticipated that a significant number of learners would need special attention in this regard.

A module development team conceptualized a module that would allow learners to acquire and develop the general skills deemed necessary for coping with curriculum 2000.

As this was a new approach, the module team was also faced with the challenge of evaluating the module, the aim being to ascertain whether the new cohort of learners benefited and to also make improvements.

The most effective way of evaluating the module was to ask the very pioneers of the new programme, who were fortunately very co-operative and always willing to participate.

The purpose of this paper is to:

a) Explain the general approach, structure and content of module MEA 112
b) Explain how the development team dealt with the challenge of evaluating the module with the aim of improving its quality and effectiveness.

2. GENERAL APPROACH AND STRUCTURE OF MODULE MEA 112

The module comprises ten (10) eight (8) hour sessions offered by a fairly large number of staff members, including academics, administrative staff and people from the public sector.

The module involves 55 hours of contact time and 25 hours of directed learning over a two (2) week period. The content of these sessions is presented by means of various teaching and learning methods such as:

- live lectures
- video-taped presentations
- group work
- hands-on sessions
- computer-assisted learning
- do-it-yourself assignments (directed learning).

3. CONTENT OF MODULE MEA 112

The aim of the module is to:

- familiarize learners with the physical environment and administrative procedures of the Faculty of Health Sciences
- serve as an introduction to the way in which learners are expected to function within the new curriculum
- develop and enhance the basic skills and competencies demanded by a resource-based learning approach.

In an attempt to reach these aims, the syllabus included the following sessions:

- physical arrangement, administration and management of the Faculty of Health Sciences
- medical education in the Faculty of Health Sciences
- inter-cultural etiquette and non-verbal interaction
- group approach
- presentation skills
- self-regulation: personal, financial and time management
- discovering computers
- subject-specific communication
- introduction to information technology and research
- finding and evaluating information
- data-base searching and bibliographic reference technique
- project presentation.

4. DEALING WITH THE CHALLENGE OF EVALUATING MODULE MEA 112

4.1 Methodology

Evaluation of MEA 112 was done in three(3) phases viz.:

- During the last session of the module, i.e. one and a half weeks after commencement of the programme, data were gathered by means of a semi-structured questionnaire.
- Two months later, a follow-up questionnaire allowed learners to comment on a compilation of a summary of the first set of data.
- Two months later, further triangulation of results was pursued by means of a focus group interview giving special attention to group-work, method of evaluation and attendance as a performance measure.

4.2 Results

4.2.1 Results of the first questionnaire

Respondents 88, = 58 Afrikaans and 30 English.

Responses are summarized below under six (6) headings, namely:

- Did MEA 112 meet your expectations?
- Which part of MEA 112 was most beneficial?
- Did the module co-ordinating team (staff of the Division of Student Learning Development, DSLD) support you sufficiently?
- Did MEA 112 help you to adapt to the new learning environment?
- Do you feel that assessment of MEA 112 is fair?
- Do you have any suggestions for the improvement of MEA 112?

Question 1: **Did MEA 112 meet your expectations?**

According to the responses, the majority of English-speaking learners and half of the Afrikaans-speaking group were satisfied with the module on general skills (cf. **Table 1**).

Table 1. Proportion of learners whose expectations were met / were not met.

LANGUAGE GROUP	YES	NO	NOT SURE
Afrikaans (n = 58)	31 (53%)	27 (47%)	-
English (n = 30)	24 (80%)	4 (13%)	2 (7%)

See **Appendix A** for reported objections.

Question 2: **Which part of MEA 112 was most beneficial?**

Responses received indicate that learners were very appreciative of the research and technological components of the module (cf. **Table 2**).

Table 2. Rank-ordering of sessions according to perceived beneficiency.

Afrikaans group(n=58)	English group(n=30)
1.Data base searching and bibliographic references(59%) 1.Finding and evaluating information(59%)	1.Introduction to information technology and research(73%)
2.Discover computers(55%)	2.Database searching and bibliographic reference(70%)
3.Presantation skills(48%)	3.Presantation skills(67%) 3.Finding and evaluating information(67%0
4.Introduction to information technology and research(45%)	4.Discovering computers(63%)
5.Inter-cultural etiquette and non-verbal interaction(33%) 5.Subject specific information(33%)	5.Project work(53%)

Question 3: **Did the module coordinating team, i.e. staff of the Division of Student Learning Development (DSLD), support you sufficiently?**

100% of learners in both English- and Afrikaans-speaking groups indicated that the staff of the DSLD supported them appropriately and in a timely manner (cf. **Table 3**).

Table 3:

	POSITIVE	NEGATIVE
Afrikaans (n = 58)	100%	-
English (n = 30)	100%	-

Learners response of the efficiency and effectiveness of the module coordinating team is a feather in the cap of the staff of the DSLD. It means the staff really follow their slogan, which is: 'We Care'. See **Appendix B** for typical comments.

Question 4: Did MEA 112 help you adapt to the new learning environment?

Judging from the response received, MEA 112 has contributed significantly to the learners adjustment to the new learning environment (cf. **Table 4**).

Table 4:

	YES	NO	NO RESPONSE
Afrikaans (n = 58)	44 (76%)	13 (22%)	1 (2%)
English (n = 30)	22 (77%)	3 (10%)	5 (13%)

See **Appendix C** for reported explanations.

Question 5: Do you feel that the process which is being used to measure your progress (attendance, participation, group project, written assignment and oral presentation) is fair?

A significant number of learners failed to see how the assessment criteria relate to the aims of the module (cf. **Table 5**).

Table 5:

	YES	NO	NOT SURE	NO RESPONSE
Afrikaans (n = 58)	33 (57%)	17 (29%)	4 (7%)	4 (7%)
English (n = 30)	20 (67%)	4 (13%)	3 (10%)	3 (10%)

See **Appendix D** for responses.

Question 6: Do you have any suggestions for the improvement of MEA 112?

Afrikaans group

- Shorten the module
- Include hospital, museum and laboratory visit
- Give more attention to group-work
- Shift groups constantly
- Use another method to form groups
- Make it more medically oriented

English group

- Condense the module
- Computer sessions too short
- More help with language usage
- More individual projects
- Module should not be compulsory especially for post-graduates
- Make it more relevant

4.2.2 Results of the second questionnaire

Respondents 88 = 58 Afrikaans and 30 English.

Respondents were requested to comment on the report of the first questionnaire using the following headings:

- On what aspect of the report do you wish to comment?
- What exactly is your comment?
- If you have not chosen group-work or method of evaluation to comment on, briefly comment on each of these aspects.

Question 1: On which aspect of the report do you wish to comment?

N.B. Some learners commented on more than one (1) aspect of the report.

The two (2) most popular aspects that learners commented on were:

- suggestions for the improvement of MEA 112
- differences between the needs of the Afrikaans- and English-speaking groups.

Question 2: What exactly is your comment?

Some learners indicated that the module is acceptable and is offered at the correct period.

Most English-speaking learners indicated that more attention should be given to computer skills.

Question 3: Group work

1st category of learners indicated that group work demands adaptability and sacrifice
2nd category of learners felt that an individual's capacity or potential cannot be reflected in group work
3rd category felt that division of groups was too drastic, more time is needed to do that and include free choice.

Question 4: Method of evaluation

1st category felt method of evaluation is acceptable
2nd category of learners are against group evaluation
3rd category indicated that attendance should not be an evaluation criteria.

4.2.3 Results of FG1

12 participants = 8 Afrikaans and 4 English.
The FG1 gave special attention to:

- Group-work
- Attendance
- Method of evaluation

Group work

Most of the participants were aware that waiting for the grouping until they know each other would take time, but feel that it would be an ideal situation.
A suggestion was, there should be more than one opportunity for re-shuffling.
When asked what their feeling was on group members sharing marks, the response was that it would be difficult since the level of involvement and skills are not the same and that could create conflict.
Participants also indicated strongly that there should be more individual projects than group projects as groups hinder performance.

Attendance

The regulations stipulate that learners should have 80% attendance of class for each module in order to qualify for examinations.
Among the participants there were; sportsmen, young adults, older adults, post-graduates and under-graduates who come straight from high school.
When asked how they felt about 80% attendance, the response was:

- Sportsmen: "we still need our time for sports, the attendance hampers this"
- Young adults: "We still need to have a balanced life, the attendance hampers this"
- Older adults who are also post-graduates had this to say:
  "If you want to be a Doctor you must live medicine and immerse yourself completely in medicine".
  "We are going to be the best"
  "You should learn to differentiate between primary and secondary things"
  "You need to have a paradigm shift"
  "Certain information discussed in the class is not in the books"

Evaluation

Once more participants felt that group-evaluation is unfair.
One participant referred to the project presentation that affected their performance because the member of the group who was chosen to do an oral presentation was not a good public speaker. This also lead to feelings of guilt.

Recommendations

- Dedicate more time to practice public speaking throughout, maybe once a week
- Weak presenters to be given an opportunity to practice and present to a smaller group before presenting to a big group
- A mini-session in front of the class before a big project
- Give clear criteria for evaluation

Recommendations for MEA 112

1. More medically oriented – 100%
2. Sessions on culture and finance to come later
3. Anthropology in MEA 112

5. INTERPRETATION OF RESULTS

The job market and society at large no longer demand subject knowledge and subject related skills only, but they also require general competencies that higher education can provide. Competencies like general skills, critical thinking skills, writing skills, communication and interpersonal skills are prerequisites for success due to the fact that they are subject-neutral and transferable to any situation in life (Gnanam 2000:147).

To illustrate the relevance of Module MEA 112 data gathered from the two(2) questionnaires and focus group interview shows that the pioneers of the new programme **accept the module** and further gave suggestions for the improvement of the module.

Learners also indicate that within the general skills there should also be course-related sessions, like visits to the hospital, laboratory and museum.

One of the major highlights of the results that featured throughout is **group work.** Data in the first questionnaire indicate that group work affects individual performance. In the second questionnaire , learners felt that group work requires adaptability and sacrifice. Once again, during the focus group interview, they still felt unhappy with group work. It is evident to the module development team that the rationale for working in groups, the composition of groups and the operationalisation of group process should receive special attention in future.

It is often heard that the first few weeks of higher education is critical since most learners who drop out do so within the first six(6) weeks (Upcraft, Gardner and Associates:1989).

Judging from the results, MEA 112 has contributed significantly to the learners **adjustment to the new learning environment** because only two(2) of them dropped out at the end of the first semester.

Some learners bring complex educational and personal issues with them when they enroll for higher education. Some have anxiety and apprehension about beginning a higher education venture. This shows that there is a need for a comprehensive and individualized support service (Levitz, Noel and Ritcher 1999:31).

From the response obtained, which indicated that 100% of the learners felt that the **DSLD supported** them, the division feels satisfied that it contributes towards meeting learners needs.

One of the lessons learned in the research is that learners in the programme are not only diverse in terms of **educational backgrounds** but also in terms of **age** and **experience** in higher education. The perceptions and attitude of older learners who are also post-graduates and the younger ones who are under-graduates differ in terms of priorities related to **class attendance** and **extra mural activities**. Older learners feel that being a medical student means dedicating most of the time to studies. Younger ones feel they still need to continue with other activities, even if it means limiting class attendance.

6. CONCLUSION

One of the learners said that MEA 112 is just like a safe house. The MEA 112 team has in the development of the module tried to lay a good foundation for the house. When the learners were in the house they asked them how they felt in it. They said there are still improvements to be made. The team is still prepared to make it an even safer house for the next occupants.

BIBLIOGRAPHIC REFERENCES

Gnanam, A. 2000. Core competency and higher education. South African Journal of Higher Education. 14(2)

Levitz, S., Noel, L. & Ritcher, J.B. 1999. Strategic moves for retention success. New Directions for Higher Education. No.108.

Upcraft, M.L., Gardner, J.N. & Associates. 1989. The freshman Year Experience: Helping Studets Survive and Succeed in College. San Francisco: Jossey-Bass.

Questionnaire used for gathering student feedback on their experience of journal writing **APPENDIX 7J**

Name/Naam ....
Stucent(e) no... .....
Date/Datum... ....

JOURNAL WRITING: SESSION 10
JOERNAAL BYHOU: SESSIE 10

EVALUATION / EVALUERING

- The overall purpose of keeping a journal in Module MEA112 was to help you organise your thoughts and to provide you with important insights into your academic and personal life.

  Die oorhoofse doel met die byhou van 'n joernaal in Module MEA112 was om jou te help om jou gedagtes te orden, asook om jou belangrike insigte te gee in jou akademiese en persoonlike wêreld.

- The Module Development Team would like to know what your experience was of journal writing as a learning mechanism.

  Die Module Ontwikkelingspan wil graag weet hoe jy die byhou van 'n joernaal as 'n leermeganisme ervaar het.

- Please answer the questions below honestly and as completely as possible: Antwoord asseblief die vrae hieronder eerlik en so volledig as moontlik:

1. **Overall, I thought the journal writing was:**
   - ☐ Very helpful
   - ☐ Fairly helpful
   - ☐ Neutral
   - ☐ Not necessary
   - ☐ A total waste of time

   ✓ only one

   Oor die algemeen het ek gedink die joernaalskrywing was:
   - ☐ Baie nuttig
   - ☐ Redelik nuttig
   - ☐ Neutraal
   - ☐ Onnodig
   - ☐ 'n Totale mors van tyd

   ✓ slegs een

2. If you answered question 1 **positively**, please specify in which way the journal writing has helped you most:

   As jou antwoord by 1 **positief** was, spesifiseer waarmee die joernaalskrywery jou die meeste gehelp het:

---

3. If you answered question 1 **negatively**, please specify the main problem you had with it:

   As jou antwoord by vraag 1 **negatief** was, spesifiseer asseblief wat jou grootste beswaar daarteen is:

EVALUERING VAN JOERNAAL BYHOU

BAIE NUTTIG (n=3)

- reflekteer dit wat geleer is as 'n geheel
- help student om stapsgeyws die ontwikkeling en groei op te som vir latere terugverwysing
- kry duidelike verwysingsraamwerk vir verdere opdragte
- help om gedagtes te orden
- laat jou dink en onthou – die inligting sink in

REDELIK NUTTIG (n=19)

- sif inligting en gee belangrikste weer
- kan oordeel of dag produktief was
- help om jouself eerlik te evalueer
- kom agter wat jou sterk/swak punte is en kan daarvolgens beplan en optree
- help om beter te onthou en kan teruggaan vir verwysing
- kry objektiewe perspektief en orden gedagtes
- kry die groot beeld
- het die spinnerakke van die kreatiewe denke afgeblaas
- selfvertrou gebou
- gehelp om van party van my stres ontslae te raak
- dit het gesorg vir nie te veel stres tydens jool

NEUTRAAL, POSITIEF (n=6)

- dit maak jou betrokke by wat jy leer
- help om te onthou
- gehelp om my doelwitte te identifiseer
- kan die volgende dag sien hoe ek die vorige dag ingestel was

NEUTRALL, NEGATIEF (n=4)

- nie regtig nut gehad
- soms in laaste 2 minute van klas afgejaag
- kan dalk behulpsaam wees as dit anders hanteer was
- was nie altyd duidelik wat hulle in die joernale wou hê nie
- was nie altyd moontlik om die lesing saam te vat en puntsgewys weer te gee nie
- brief aan ouers was onnodig
- dink nie dit het my vreeslik gehelp nie

NEUTRALL, POSITIEF EN NEGATIEF (n=7)

- mooi opgesom en laat vassteek
- kry perspektief

- tydsbestuur was onnodig
- finansiële bestuur was onnodig
- afgerammel omdag dag baie lank was
- sommige sessies was nutteloos
- sekere onderwerpe (nie journaalbyhou nie) was elementêr, oneffekteif en tydrowend
- dit het te veel van my tyd gevat wat ek waardevol kon gebruik het
- weet nie of dit werklik van nut is vir die toekoms nie
- te veel ingemeng met ons ander vakke wat effens belangriker is
- die tyd wat ons daaraan spandeer het, kon beter benut gewees het – deur bv. die nuwe leerplan aan ons te verduidelik – ons is steeds bekommerd of dit geslaagd gaan wees
- almal is bang dat 5 jaar leerplan 'n flop gaan wees

ONNODIG (n=8)

- die taak vir MEA 112 was groot in min tyd en studieverwante vakke is afgeskeep daarvoor
- sessie 1 van MEA 112 is nie volledig aangebied nie – ons is nie aan al die dosente bekend gestel nie
- het ekstra tyd gevat
- party lesings kon jy nie regtig terugvoer gee nie – alles was net jou persoonlike mening
- kan nie sien wat se verband dit met my leerdery het nie
- brief aan ouers het niks met medies swot uit te waai nie
- voel ons het ons tyd gemors
- ek hou nie daarvan nie
- tydmors – want die span gaan sekerlik nie alles deurlees nie
- voel nie dat ek iets geleer het nie en voel ook die verryk nie
- nie daarby baatgevind nie
- dit is 'n persoonlike ding wat van my verwag word om te skryf – dan sal mens nie die waarheid skryf nie, omdat jy weet ander gaan dit lees
- as ek dit oor 'n paar jaar weer moet lees, sal baie van my persepsies verander het – dus nie relevant

MORS VAN TYD (n=5)

- dit orden nie jou gedagtes nie
- dit vat net tyd
- niks geleer
- as ek dit nodig ag om die dag se werk op te som, sal ek dit by die huis doen
- geen nut om opstelle (o.a. aan myself) te skryf nie
- die rede (nl. om die dag se werk op te som) is geldig, maar die metode is nutteloos
- ons het voldoende notas gekry – onnodig om brief aan myself/my ouers te skryf – dit was simpel

VERY HELPFUL (n=7)

- it helped me to remember important facts and info I gathered during lectures
- it really helped me to brainstorm what I have learned
- it made me honest about myself
- made me realise that even thou the truth hurts, it must be said and faced
- could communicate with my deep buried feelings and express them on paper
- I have been able to take control of my life
- help me manage my time
- help me to make a good presentation and speech
- enhanced my writing skills
- I learnt to ~~interact~~ connect my everyday life with what I have learned
- helped me to understand how other people feel and think
- it helped us to function from the start as a group
- helped the group to identify and solve problems
- helped to identify with other group members, and to stabalise group interaction
- now I am able to use a computer
- it helped me to work with other people – important, because a doctor had to work with other people

FAIRLY HELPFUL (n=11)

- helped to remember what you've learnt
- helped to organise your thinking
- helped to consider the relevance of the day's work an to evaluate it
- helped to put it in perspective regarding the coming studies
- helped me to be orientated with university life

NEUTRAL, POSITIVE (n=4)

- journal writing helped to review the day's work and even understand a few things which might have not understood during the day
- I think it was helpful in the sense that it "forced" one to reflect on the day's activities. Thus giving the work a greater chance to absorb and to be understood better

NEUTRAL, NEGATIVE (n=1)

- It didn't held my attention and the most of it wasn't very interesting

NEUTRAL, POSITIVE AND NEGATIVE (n=4)

- I actually answered neutrally, as I feel that the journal writing did help us reflect on what we did, but it was a tedious task which I did not always know how to answer
- the course for me was not bad and good It was neutral. Some topics were boring while others were interesting and really good
- to reflect what you were told, to listen attentively

- it helped us to realise if we understood the day's activities. I enjoyed discovering my inner feelings about our sessions sometimes the journal writing made re realise how privileged I am to receive a good education as well as many other general skills which you don't expect to learn at varsity

- it's because I was every day working
- does not consist of questions that need someone to think
- the daily sessions were so long, that by the end of the day it was a real drag to write a journal

NOT NECESSARY (n= 1)

- I could not see how relevant it is to the greater scheme of things, that is, studying medicine
- I believe journal writing belongs elsewhere, not in the study of medicine where there's a lot of work to do and no time for trivialities. The good should be brought in to supplement and enrich the course, but journal writing is certainly not the way to go

A TOTAL WASTE OF TIME (n=2)

- it was because it didn't let us write what we learn for the day, and mostly what we didn't understand
- if the journal hadn't restricted us in what to say, then it would be necessary to write it
- as I understand the meaning/definition of a journal, then I think some improvements need to be done on the journal writing
- the journal writing was a total waste of time in the sense that, students were channeled to a specific question. The understanding and meaning of journal got lost there, as we though we were to reflect on the happenings of each day as they passed by
- the co-ordinators were actually interested at what they wanted to hear and not the general feeling of the students

Score sheet used for assessment of oral presentations

MEA 112
SESSION 10: EVALUATION OF PROJECT PRESENTATIONS

GROUP: .....

PRESENTER: .....

SCORE SHEET

CHARACTERISTIC	SCORE	COMMENT
1. **Podium presence** (personal stance, posture, body language, relationship with audience)	1 2 3 4 5 6 7 8 9 10	
2. **Speaking ability** (language usage, voice modulation)	1 2 3 4 5 6 7 8 9 10	
3. **Management of the environment** (command of space, technical facilities and support materials, handling of questions)	1 2 3 4 5 6 7 8 9 10	
4. **Content of presentation** (selection and structuring of verbal message and visual aids, relevancy, accuracy, evidence of critical thinking)	1 2 3 4 5 6 7 8 9 10 x 2	
Total score = (maximum 50 points)	_____	
% =	_____	

Letter requesting the involvement of clinicians in general skills teaching in MEA112

19 June 2000

Prof. B. Middlecote
Chair: Phase II

Dear Professor Middlecote

DEVELOPMENT OF GENERAL SKILLS: PHASE I

- The module development team[5] responsible for the design and delivery of Module MEA112 in Phase I had a meeting today with a view to the improvement of the module.

- Discussions took place against the background of student feedback on their experience of MEA112.

- With regard to the road ahead, the following is of importance:
  (a) the medical context of MEA112 should receive greater prominence;
  (b) development of skills such as intercultural communication, computer skills and critical evaluation of information will have greater impact if the theory is supplemented by real-world examples.

- In order to reach this goal, I need the following:
  (a) an indication of the kind of numerical, computer, research and language skills that you will expect from students in Phase II, and especially an indication of the kind of contexts in which students will need these particular skills;
  (b) the names of clinicians whom I can approach with a request to become involved in the teaching of topics such as:

- the presentation of scientific information in a medical context
- intercultural problems that the doctor has to deal with during consultations and ward rounds
- community involvement

I sincerely trust that you will be able to assist the module development team in their endeavour to enhance the contextual relevance of Module MEA112.

Kind regards

ADRI BEYLEFELD
LEADER: MODULE MEA112

[5] Ms A.A. Beylefeld, Prof. C.P. Herbst, Dr. F.J.W. Calitz, Me. G. Joubert, Me. H. Lombard, Me. M.P. Jama

Excerpt from the 2001 MEA112 workbook

1. WELCOME

The staff of the Faculty of Health Sciences (FHS). School of Medicine. module leaders. module development team and facilitators welcome you to the Module: General skills (MEA 112).



From: L. Dison *et al.*. 1993

This guide describes the first two (2) weeks of Phase 1 (first year) of the M. B. Ch. B 1 learning programme. It is designed to facilitate your learning in Module MEA 112.

2. ORIENTATION

The module development team and facilitators trust that you will acclimatise quickly and make effective use of all opportunities offered to you.

You are about to start a "race" and we would like to see you reach the finishing line as a winner. Use the following tools to equip yourself:

Self-esteem:	Concentrate on your strengths, *not* weaknesses: on what you have done, *not* what you have not done.
Motivation:	Have a powerful desire to move towards your dominant and positive thoughts.
Goal-setting:	Use your imagination to "see" yourself achieving specific goals and practise winning as if you have already won.
Self-discipline	Practise the skills necessary to achieve your goals relentlessly.
Perspective:	Strive for a " win-win" situation because by helping others you help yourself.



Notional learning hours: 80 hours (=8 credits)

The amount of time you require to complete the module is:

36 hours contact teaching and learning
27 hours directed learning
±17 hours self-study

3. LEARNING RESOURCES

There are no prescribed books in this module. However, feel free to use the following resources to facilitate your learning:

- Library
- Computer
- Your colleagues
- Module team and facilitators
- Semester guide

4. AIM OF THE MODULE

A learner-centred curriculum, such as the one you are about to embark on, represents a radical change in the style of education most current school-leavers are used to.

A learner-centred curriculum aims at producing graduates whose approaches to learning are based on curiosity and exploration of knowledge, rather than its passive acquisition.

In order to adapt to this new way of constructing knowledge, and the new learning environment within the Faculty of Health Sciences, Module MEA 112 was designed to

- familiarise you with the physical surroundings and learning resources available in the Faculty of Health Sciences;
- introduce you to the way in which you will have to work as a learner in the new curriculum;
- develop the basic skills and competencies you will need to support your learning.

In addition, it offers opportunities for self-assessment that will enable you to (a) identify deficiencies in your knowledge, skills and attitudes likely to impair your academic performance further on in the curriculum, and (b) take appropriate steps to remedy them.

5. INTENDED LEARNING OUTCOMES

The Faculty has agreed on certain learning outcomes for the next two weeks, which are up to you to achieve (with the Faculty's support). Specifically they are that at the end of Module MEA 112, you should be able to :

- *function as a member of a group*
- *use learning resources on an individual and group basis during directed learning time*
- *apply the principles of problem solving within a group context and individually*
- *demonstrate intercultural tolerance*
- *use a computer as a learning resource*
- *evaluate numerical data critically*
- *collect , analyse, organise and critically evaluate information*
- *communicate research information*
- *use subject specific terminology*
- *apply specific techniques to manage social, personal and academic life.*

In addition to these objectives, the Faculty hopes to instil in you certain attitudes, the most important of which are:

❖ *Ability to relate to the small group of learners belonging to your group.*

- *Insight into the importance and advantages of co-operative learning with others to share knowledge and skills with a view to promoting effective learning.*
- *A positive attitude towards community visits, based on the realisation that it is essential to meet people in their social context in order to understand and meet their needs.*
- *Willingness to recognise and capitalise on the knowledge, skills and attitudes you already have (i.e. realise that you are not a clean slate or an empty bucket to be filled with new knowledge, skills and attitudes).*
- *A positive attitude towards self-assessment by monitoring your own progress and identifying areas that need extra work.*

6. STRUCTURE AND PRESENTATION OF THE MODULE

The content of Module MEA 112 will be presented in the form of ten (10) sessions, each consisting of approximately eight (8) hours of structured activities. However, you can expect to spend some more time in self-study and preparation, especially with the view to the written assignment and oral presentation thereof.

The content of each session will be presented by means of various teaching and learning methods, such as



live lectures



video-taped inserts



group work



computer-assisted learning



DIY assignments (directed learning)

7. DETAILS OF MODULE LEADERS AND FACILITATORS

Session	Content	Co-ordinator/ Facilitator	Department/ Division	Room	Tel
1.	Orientation to new learning environment	Prof CJC Nel Prof DJV Weich Mr L Theron Ms AA Beylefeld Ms MP Jama Ms V Lourens	Deans Office Intern. Medicine Administration (FHS) DSLD DSLD Dean's Office	D 211 E246 D 203 A 115 A 114 D 115	405-3(405-31 405-3(405-33 40533(405 36-
2.	Group learning	Prof MM. Nel Ms H. Bezuidenhout	Education Development Education Development	A 125 A 129	405-30 405-30
3.	The curriculum	Dr AEM Prinsloo Ms AA Beylefeld Ms MP Jama Ms V Lourens	Dean's Office DSLD DSLD Dean's Office	E 208 A 115 A 114 D 115	405-35 405-33 405-33 405-36-
4.	Personal. social and academic self-responsibility	Dr B Anderson Dr FJW Calitz M AA Beylefeld Ms MP Jama	Management studies Psychiatry DSLD DSLD	FGG361 B E 230 A 115 A 114	401-21(407-93(405-33(405-339
5.	Discovering computers	Ms. H. Lombard Ms R du Plessis	Sasol library Frik Scott library	403	401-222 405-300
6.	Introduction to information technology and research	Ms H Lombard Ms R du Plessis Prof G Joubert Prof CP Herbst	Sasol library Frik Scott library Bio-statistics Medical Physics	403 CRdeWet E 403	401-222 405-300 401-311 405-315
7.	Subject specific com-munication	Ms AA Beylefeld Ms MP Jama Mr AEF Gous Mr W van Wyk Mr N Baird	DSLD DSLD Anatomy Medical Physics Education Development	A 115 A 114 B 136 E 402 A 131	405-339 405-339 405-310 405-344 405-309
8.	Finding and evaluating information	Ms H Lombard Ms R duPlessis Prof G Joubert Prof CP Herbst	Sasol library Frik Scott library Bio-statistics Medical Physics	403 CRdeWet E 403	401-222 405-300 401-3117 405-3157
9.	Data base searching	Ms H Lombard Ms R du Plessis	Sasol library Frik Scott Library	403	401-222 405-3006
10.	Written and oral presentation	Prof G Joubert Prof CP Herbst M AA Beylefeld Ms MP Jama	Bio-statistics Medical Physics DSLD DSLD	CRdeWet E 403 A 115 A 114	401-3117 405-3157 405-3395 405-3394

M.B.CH.B 1
MEA112

STU. NO	INDIVIDUAL SCORE		GROUP SCORE							
	ATTENDANCE	JOURNALS	WRITTEN PROJECT				ORAL PRESENTATION		FINAL	
			INFORMATION			CONTENT	TUTOR EVAL	PEER EVAL	MARK	
			GROUP	STRUCTURE	REFERENCING				%	
1999339862	Excellent	Excellent	A	Satisfactory	Unsatisfactory	Satisfactory	Satisfactory	Satisfactory	64	
2000018644	Excellent	Excellent	A						64	
2000009049	Excellent	Excellent	A						64	
1999251638	Excellent	Excellent	A						64	
1999003492	Excellent	Satisfactory	B	Satisfactory	Unsatisfactory	Excellent	Excellent	Satisfactory	68	
2000002010	Satisfactory	Excellent	B						68	
1999193764	Excellent	Excellent	B						71	
2000002838	Excellent	Excellent	B						71	
2000009361	Excellent	Excellent	C	Unsatisfactory	Unsatisfactory	Satisfactory	Satisfactory	Satisfactory	61	
2000016580	Satisfactory	Unsatisfactory	C						51	
1993122348	Excellent	Excellent	C						61	
2000007977	Excellent	Excellent	C						61	
1999085283	Excellent	Excellent	D	Satisfactory	Unsatisfactory	Satisfactory	Satisfactory	Satisfactory	64	
2000009759	Excellent	Excellent	D						64	
2000005955	Excellent	Satisfactory	D						61	
2000006631	Excellent	Excellent	D						64	
2000021051	Excellent	Excellent	E	Satisfactory	Unsatisfactory	Satisfactory	Satisfactory	Satisfactory	64	
2000014098	Excellent	Excellent	E						64	
2000017646	Excellent	Satisfactory	E						61	
2000017364	Excellent	Excellent	E						64	

Marks reflecting the performance of M.B.,Ch.B.I students in MEA112 in 2000

APPENDIX 8C

1997257256	Excellent	Excellent	F	Excellent	Unsatisfactory	Excellent	Excellent	Satisfactory	75	SMO
2000002200	Excellent	Excellent	F						75	SMO
1995492509	Excellent	Excellent	F						75	SMO
2000002374	Excellent	Excellent	F						75	SMO
1995558549	Excellent	Excellent	G	Satisfactory	Excellent	Satisfactory	Satisfactory	Satisfactory	71	
2000012738	Excellent	Satisfactory	G						67	
2000013645	Excellent	Excellent	G						71	
1999347527	Excellent	Excellent	G						71	
2000020806	Excellent	Excellent	H	Excellent	Excellent	Satisfactory	Satisfactory	Satisfactory	74	
2000007381	Excellent	Excellent	H						74	
2000005542	Satisfactory	Excellent	H						71	
2000007035	Excellent	Excellent	H						74	

Grading	Weight
Excellent	85%
Satisfactory	60%
Unsatisfactory	40%

UOFS scoring system

75% = pass with extinction

50 - 74% = pass

less than 50% = fail

MODULE LEADER:

ABeyleveld

DATE:

30 - 06 - 2000

MODULE DEVELOPMENT TEAM:

.....

.....

.....

.....

.....

Information on assessment in MEA112 in 2001

ASSESSMENT IN MEA112

GENERAL INFORMATION

In this module you will be assessed on a continuous basis. There will not be a final exam, but you will be rewarded for:

- Consistent class attendance (each session monitored on a daily basis)
- Completion of learning tasks in the *Module Guide*
- Collaboration with group members
- Test performance
- Summary writing
- Design and production of a brochure/pamphlet
- A written assignment
- Oral presentation of the written assignment

Individual performance is important, but collaboration with your group is equally important. For some activities you will earn an average group mark. Within the group, individual marks will then have to be negotiated. In this way, you will have the opportunity to reward individual effort and to penalise individual sloth. Refusal to collaborate with the group could result in you being awarded zero marks.

You should realise that assessment is no longer the business of lecturers/facilitators only. In MEA112 you will be expected to assess yourself (self-assessment) and the members of your group (peer assessment).

Self-assessment will help you keep track of your own strengths and weaknesses.
Peer assessment will permit you to take cognisance of the strengths and weaknesses of the members in your group. The latter form of assessment will also indicate whether you rate yourself too high or too low.

ATTENDANCE

Tests and examinations are not the only means of reliable assessment. Attitudes and values (which form part of learning) need to be "measured" in alternative ways.

Compulsory class attendance is one way of measuring whether you have the responsibility, accountability and self-discipline that a doctor must have in order to be a successful professional practitioner.

Success in MEA112 depends not only on the test, or the assignment, but also on your conduct; and conduct includes attendance of at least 80%.

Malpractice policy:

The School of Medicine takes a stern view about practices that are not consistent with the ethical guidelines by which it operates. You are advised to seriously heed the warning not to forge the signature of another learner on the daily attendance lists.

SIGNATURE FRAUD IS A SERIOUS OFFENCE AND DISCIPLINARY ACTION WILL FOLLOW

LEARNING TASKS IN THE *MODULE GUIDE*

Learning tasks are a very important part of your development in MEA112, in the sense that the completed tasks represent a record of your thinking, and changes in your thinking.

We urge you to do all the required tasks in the *Module Guide*, These tasks are formative self-assessments, designed to help you learn, rather than "measure" your knowledge.

Conscientious completion of all tasks will be an indication of your lifelong learnership[1], i.e. the ability to keep up to date with new developments in the world of medicine, once you have completed your formal studies.

You will be required to hand in journal writings, evaluation sheets and questionnaires. The purpose of these activities is to provide the module development team with feedback on aspects of the module that you regard as important or irrelevant, as well as to improve the quality of the module.

Request: PLEASE WRITE LEGIBLY.

GROUP WORK

Being able to function as a member of a team and demonstrate that you hold democratic values, are regarded as essential outcomes of MEA112. Effective participation in group work will signify (a) that one day you will be able to form part of a multi-disciplinary health care team; and (b) that the School of Medicine is developing the kind of citizens that the new educational dispensation requires.

We urge you to approach the interdependence within your group with sensitivity. In some instances your group will receive, as a bonus, the poorest mark that was obtained by a member of your group; in other instances, such as the safari-test, each member of the group will answer a different question, the sum total of which will be the mark that is awarded to the whole group.

In order to perform well, members are encouraged to function interdependently. Each member of a group has strengths and weaknesses; each has different skills which, when combined, will help the group perform well. Therefore: It pays to help each other perform well!

SUMMARY WRITING

Demonstrating individual ability and proficiency in certain skills, is not to be neglected. The exercise in summary writing is meant to give you an opportunity to do just that.

Good writing is a marketable skill - many job descriptions in the world of work call for good writing skills. Even though we live in the information technology age, writing is still considered an essential skill. Owing to computers, large volumes of information can be stored and retrieved. However, this barrage of information can easily cause one to feel lost.

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[1] Lifelong learning (French term: *education permanente*) means seeing education as built into the process of living rather than as separated into a range of special activities.

Writing can help, according to Ellis[2] (1994:219): "When you write, you not only gather information you also assess it. You sift through the data, play with it, and sort it out. You look for relationships among facts and choose ideas that are useful to you. Through writing, you turn *data* into *insight*."

The exercise in summary writing is meant to determine how well you can grasp the main drift of a piece of writing, which is not necessarily in your mother tongue. Your summary will show how skilled you are at sequencing your understanding of the text into a coherent summary of key ideas and supporting detail.

NOTE: Do not copy key points *verbatim* from the passage (i.e. 'knowledge telling'). USE YOUR OWN WORDS TO DEMONSTRATE THAT YOU UNDERSTAND THE CONCEPTS YOU ARE WRITING ABOUT.

BROCHURE

Effective use of science and technology, reflecting responsibility towards the environment and others' health, is an important critical outcome[3] of the M.B.,Ch.B. I learning programme.

In order to start demonstrating your competence[4] in this area, you will be given an assignment in the form of the design and production of a brochure/pamphlet. The general outlay, headings, neat appearance, logical exposition (introduction, body, conclusion), referencing and bibliography will be assessed.

Each group will work jointly on one brochure/pamphlet and the mark earned, will apply to all members of the group.

MINI-PROJECT

The final, and most important "product" according to which you as an individual, as well as your group will be assessed, is a mini-project. The mini-project consists of a written assignment and an oral presentation. It attempts to integrate most of the skills you have been taught to perform, such as your ability to work with others, to gather information from various sources, to critically evaluate this information and to integrate the information in the form of a fluent, coherent scientific report.

Each group member must be prepared to make an oral presentation of the group's project to an audience consisting of peers and the module development team. One presenter from each group will be called on randomly on the day of the actual presentation. (Equal misery is good for bonding!)

Hint: approach the mini-project with the aim of demonstrating that you have achieved the skills of being part of a team, of collecting, critically evaluating and reporting information.

---

[2] Ellis, D. 1994. *Becoming a Master Student*. Rapid City, USA: Houghton Mifflin.

[3] Outcomes: demonstrable and assessable end products of a learning process. Critical outcomes are not restricted to particular disciplines or learning areas, but are cross-curricular and generic.

[4] Competence: Combination of knowledge, skills and attitudes.

The reports (written and oral formats) will be graded A (excellent = 80% - 100%), B (good = 70% - 79%), C (adequate = 60% - 69%), D (borderline = 50% - 59%) and E (fail = below 50%). In order to calculate an individual mark for each group member, the mark/grading obtained will be multiplied by the number of participants in the group (e.g. 50 x 4=200). The group itself will then have to decide how to divide the total score of 200 amongst the individual members, according to each person's contribution.

Those learners with A and B grades will then be encouraged to make an oral presentation at the Student Forum later on in the year, which is a prestigious occasion.

SUMMARY OF ASSESSMENT

In order to be declared an M.B.Ch.B.I-learner who has acquired the generic skills necessary for successful learning in Phase I of the Curriculum, you will be assessed in the following ways:

In addition to attendance of at least 80% of all scheduled contact sessions and *formative*[5] feedback on learning tasks in the *Module Guide*, there will be five *summatively*[6] assessed items in this module, namely

PRODUCT TO BE ASSESSED	DATE TO BE WRITTEN/ HANDED IN	WEIGHT TOWARDS MODULE MARK
Summary writing, 900-1000 words (individual)	Wednesday, 7/2 at 13h00 in A116	10%
Brochure (group)	Friday, 23/2 at 13h00 in A116	10%
Short-answer safari test (individual/group)	Wednesday, 14/2 at 12h00 in Kine 5	20%
1500-word written assignment (group/individual)	A: Wednesday, 28/2 E: Thursday, 1/3 at 13h00 in A116	40%
Oral presentation of assignment (group/individual)	A: Wednesday, 28/2 at 08h00 in Kine 7 E: Thursday, 1/3 at 08h00 in Kine 6	20%
	TOTAL:	100%

These 5 components will be summed to determine your final grading of

Excellent = 75% +
Satisfactory = 50 - 74%
Unsatisfactory = < 50%

[5] Formative assessment: Assessment during the course of the module so that suggestions by the assessor can lead to improved performance by the learner.
[6] Summative assessment: Assessment at the end of a session/ unit/module for the purpose of grading the learner.

Details of the assignments/projects you must undertake for assessment, are presented in the MEA112 *Module Guide.*

PLAGIARISM

Plagiarism refers to the usage of ideas, word sequences, diagrammes and other forms of work done by someone else, without appropriate acknowledgement.

NB: In the School of Medicine plagiarism also includes copying the work done by other learners on previous occasions.

PLAGIARISM IS A SERIOUS OFFENCE THAT WILL RESULT IN DISCIPLINARY ACTION

/c:assessment in 2001
AB:20-09-00

Instruments used for the assessment of written reports and oral presentations in 2001

1. WRITTEN RESEARCH PROJECT

Note: Learner and lecturer/facilitator fill out the form below. The completed form is handed back to the learner together with the marked written assignment so that they can see in what respects they have over- or underestimated themselves.

MARKING SCHEME

Each criterion is worth 5 marks. Categories for grading: **A** (Excellent) = 5, **B** (Good) = 4; **C** (Average) = 3; **D** (Poor) = 1

Learner: *Put an L in the top corner of the box which you feel is appropriate to your work. Repeat the process for each of the 9 criteria.*
Marker: *Put an N in lower corner of the box you deem appropriate with regard to each criterion.*

CRITERIA	GRADING AWARDED			
	A	B	C	D
1. Introduction (orientation of the reader to the subject)				
2. Review of information gathered from the prescribed sources				
3. Discussion of the subject (arguments made on the basis of a critical evaluation of the information: presentation of scientific evidence to confirm arguments)				
4. Conclusions drawn				
5. Acknowledgement and citation of sources consulted				
6. Bibliographic referencing				
7. Use of tables, graphs and figures				
8. Written expression (style of writing, grammar, spelling, punctuation, etc)				
9. General finish off (neatness of handwriting or word processing)				
Total mark as suggested by the learner				
Total mark as moderated by the marker				

WRITTEN RESEARCH REPORT

ASSESSMENT CRITERIA

PLEASE NOTE: The scheme below should be completed by the lecturer/assessor as well as the group.

1. **Each group allocate a mark to their group's written report - before handing it in.**
2. **The lecturer/assessor allocates a moderated mark.**
3. **The completed form is returned to the learners together with their assessed report, so that they can see where they have over- or underrated themselves.**

ASSESSMENT SCHEME

Each criterion can earn a maximum number of marks. e.g. only 5 marks can be earned by an excellent introduction. The marks for the different criteria are then summed to get a mark out of 100.

CRITERIA	MAXS MARK	MARK ALLOCATED By Learner Group	By Lecturer/ Assessor
INTRODUCTION	5		
PURPOSE	5		
METHOD	10		
RESULTS	25		
DISCUSSION	30		
CONCLUSION	15		
REFERENCING AND USE OF LITERATURE	5		
LANGUAGE: GRAMMAR AND STYLE	5		
TOTAL	**100**		

HAND THIS FORM IN TOGETHER WITH YOUR RESEARCH REPORT

CRITERIA FOR ASSESSMENT OF ORAL PRESENTATION

SPEAKER .....

ORAL PRESENTATION FEEDBACK FORM

Key:	Excellent	Good	Average	Poor	Very poor	
	✓✓	✓	=	✗	✗✗	
1. SPEAKING ABILITY						
Voice	*appropriate*				*too loud/soft*	
Tempo	*paced*				*too fast/slow*	
2. PODIUM PRESENCE						
Orientation	*facing*				*hiding*	
Eye contact	*appropriate*				*too little*	
Involvement	*enthusiastic*				*uninvolved*	
3. CONTENT OF PRESENTATION						
Quantity of material	*appropriate*				*too much/little*	
Clarity and structure	*very clear*				*muddled*	
Level of interest	*very interesting*				*boring*	
4. MANAGEMENT OF ENVIRONMENT						
Visual aids	*very helpful*				*poor*	
Handling of questions	*very well*				*poor*	

Best feature of the presentation

If you were the presenter, what would you have done differently?

Group B

Assessment sheet used by lecturers and students, example of written feedback from lecturer and invitation to share group marks

6. CRITERIA FOR ASSESSEMENT OF WRITTEN RESEARCH REPORT

PLEASE NOTE: The scheme below should be completed by the lecturer/assessor as well as the group.

1. Each group allocate a mark to their group's written report - before handing it in.
2. The lecturer/assessor allocates a moderated mark.
3. The completed form is returned to the learners together with their assessed report, so that they can see where they have over- or underrated themselves.

ASSESSMENT SCHEME

Each criterion can earn a maximum number of marks, e.g. only 5 marks can be earned by an excellent introduction. The marks for the different criteria are then summed to get a mark out of 100.

CRITERIA	MAXS MARK	MARK ALLOCATED By Learner Group	By Lecturer/ Assessor
INTRODUCTION	5	4	7
PURPOSE	5	4	
METHOD	10	7	6
RESULTS	25	17	39
DISCUSSION	30	25	
CONCLUSION	15	12	12
REFERENCING AND USE OF LITERATURE	5	2	2
LANGUAGE: GRAMMAR AND STYLE	5	5	5
TOTAL	100	76	71

HAND THIS FORM IN TOGETHER WITH YOUR RESEARCH REPORT

Group B : 71%

Unfortunately, you did not deal with the topic as stated, that is the effect that smoking legislation has on the smoking habits of people.

So, your Introduction & Purpose don't fit the topic, and in Results you do not really give any results, relevant to the topic -

Otherwise, the only problems are that you did not describe you methods very clearly, and that references used are not always in text, or in text names appear which do not appear in reference list.

GROUP ...B (Green)

1. The mark that has been allocated to your written project, is 71 %
2. Share this mark now amongst yourselves according to each person's earnings:

   - Multiply the above mark with the number of members in your group
     i.e. ....8.... x ....71.... = ...568....
   - Share the latter mark amongst yourselves and indicate below how marks have been allocated:

Lutchman	RR	71
Jose*	C	71
King	ER	71
Taylor*	IK	71
Viljoen	MI	71
Edmunds	DJ	71
Wen	S-C	71
Hunt*	EA	71
TOTAL		568

   - Please do the above calculation in a responsible manner. The mark that you assign to each individual will be the mark that counts.

PLEASE HAND THIS FORM IN TO MS. ADRI BEYLEFELD, ROOM A115 - BEFORE OR ON TUESDAY, 20 MARCH 2001.

Letter requesting students' participation in focus group interview

15 March 2001

Dear ..... Group

REQUEST FOR PARTICIPATION IN FOCUS GROUP INTERVIEW

According to the facilitator of MEA112, Session 8, prof. Joubert, learners did not adhere to provided guidelines in a satisfactory manner for the written project.

Seeing that the skill of writing a scientific report is critically important in the rest of your study career, the identified problem area should receive attention.

I hereby invite you to elect a spokesperson who can represent your group's point of view in a **focus group interview on the problems of assessment** on Tuesday, 27 March 2001 between 12h00 and 13h00.

The interview will be conducted in Seminar Room A112 and a light lunch will be served.

Learners' input is important if we are interested in improving the quality of the M.B.,Ch.B.I learning programme. I therefore urge you in a friendly, but urgent manner to comply with this request.

Indicate the name of the person whom you have selected to represent your group in the space below and hand the tear-off to the class leader. He/she will see to it that I receive your responses.

Thank you for your friendly cooperation and your time!

Ms. Adri Beylefeld
Module leader: MEA112

✂

..... of the ..... Group, will attend the focus group interview on 27 March 2001.

Letter requesting students' participation in triangulation of focus group interview data

APPENDIX 8H

Die Universiteit van die Oranje Vrystaat

The University of the Orange Free State

Afdeling Ontwikkeling van Studenteleer
Division of Student Learning Development

Dekaanskantoor / Office of the Dean
Fakulteit Gesondheidswetenskappe / Faculty of Health Sciences

339 (G13) BLOEMFONTEIN 9300
- 27 (051) 405 - 3395 / 4
- 27 (051) 444 - 3505
GNDKTLR@MED UOVS.AC.ZA

7 May 2001

Dear Learner

TRIANGULATION OF RESULTS: FOCUS GROUP INTERVIEW WITH M.B.,Ch.B.I LEARNERS, 27 MARCH 2001

Thank you once again for participating in the focus group interview.

Below is a summarised version of what was said during the interview. Do you regard the summary as a true record of the issues that were raised by you?

If your answer is YES, please sign this document and return it to me before Tuesday, 8 May 2001.

If your answer is NO, please add your comments in the space provided below each topic of discussion. Then sign the document and return it to me before Tuesday, 8 May 2001.

Kind regards

ADRI BEYLEFELD
HEAD: DSLD

Stimuli that were used to obtain students' perception on discrepancy between lecturers' and students' marks in the focus group interview

FOCUS GROUP INTERVIEW WITH M.B.,CH.B.I LEARNERS – TUESDAY, 27 MARCH 2001

Group representatives who indicated that they would participate in the interview:

GROUP	REPRESENTATIVE	PRESENT
A – Blue		
B – Green		
C – Orange		
D – Turquoise		
E – Red		
F – Grey		
G – Magenta		
H – Yellow		
I – Blou		
J – Groen		
K – Turkoois		
L – Liggeel		
M – Donkergeel		
N – Grys		
O – Magenta		
P – Pienk		
Q – Oranje		

Facilitators:

Mss Adri Beylefeld and Mpho Jama
Division of Student Learning Development

Venue:

Seminar Room A112

Time:

12h00 – 13h00

Light lunch is served.

Stimuli:

1. ***It is vital that learners understand how marks will be allocated.***
According to our observation, there was a discrepancy between the marks learners allocated to themselves, and those allocated by the assessors in the written project. COMMENT PLEASE.

1. ***Dit is krities belangrik dat leerders sal verstaan hoe punte toegeken word.***
Volgens ons waarneming, is daar 'n groot diskrepans tussen die punte wat leerders aan hulself toegeken het, en diè wat die assessors gegee het. LEWER KOMMENTAAR, ASB.

2. ***While the lecturer may be in the best position to judge the quality of the <u>product</u> of group work, the group members themselves may be in the best position to judge the group <u>process</u> and the relative contribution of each group member.***
It is widely acknowledged that it is difficult to allocate marks differentially to individuals after a group mark has been assigned to the group.

Even so, learners often say that they want their marks to be their own. When they do get the opportunity to personalise a group mark, they don't seem to have the guts to award excellence and penalise individual sloth. It seems as if you all agreed that each and every member in the group contributed equally to the written project or else you were afraid of penalising each other.

2. ***Die dosent is waarskynlik in die beste posisie om die gehalte van die <u>produk</u> van groepwerk te beoordeel, maar die groeplede self is tog in die beste posisie om die <u>groepproses</u> en relatiewe bydrae van elke groeplid te beoordeel.***
Dit word alom erken dat dit moeilik is om punte gedifferensieerd aan individue toe te ken nadat 'n groeppunt verwerf is.

En tog sê leerders dikwels dat hulle verkies dat die punte wat hulle verdien, hul eie is. Wanneer hulle egter 'n geleentheid kry om die groeppunt regverdig onder mekaar te verdeel, wil dit voorkom asof hulle nie die waagmoed het om uitstaande verdienste te beloon of lyfwegsteek te penaliseer nie. Dit lyk asof julle almal ooreengekom het dat elke lid van die groep ewe veel bygedra het tot die skriftelike projek, of anders was julle bang om mekaar te penaliseer.

3. ***Most conventional assessment processes or methods do not indicate that skills matter. Gibbs (1995), a well-known educational researcher said: "I have seen teamwork projects which contained excellent training exercises but which were followed by content-oriented courses that made almost no demand on students to display the teamwork skills they had developed, and which then fell into disuse."***

If skills are not assessed, then learners soon stop taking the skill, and skills development modules seriously.

Comment on the degree to which skills such as team work, communication, critical thinking, technological skills, etc. are being tested in the core modules.

3. Die meeste konvensionele assesseringsprosesse of –metodes gee nie blyke daarvan dat vaardighede belangrik is nie. Gibbs (1995), 'n bekende onderwysnavorser het gesê: "I have seen teamwork projects which contained excellent training exercises but which were followed by content-oriented courses that made almost no demand on students to display the teamwork skills they had developed, and which then fell into disuse."

As vaardighede nie geassesseer word nie, dan hou leerders op om die vaardigheid, asook vaardigheidsontwikkelingsmodules ernstig op te neem.

Lewer kommentaar op die mate waartoe vaardighede soos spanwerk, kommunikasie, kritiese denke, tegnologiese vaardighede, ens. in die kernmodules getoets word.

Interview schedule used for gathering information from lecturers on the general skills that were addressed in core modules

SURVEY ON THE DEVELOPMENT OF GENERAL SKILLS IN PHASE I OF CURRICULUM 2000

MODULE:..... DATE: .....

MODULE LEADER:.....INTERVIEWER: .....

1. Which of the skills needed to demonstrate the qualities listed below are already addressed implicitly in your module?

- Complex thinking
- Skillful information processor
- Effective communicator
- Cooperative learner/worker
- Community worker/responsible citizen
- Tolerant/culturally diverse learner
- Independent/self-regulating learner

2. In which session does the development of the skills mentioned take place?

.....
.....
.....

3. How do you assess whether these outcomes have indeed been achieve?

.....
.....
.....

4. What will you accept as evidence that these outcomes have been achieved?

.....
.....
.....
.....

5. Would you have liked to spend more attention and time on the development of this particular skills?
If YES, how and where in the module?

.....
.....
.....

6 What form of support would you have liked to give to learners who do not achieve the desired level of competence?

.....
.....
.....

7. What is your definition of:

- Complex thinker
- Skillful information processor
- Effective communicator
- Cooperative learner/worker
- Community worker/responsible citizen
- Tolerant/culturally diverse learner
- Independent/self-regulating learner

EMBEDDED SKILLS DEVELOPMENT IN CORE MODULES

Title of module, location in learning programme and credits		Critical outcomes/Generic Skills (Learners will be able to...)	Performance criteria (assessment standards) (Learners will demonstrate competence by...)	Method of assessment
Health psychology (MEB 113) Semester 1 12 credits		• Implement practical skills on the basis of theoretical knowledge. • Listen effectively to other people, identify problems and solve them.	+ Insight and understanding when solving problems / case studies in work book. + Oral or written answers reflecting analytical and synthesising thought prosesses. + Practical application of theoretical principles during group work.	- Workbook exercises. - Oral feedback from groups. - Higher cognitive (application) questions in written tests and examination.
The doctor and the environment (MEC 113) Semester 1 12 credits		• Listen and interpret verbal and non-verbal cues. • Handle different personality types and their ways of communication. • Guide a patient discretely towards taking a decision. • Value other people's input and accept joint responsibility for decisions taken.	+ Production of a report and a SWOT analysis reflecting recognition of theoretical concepts in everyday practice. + Ideas and thoughts expressed during group discussion which give evidence of assimilation of theoretical concepts. + Answers in test and examination which testify to the application of	- Short report after community visit. - SWOT analysis of MUCPP community. - Oral feedback in group format. - Critical comment on doctor-patient interview. - Higher cognitive questions in written test and examination.

067

		• Work cooperatively with people from different cultures, linguistic and socio-economic backgrounds. • Acknowledge the rights of individuals and groups. • Work with suspicion and dependence behaviour in the community. • Identify community problems and engage in joint decision making. • Show respect for community members. • Treat community members as potential sources of information and skills. • Refrain from patronizing community members. • Accept and take cultural, language and religious differences into account. • Keep to commonly accepted ethic principles. • Take a patient's cultural values and norms into	ethical values. • Relevant and appropriate solutions offered in answer to problems related to cultural differences.	

890

		account in evaluating and advising that person.		
Concepts of health and disease (MED 113) Semester 1 12 credits		• Sift large volumes of information in order to condense the essence and apply it to concepts of health and illness. • Find information independently by consulting source references.	+ Succinct and logical systematization of information in the written piece of work. + Answers (informal and formal) that reflect insight and ability to apply theoretical knowledge.	- Written task. - Placard presentation. - Higher cognitive questions in written tests and examination.
Tissues of the body (MEE 113) Semester 1 12 credits		• Independently find and study material identified by the lecturer. • Sift large volumes of learning matter, identify and assimilate the essence.	+ Correct answers in tests and exams. + Logical and systematic exposition of facts.	- Informal, formative questions during groupwork. - Oral presentation during structured directed learning sessions. - Written tests and examination.
Structure of the body (MEF 113) Semester 1		• Understand basic principles and apply them in different contexts.	+ Application of principles (explained in relation to a specific part of the body) to other parts of the body as well.	- Higher cognitive questions in written tests and examination.

690

12 credits				
Health policy and service provision (MEG 123) Semester 2 12 credits		• Sift large volumes of information in order to condense the essence and apply it to concepts of health and illness. • Find information independently by consulting source references.	+ Succinct and logical systematization of information in the written piece of work. + Answers (informal and formal) that reflect insight and ability to apply theoretical knowledge.	- Written task. - Placard presentation. - Higher cognitive questions in written tests and examination.
Epidemiology and Biostatistics (MEH 123) Semester 2 12 credits		• Critically evaluate health information. • Weigh the importance of different measurements and express an opinion.	+ Answers that reflect insight, analytical and critical thinking.	- Written assignment in the form of a protocol. - Higher cognitive questions in written tests and examination.
Molecules of the body (MEI 123) Semester 2 12 credits		• Apply basic principles in changed factual contexts. • Find and relate information from different sources. • Independent integration of peripheral (nice-to-know) knowledge with core	+ Relevant, appropriate and "correct" answers to "difficult" questions that demand application.	- Case studies. - Problem solving in group context. - Written tests and examination.

		knowledge.		
Development of the body (MEJ 123) Semester 2 12 credits		• Analyse information to such an extent that they can communicate it in simple terms. • Synthesize the essence from large body of information. • Solve and explain the process of embriology. • Make use of others' knowledge and skills within the group. • Act as a source of information and skills to others within the group. • Communicate information that was prepared independently in front of peers.	+ "Correct" solutions. + Logic, coherent and well-structured arguments. + Informed, off-the-cuff type of responses in class, based on independent work.	- Two short, written assignments. - Oral feedback in group context. - Higher cognitive questions in written tests and examination.
Electrical systems of the body (MFK 1233) Semester 2		• Use a variety of reasoning strategies. • Come to logical conclusions on the basis of	+ Ability to apply theoretical concepts and principles.	- Formative evaluation at beginning of lecture sessions and at end of group work. - Higher cognitive questions

12 credits		valid evidence. • Solve problems and take decisions. • Interpret and synthesize information.		in written tests and examination

270

Contact summary form used to gather observational notes

CONTACT SUMMARY FORM

Contact type: .....
(Visit, phone call, meeting, interview, etc.)

Site: .....

With whom: .....

Contact date: .....

Summary written by: .....

Today's date: .....

1. What were the main issues/themes that struck me in this contact session?

2. Summary of information that I got (or failed to get) on each of the target questions I had prepared for this contact session:

QUESTION	INFORMATION
A. What are the problems you experience with assessment at this stage?	
B. What will happen if we start involving learners directly in assessment?	
C. How do you feel about the fact that learners should get an opportunity from time to time to say how they feel about the assessment they were subjected to?	

3. What were the things that struck me as salient, interesting, illuminating or important in this contact session?

4. What new (or remaining) target questions do I have in considering the next contact with this person/group of people?

5. What are my concerns at this stage?

(Form adapted from: Miles & Huberman, 1984:52)

/c:contact summary form.doc
AB: 31 Oktober 2000

HEALTH EXPO / GESONDHEIDSEKSPO - 03 MAY 2001

PROJECT PRESENTATIONS / PROJEKVOORDRAGTE

MODULE MED113

CONCEPTS OF HEALTH AND DISEASE /KONSEPTE VAN GESONDHEID EN SIEKTE

PLEASE NOTE: **Assessors should take into account the posters, brochures and display of items**
NEEM ASB KENNIS: **Assessore moet plakkate, brosjures en uitstallings van items in aanmerking neem**

Name of assessor / Naam van assessor:

Tel.:

E-mail / E-pos:

Scoring scale: *Low 1 2 3 4 5 High* / Punteskaal: *Laag 1 2 3 4 5 Hoog*

CRITERION / KRITERIUM	GROUPS									GROEPE								
1. Visual impact/Visuele impak	**Brown**	**Red**	**Orange**	**Blue**	**Green**	**Yellow**	**Purple**	**White**	**Grey**	**Bruin**	**Rooi**	**Oranje**	**Blou**	**Groen**	**Geel**	**Pers**	**Wit**	**Gys**
Originality/creativity																		
Oorspronklikheid/kreatiwiteit																		
Relevancy of way in which theme is portrayed																		
Relevansie van manier waarop tema uitgebeeld is																		
Usage of colour																		
Gebruik van kleur																		

Scoring scale: *Low 1 2 3 4 5 High* / Punteskaal: *Laag 1 2 3 4 5 Hoog*

CRITERION / KRITERIUM	GROUPS									GROEPE								
	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rooi	Oranje	Blou	Groen	Geel	Pers	Wit	Grys
Size/proportion/logical arrangement																		
Grootte/proporsie/logiese rangskikking																		
Overall visual appeal of:																		
Poster																		
Brochure																		
Display of items																		
Algemene visuele indruk van:																		
Plakkaat																		
Brosjure																		
Uitstalling van items																		
2. Transmission of information/ Oordrag van inligting	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rooi	Oranje	Blou	Groen	Geel	Pers	Wit	Grys
Simplicity / clarity																		
Eenvoud / duidelikheid																		
Comprehensibility (Understandability) of content for target group (Grade 11 school children for health topics; the general public for NGO's)																		

Scoring scale: *Low 1 2 3 4 5 High* / Punteskaal: *Laag 1 2 3 4 5 Hoog*

CRITERION / KRITERIUM	GROUPS									GROEPE								
	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rooi	Oranje	Blou	Groen	Geel	Pers	Wit	Grys
Verstaanbaarheid van inhoud vir die teikengroep (Graad 11 skoliere vir gesondheidsonderwerpe; die algemene publiek vir NGO's)																		
Usefulness of ideas communicated																		
Bruikbaarheid van idees wat gekommunikeer word																		
Correctness of language usage																		
Korrektheid van taalgebruik																		

NB: Criterion 3 should be completed by subject experts ONLY

NB: Kriterium 3 moet SLEGS deur vakspesialiste voltooi word

Scoring scale: *Low 1 2 3 4 5 High* / Punteskaal: *Laag 1 2 3 4 5 Hoog*

CRITERION / KRITERIUM	GROUPS									GROEPE								
3. Accuracy of content Akkuraatheid van inhoud	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rooi	Oranje	Blou	Groen	Geel	Pers	Wit	Grys
Factual correctness																		
Feitelike korrektheid																		

MODULE MED113: ASSESSMENT OF POSTERS/BROCHURES/DISPLAYS
MODULE MED113: ASSESSERING VAN PLAKKATE/BROSJURES/UITSTALLINGS

CONCEPTS OF HEALTH AND DISEASE /KONSEPTE VAN GESONDHEID EN SIEKTE

Please assess the posters/brochures/displays on exhibition by answering YES ( ) or NO ( ) to the following questions:
Assesseer asb die plakkate/brosjures/uitstallings wat vertoon word deur JA ( ) of NEE ( ) te antwoord op die volgende vrae:

CRITERION / KRITERIUM	GROUPS									GROEPE								
1. Visual impact/Visuele impak	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rool	Oranje	Blou	Groen	Geel	Pers	Wit	Grys
1. Does the poster/brochure/ display communicate a strong message to **you**?																		
Kommunikeer die plakkaat/ brosjure/uitstalling 'n kragtige boodskap aan **jou**?																		
2. Would you like this poster/ brochure/display to be exhibited at your school?																		
Sal jy daarvan hou as die plakkaat/brosjure/uitstalling by jou skool vertoon word?																		
3. Do you think the children at ComTech/Navalsig High School will understand the message of this poster/ brochure/display?																		
Dink jy dat die kinders by ComTech/Navalsig Hoër-skool die boodskap van die plakkaat/brosjure/uitstalling sal verstaan?																		

4. What is it that you particularly **like** or **dislike** about the posters/brochure/display of each group?
Waarvan het jy in die besonder **gehou/nie gehou nie** op die plakkaat/brosjure/uitstalling van elke groep:

M.B.,Ch.B. I LEARNERS

Hereby I friendly request your comment on the assessment of the poster presentations in MED 113. The reason your comment is requested, is to streamline and improve learning activities in the new curriculum to the benefit of learners.

Thank you for your co-operation.

A.A. BEYLEFELD
HEAD: DIVISION OF STUDENT LEARNING DEVELOPMENT

HALFSHEET RESPONSE

Comment on your experience of the assessment of the products (poster/brochure/display) of your MED 113 field trip.

Instrument used for gathering information on the needs and expectations of core module leaders with regard to the development of general skills

APPENDIX 9A

INTEGRATION OF SKILLS IN CORE MODULES

1. Which skills in which module?

- Determine the desired CRITICAL outcomes. Focus on what learners should be able to do in this particular module.

MODULE CODE	TASK TO BE PERFORMED	GS	CS
MEB113			
MEC113			
MED113			
MEE113			
MEF113			

2. **Why** should the GENERAL SKILLS identified in 1 be demonstrated in this particular context?

MODULE CODE	GENERAL SKILL TO BE DEVELOPED	RATIONALE FOR DEVELOPING THIS SKILL IN THIS MODULE
MEB113		
MEC113		
MED113		
MEE113		
MEF113		

3. **How, by whom and where in the timetable** will the development of the identified skill(s) be addressed?

Skill	Module	Mode of instruction	Facilitotor/Module	Date	Time	Venue

3. **How, by whom and where in the timetable** will the development of the identified skill(s) be addressed?

Skill	Module	Mode of instruction	Facilitotor/Module	Date	Time	Venue

4. **How** will the **assessment** of general skills be organised?

A. Summary of existing forms of assessment as outlined in 20001 Module Guide:

MODULE	MODE OF ASSESSMENT	WEIGHT
MEA112	summary brochure computer-assisted test written assignment oral presentation computer literacy test	10% 10% 20% 40% 20% -
MEB113	2 written tests assignments written examination	80% 20%
MEC113	2 written tests group work participation assignments and directed learning tasks written project (hand-in date:.....) written examination	80% ? 10% 10%
MED113	2 written tests session assignments (sessions 1+2) (hand-in date:.....) poster/brochure presentation (sessions 3-11) (expo date:.....) written examination [hierdie week nog]	50% 10% 40%

MEE113	2 written tests 5 small continuous assessment unannounced tests (best 4 counted) attendance and group work participation directed learning assignments written examination [einde volgende week of volgend semester]	66% 33% - -
MEF113	2 written tests directed learning assignments written examination	100% 10%

B. How can **assessment** by subject experts and skill experts be **shared** on tasks that learners need to perform.
Purpose: to give learners the opportunity to SIMULTANEOUSLY earn marks for both core knowledge and fundamental (general) skills.

MODULE	TASK	RESPONSIBILITY OF CORE MODULE	RESPONSIBILITY OF FUNDAMENTAL MODULE
MEA112			
MEB113			
MEC113			
MED113			
MEE113			
MEF113			

B. How can **assessment** by subject experts and skill experts be **shared** on tasks that learners need to perform.
Purpose: to give learners the opportunity to SIMULTANEOUSLY earn marks for both core knowledge and fundamental (general) skills.

MODULE	TASK	RESPONSIBILITY OF CORE MODULE	RESPONSIBILITY OF FUNDAMENTAL MODULE
MEA112			
MEB113			
MEC113			
MED113			
MEE113			
MEF113			

Revised content of modules comprising Phase I of Curriculum 2000

GENERAL SKILLS

Module code	:	*MEA112*
Module type	:	*Fundamental*
Semester	:	*First*
Contact time	:	*40 hours*
Directed learning	:	*40 hours*
Module leader	:	*Ms AA Beylefeld*

AIM

The purpose of this module is to help learners adjust to the learning environment in the Faculty of Health Sciences and on the UFS campus, to meet the expectations and demands of the M.B.Ch.B. I learning programme and to contribute to their personal and professional development..

PREREQUISITES

Before starting this module, learners should have made a well-informed decision to study medicine (i.e. identification with the policy, procedures, ethics and requirements of the medical curriculum and profession), display tolerance towards other cultures and language groups, and have a willingness to take responsibility for their own learning.

OUTCOMES

By the end of this module, learners should be able to:

- *use learning resources in the Faculty of Health Sciences and on campus on an individual and a group basis*
- *use the computer as a learning resource*
- *seek, interpret and critically evaluate information*
- *apply numerical tools and methods to solve problems and reach conclusions*
- *work with and meet obligations to others*
- *demonstrate intercultural tolerance*
- *apply knowledge to address the needs of the community*
- *communicate effectively in context, both orally and in writing*
- *apply specific techniques to manage their personal, social and academic life.*

STRUCTURE OF THE MODULE

The first few sessions of Module MEA112 serve as an introduction to the way in which medical learners are expected to function in the Faculty of Health Sciences. Thereafter, skills development sessions are embedded in core modules, depending on specific, content-related needs.

DAY 1:	**Orientation**
09:10 – 10:00	General skills
10:10 – 11:00	The curriculum
11:10 – 12:00	Photographs
12:00 – 13:00	*Lunch*
14:00 – 15:00	Get to know one another
15:00 – 16:00	Learning styles
16:00 – 17:00	Principles of group work
DAY 2:	**Orientation**
09:10 – 10:00	Group learning
10:10 – 11:00	IT skills
11:10 – 12:00	Directed learning: Group learning
12:00 – 13:00	*Lunch*
14:00 – 15:00	Learning environment
15:00 – 16:00	Directed learning: Learning environment
DAY 3:	**Orientation / Commencement of core modules**
09:10 – 12:00	Discover computers
14:00 – 17:00	MED113, Session 1

CLOSELY RELATED MODULES

MEB113: Health psychology (Phase I).
MEC113: The doctor and the environment (Phase I).
MED113: Concepts of health and disease (Phase I).
MEE 113. Tissues of the body (Phase I)
MEF113. Structure of the body (Phase I).

ASSESSMENT

A portfolio approach is followed to allow learners to demonstrate what they have learned and what they can **do**. Should they fail to achieve a set minimum standard, they are required to attend "catch-up" sessions, do additional work, and/or replace below-standard products with better products, depending on the situation.

Tasks forming part of the portfolio are assessed at set intervals/dates and the complete portfolio should be handed in toward the end of the first semester. If a learner fails to reach the minimum standards, he/she is granted time until the end of the second semester to upgrade the portfolio. During this time, guidance and support are available.

Levels of performance are specified with regard to each assessment task. The products assessed for skills development, are, for the most part, the same products learners have to produce for assessment in core module(s).

A common grade scale is used for converting levels of performances, expressed in terms of symbols (e.g. B [achieved beyond], A [achieved], P [partly achieved], N [not achieved]) or descriptive words (e.g. excellent, good, fair, poor) into grades, for administrative purposes.

Module development team: *Ms AA Beylefeld, Ms MP Jama, Prof CP Herbst, Dr FJW Calitz, Ms G Joubert, Ms I Visser.*

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HEALTH PSYCHOLOGY

Module code	:	*MEB 113*
Module type	:	*Core*
Semester	:	*First*
Contact time	:	*36 hours*
Directed learning	:	*36 hours*
Self-study time	:	*Minimum 48hours*
Module leader	:	*Dr FJW Calitz*

AIM

Comprehensive health care involves both psychological and physical care, which are inseparable. What is provided is health care, since the mind can affect physical disease and vice versa. In general people who are fit, happy and relaxed tend to be healthier than those who are unfit, anxious, depressed and unhappy, therefore this module provides learners with an understanding of the psychosocial factors involved in health, illness and medical care.
The major aim with skills development in this module is to empower learners with the skills that will enable them to gain self-knowledge through peer and group assessment. Learning skills such as study technique and report writing will also be focused on.

PREREQUISITES

No previous knowledge of psychology is required.

OUTCOMES

By the end of this module, learners should be able to:

- *demonstrate that they have mastered the required knowledge of health psychology*
- *discuss the interaction between body and mind*
- *discuss developmental theories*
- *identify factors influencing human behaviour*
- *discuss group dynamics and the different types of leadership*
- *identify the different temperaments of mankind*
- *define stress, identify some of the factors involved, and manage stress*
- *describe a variety of psychological treatment techniques*
- *describe psychological reaction to chronic and serious illness*
- *identify behaviour related to disease, illness and health.*

General skills (MEA112):

- *identify and apply criteria for peer and group assessment*
- *learn from one another through group work and peer assessment*
- *apply study techniques to extract, note, memorise and use core factual content*
- *objectively and accurately compile information in the form of a report.*

STRUCTURE OF THE MODULE

The contact time of this module will consist of lectures, small group discussions and practical exercises. A timetable for each of the sessions will be provided at the beginning of the semester. Information on reading material and practical exercises related to contact time will be provided for directed learning activities.

SESSION 1:	**Introduction to health psychology, the developmental theories and influences on behaviour**
Lecture (1hour):	Introduction to health psychology and development theories.
Group work (2hours):	Written instructions in groups.
MEA112:	
Group work (1hour):	Assessment of group process.
Directed learning	
MEB113 (2hours):	Written case studies.
SESSION 2:	**Group dynamics**
Lecture (1hour):	The nature of groups, developmental phases and group influence.
Group work (2hours):	Ice breakers, inter-group competitions and discussions about dynamics of groups as experienced by learners.
MEA112:	
Group work (1hour):	Review groupings.
Directed learning	
MEB113 (2hours):	Revision of the session material.
SESSION 3:	**Leadership**
Related sessions (1hour):	Overview of topics Communication and Temperaments.
Lecture (1hour):	Leadership and how it is put into practice in the career environment.
Group work (2hours):	Application of leadership styles in the personnel core. Task-relevant maturity and leadership. Practical application and revision of principles.
Directed learning	
MEB113(2hours):	Written case studies, should they be provided.
MEA112:	
Group work (1hour):	Study technique.

SESSION 4:	**Temperaments**
Preliminary learning (1hour):	Review of previous sessions.
Lecture (1hour):	Temperaments and the role it plays in human interaction.
Group work (2hours):	Practical application of the instruments used to determine temperaments. Determine the strengths and weaknesses of a temperament group. Indicate how it affects individuals as previously discussed.
Directed learning (3hours):	Application of knowledge gained during the session on a self-identified couple in the community where you have to determine the temperaments of both parties.
Self-study assignment:	In your own time, determine the temperaments of a couple you know well. Indicate what aspects may be critical for this couple regarding the development of conflict. Write suggestions on how conflict could be avoided/dealt with.
SESSION 5:	**Stress and stress management**
Lecture (1hour):	Stress and its nature.
Group work (2hours):	Practical exercises to understand the nature of stress and identify the learner's own stress factors.
Directed learning MEB113 (2hours):	Revision of lecture material: Stress and how to deal with it.
MEA112:	
Group work (1hour):	Assessment of group process.
SESSION 6:	**Coping mechanisms**
Lecture (1hour):	Overview of stress management techniques.
Group work (2hours):	Practical exercises.
Directed learning (3hours):	Written case studies.
SESSION 7:	**Feedback: Test 1**
SESSION 8:	**Psychological management of medical patients**
Lecture (1hour):	Psychological treatment techniques.
Group work (2hours):	Practical exercises.
Directed learning (3hours):	Written case studies.
SESSION 9:	**Psychological reactions to chronic and severe illness**
Lecture (1hour):	Psychological reactions to illnesses.

Group work (2hours):	Identification of factors and reactions to illness: relate these to clinical outcomes.
Directed learning MEB 113 (1hour):	Written case studies
MEA112:	
Group work (2hours):	Report writing.

SESSION 10:	**Behaviour related to disease, illness and health**
Lecture (1hour):	The relation between behaviour and health.
Group work (2hours):	Identify health risk behaviour.
Directed learning (3hours):	Compile and hand in a report on a programme for a healthy life style.
SESSION 11:	**Case studies**
SESSION 12:	**Feedback: Test 2 / Revision for examination**

CLOSELY RELATED MODULES

MEA 112: General skills (Phase I).
MEC113: The doctor and his environment (Phase I).
MEX314: Health and disease in populations (Phase II).

EVALUATION/ASSESSMENT

The module mark is based on 2 written tests as scheduled (80 % of module mark), as well as exercises on certain sessions in the *Module Guide* (20 % of module mark). The final combined mark is derived from the module mark (50%) and the examination mark (50%). The *Module Guide* may be taken in at any time and should remain current. A two-hour paper is written at the end of the first semester. You should note that one fact does not automatically equal one mark. When a question requires discussion, all relevant knowledge should be used to formulate an answer.
Learners' level of skills development will be assessed, based on learners' own, as well as peers' opinion of group members' contribution to group products and the group process (Refer to MEA112 *Module Guide)*..

SUGGESTED READING MATERIAL

☞ Louw DA, Van Ede DM, Louw AE. Human development. 2nd editon. Pretoria: Kagiso Publishers, 1998.

☞ Pistorius GJ, Pistorius CWI. Family practice management. Pretoria: HAUM, 1986.

☞ Schlebush L, editor. Clinical Health Psychology: A behavioral medicine perspective. London: Southern Book Publishers, 1990.

Module development team: *Dr FJW Calitz, Prof LA Hiemstra, Dr EAM Prinsloo, Dr M Slabber, Dr LM van der Merwe, Ms AA Beylefeld, Ms MP Jama..*

THE DOCTOR AND THE ENVIRONMENT

Module code	:	*MEC113*
Module type	:	*Core*
Semester	:	*First*
Contact time	:	*36 hours*
Directed learning	:	*36 hours*
Self-study time	:	*Minimum 48 hours*
Module leader	:	*Dr EAM Prinsloo*

AIM

The aim of this module is to ensure optimal functioning of the learner as future doctor in his/her environment. The following are determinants of successful interaction:

- Functioning in a team while still in training, with special reference to multi-sectorial and multi-disciplinary settings, as well as interpersonal relationships
- Functioning within the parameters of a family set-up, with special reference to the learner's own family, the patient's family, and the impact of the family on disease and *vice versa*
- Maintenance of a proper code of conduct in relationships with others and the acceptance of the importance of ethics in the medical profession, with special reference to inter-doctor relationships, doctor-patient relationships, and relationships between the doctor and other health professionals (team approach)
- Fostering intercultural relationships
- Understanding the impact of social factors on communities and its influence on patterns of disease
- Establishment of mutual trust in relationships with clients, especially through sensitive and effective communication.

The major aim with skills development in this module is to empower learners with the skills that will enable them to utilise the opportunities for problem solving presented in this module, through the acquisition, critical evaluation and application of knowledge.

PREREQUISITES

None.

OUTCOMES

By the end of this module, learners should be able to:

- *participate/enter into group work, attentive listening, effective communication, interviewing, debating/negotiation, information gathering, problem-solving and decision-making, facilitation, and bedside manner*
- *demonstrate willingness to learn from others, and to work across language and cultural barriers*
- *accept the worth and dignity of all patients and treat them with respect*

- *demonstrate unconditional positive regard for patients and caregivers*
- *demonstrate accountability.*

General skills (MEA 112):

- *compile and implement questionnaires for structured interviewing*
- *apply study techniques to extract, note, memorise and use core factual content*
- *objectively and accurately compile information in the form of a report*
- *reason and arrange their thoughts logically*
- *find and critically evaluate information on the internet*
- *present information orally to an audience of peers and academic staff members.*

STRUCTURE OF THE MODULE

SESSION 1:	**Society and population**
Lecture (1hour):	Different types of society.
Lecture (1hour):	Profile of the South African population.
Group work (1hour):	Variation in disease patterns in the various types of society. Case study: Determining how the incidence and prevalence of a specific disorder (e.g. TB) varies in different societies.
Directed learning MEC113 (1hour):	
MEA 112:	
Lecture (1hour):	Compilation of a questionnaire for structured interviewing.
Group work (1hour):	Practical interviewing exercises.
SESSION 2:	**Community entry, culture sensitivity and preparation for community based education**
MEC 113:	
Lecture (1hour):	Community entry.
MEA 112:	
Lecture (1hour):	Culture sensitivity.
Group work (1hour):	Preparation for community based education – questionnaires.
MEC 113:	
Directed learning (3hours):	Mangaung tour.
SESSION 3:	**Communication, doctor-patient relations and joint problem management**
Preliminary learning (1hour):	Revise the session dealing with temperaments.
Lecture (1hour):	Communication, doctor-patient partnerships and joint problem management between doctor and patient.
Group work (2hours):	Practical application of the theory. Answer questions in the

	Module Guide.
Directed learning (3hours):	Application of knowledge gained during this session. Self-study assignment: In your own time, give a written explanation of why you would like to become a doctor and which concerns you are experiencing regarding your current career choice. Clinical contact as scheduled: Visit a medical clinic where consultations occur. Report writing on the communication process you have observed during the consultations. You will also look at a video consultation which you will have to incorporate in your report. Visits to clinics will be in separate groups according to roster.
MEA 112: *Lecture (1hour) for groups not going for clinic visit:*	Study technique. Repeat the next day for groups that have already visited clinics.
SESSION 4:	**Deviance and social problems in relation to health**
Lecture (1hour).	Social problems.
Lecture (1hour):	Deviant behaviour, labelling and stigmatisation.
Group work (1hour):	Labeling, stereotyping and the doctor.
Directed learning MEC113 (1hour)	Guest speaker from Aurora Rehabilitation Clinic
MEA 112: *Lecture (1hour):*	Writing skills.
Directed learning leer (1uur):	Report writing.
SESSION 5:	**Family structure and dynamics**
Lecture (1hour):	Theoretical approaches.
Lecture (1hour):	The dynamics of family life.
Group work (1hour):	Family organization – case studies.
Directed learning (3hours):	Design and interpret family circles and echo charts.
SESSION 6:	**Family crises and disruption**
Lecture (1hour):	Divorce and family violence (child abuse).
Lecture (1hour):	Family violence (battered wife, family murder).
Group work (1hour):	Family and disease.
Directed learning MEC (2hours):	The influence of disease on the family: the case of congenital displacement of the hip: Discussion with parent of child suffering from congenital displacement of the hip.
MEA 112:	

Lecture (1hour):	Critical thinking.
SESSION 7:	**Belief systems and cultural influences**
Lecture (1hour):	Culture and its impact on behaviour.
Group work (1hour):	Case studies.
Discussion (1hour):	Feed back on case studies.
Directed learning	
MEC113 (3hours):	Clinic visit. In groups according to roster.
MEA 112:	
Lecture and group work (3hours) – for groups not going on clinic visits:	Internet training. Repeat the next day for groups that have already visited clinics.
SESSION 8:	**Complementary and traditional health care**
Lecture (1hour):	Complementary health care.
Lecture (1hour):	Traditional health care.
Group work (1hour):	Traditional healing in primary health care.
Directed learning (3hours):	Discussion with panel of complementary health care workers.
SESSION 9:	**Report back on test and learning presentation skills**
Discussion (1hour):	Report back on test.
MEA 112:	
Lecture (1hour)	Public speaking.
Directed learning (1hour):	Oral presentation skills.
SESSION 10:	**The role of the doctor in the community**
Lecture (1hour):	The different roles of the family practitioner and the specialist in the South African health system, the principles of holistic family medicine. McWhinney IR. *Family medicine*, pp. 13 - 28.
Group work (1hour):	Case studies: (a) Man with chest pain. (b) Young couple with disabled child.
Lecture (1hour):	The Hippocratic oath and variants, factors contributing to the transformation of the role of the doctor in the community. The role of the family physician in health education and promotion.
Directed learning (3hours):	Read: McWhinney IR. *Family medicine*, pp. 196 – 227. Also refer to MED Session 5. Additional reading: McWhinney IR. *Family medicine*, pp.179 - 196.

SESSION 11:	**The health team**
Lecture (1hour):	The health team: definitions of health, team and health team. Advantages of teamwork. Prerequisites of effective team work. Types of teams: multi-disciplinary, and multi-sectorial. The team in practice. Leadership in the team. Interactions between team members.
Group work (1hour):	Discussion on teams in action in specific situations.
Directed learning (3hours):	Visit possible team members in interdisciplinary departments in groups.
Feedback (1hour):	Feed back of groups to rest of class.
SESSION 12:	**Inter-collegial relations and principles of professional ethics**
Preliminary learning (1hour):	
Lecture (1hour):	Introduction and general principles applicable to ethical conduct and the rights and responsibilities of patients. Clinical guidelines and medical audit.
Group work (2hours):	Practical application of the theory. Discuss and answer questions in the workbook. Feedback will be given in the next session.
Directed learning (3hours):	Application of knowledge gained. Supplement knowledge as indicated in *Module Guide*.
SESSION 13:	**Feedback on test and case studies**
Feedback (1hour):	Discussion of test questions and answers.
Group work (1hour):	Case studies as identified in Session 12.
Discussion (1hour):	Feedback on case studies.

CLOSELY RELATED MODULES

MEA112: General skills (Phase I).
MEB113: Health psychology (Phase I).
MED113: Concepts of health and disease (Phase I).
MEX314: Health and disease in populations (Phase II).

EVALUATION/ASSESSMENT

The module mark is based on two written tests as scheduled, group work participation, as well as assignments in the *Module Guide* and directed learning assignments. Each test contributes 40% to the module mark. Directed learning assignments and *Module Guide* assignments contribute 10 % to module mark. An assignment on Sessions 5 and 6

contributes 10 % to the module mark. The module mark contributes 50% to the final combined mark. The examination mark contributes 50% to the final combined mark. You will sit a two-hour written paper at the end of Semester 1. Each session must be viewed as a potential evaluation/assessment opportunity.
Learners' level of skills development will be assessed, based on products (assignment, report) and concomitant activities performed as an integral part of Module MEC113 (Refer to MEA 112 *Module Guide*).

SUGGESTED READING MATERIAL

- Gilbert L *et al.* Society, Health and Disease. Randburg: Rawan Press, 1996.
- McWhinney IR. Family Medicine. New York: Oxford University Press, 1997.

Module development team: *Dr EAM Prinsloo, Dr WJ Steinberg, Prof LA Hiemstra, Dr T Kellerman, Ms S Machedi, Prof E Pretorius, Ms AA Beylefeld, Ms MP Jama.*

CONCEPTS OF HEALTH AND DISEASE

Module code	:	*MED 113*
Module type	:	*Core*
Semester	:	*First*
Contact time	:	*36 hours*
Directed learning	:	*36 hours*
Self-study time	:	*Minimum 48 hours*
Module leader	:	*Dr B de Klerk*

AIM

The purpose of this module is to expose the learner to some basic insights of disease and illness, as well as some of the different factors which influence the health and well-being of the individual, but in particular the health and well-being of the community. The major aim with skills development in this module is to empower learners with the skills that will enable them to educate individuals and community groups on the principles and processes of disease prevention and health promotion.

PREREQUISITES

None.

OUTCOMES

By the end of this module, learners should be able to:

- *Understand the concepts of health and disease*
- *Give contemporary explanations of health and disease*
- *Describe the multi-causality of disease*
- *Debate the notion of communities, community participation and community demographics*
- *Explain concepts surrounding health promotion and health education*
- *Discuss the issues of importance in environmental health*
- *Understand statistical and epidemiological concepts of normality and disease*
- *Apply the levels of care and levels of prevention to health*
- *Debate the aspects surrounding accident prevention*
- *Describe the concepts of community nutrition.*

General skills:

- *Practically apply theoretical content, based on paper case studies*
- *Make core summaries*
- *Express themselves clearly and systematically*
- *Interpret numerical data*
- *Find and critically evaluate information (Internet)*
- *Creatively systematise information in the form of a brochure*
- *Use a computer for word processing, data base searches and communication*
- *Visually communicate information in the form of a poster*
- *Orally present information to an audience of peers and academic staff*
- *Use stress management techniques.*

STRUCTURE OF MODULE:

SESSION 1:	The concepts of health, disease and illness

6/2/2002:

Lecture (1 hour):	The stages of the illness experience.
Lecture (1hour):	Briefing on how to conduct the survey
Group work (1hour):	Text mapping (MEA 112)
Group work (1hour)	Discussion and debate on professional and lay beliefs of health.

7/2/2002:

Directed learning (3hours):	Application: Text mapping (MEA 112)

SESSION 2:	Contemporary explanations of health and disease

13/2/2001:

Lecture (1 hour):	The biomedical model.
Lecture (1 hour):	The social model and structuralist explanations.
Group work (1 hour):	Medicine as an instrument of social control.

14/2/2002:

Directed learning (3 hours):	Interpret numerical data (MEA 112)

SESSION 3:	Multi-causality of disease

20/2/2002:

Lecture (1hour):	Multi-causality of disease
Group work (2hours):	Library use and finding sources of information (MEA112)

21/2/2002:

Directed learning(3 hours):	Work on library assignment (MED 112 + MEA112)

SESSION 4:	Community, community participation and community demographics

27/2/2002:

Lecture (1hour):	Community, community participation and community demographics
Group work (2 hours):	Discussing brochures of 2 NGO 's in different communities

28/2/2002:

Directed learning (3 hours):	Compilation of brochure. Search strategies (MEA 112) Refer to session 4 & 5. See directed learning 14/3/2002, 20/3/2002 & 18/4/2002

SESSION 5:	Health promotion and health education

6/3/2002:

Lecture (1 hour):	Health promotion and health education.
Lecture (1 hour):	Poster communication (MEA112)
Lecture (1 hour):	Theory and planning of the needs analysis workshop

7/3/2002:

Directed learning (3 hours):	Community visit – needs analysis for health education at a high school. See directed learning 28/2/2002, 14/3/2002 & 18/4/2002

SESSION 6:	Environmental health

13/3/2002:

Lecture (1 hour):	Environmental health
Group work (2hours)	Critical discussion of environmental health posters distributed by Department of Health / Nature conservation / Water affairs

14/3/2002:

Directed learning (1 hour):	Establish criteria for assessment of project-based poster presentations (MEA112) See session 5
Directed learning(1 hour):	Working on projects. See session 5

SESSION 7:	Statistical and epidemiological concepts of normality and disease

20/3/2002:

Lecture (1hour)	Statistical and epidemiological concepts of normality and disease
Group work (2 hours)	Data-interpretation exercise.
	Work on projects (sessions 4 & 5)
Directed learning (3 hours):	Visiting of NGO's (see session 4)

9/4/2002:

Directed learning (3 hours):	Work on projects (session 4 & 5)

SESSION 8:	Levels of care and levels of prevention

10/4/2002:

Lecture: (1hour):	Levels of care and levels of prevention

SESSION 9:	Accident prevention

17/4/2002:

Lecture(1 hour):	Accident prevention
Group work (1 hour):	Video of safe office administration & discussion
Group work (1 hour):	Final preparation and exhibiting projects

18/4/2002:

Directed learning (3hours):	See sessions 4&5.
	HEALTH EXPO IN FOYER OF FACULTY (MED112 & MEA 112)
2/5/2002:	Oral presentation of projects (MEA112)

SESSION 10:	Community nutrition

8/5/2002:

Lecture (1 hour):	Community nutrition
Group work (2 hours):	Completing of group work assignments in class

9/5/2002:

Directed learning (3 hours):	Literature study

SESSION 11:	MED 113 test

10/5/2002	Test session 1-10
15/5/2002	
Feed back (1hour)	Feed back of test & revision
Group work (1 hour)	Writing examination and managing stress (MEA 112)

SESSION 12:

Extra study time. Attending of classes not compulsory for this session. Time available with lecturers to sort out problems.

CLOSELY RELATED MODULES

MEA 112: General skills (Phase I).
MEC113: The doctor and the environment (Phase I).
MEG123: Health policy and service provision (Phase I).
MEX314: Health and disease in populations (Phase II).

EVALUATION / ASSESSMENT

One test of one hour will be written. The module mark will be derived from the test mark (50%), and session assignment marks (50%).
One two-hour examination will be written at the end of Semester 1. The final combined mark will be derived from the module mark (50%) and the examination mark (50%).
Learners' level of skills development will be assessed, based on products (brochure, poster, oral presentation of project) and concomitant activities performed as an integral part of Module MED113. (Refer to MEA 112 *Module Guide*).

SUGGESTED READING MATERIAL

- Farmer R, Miller D. Lecture notes on epidemiology and public health medicine. 4th edition. Oxford: Blackwell Science, 1996.
- Katzenellenbogen JM, Joubert G, Abdool Karim SS, editors. Epidemiology: a manual for South Africa. London: Oxford University Press, 1997.
- Last JM. Public health and human ecology. 2nd edition. Stanford: Appleton & Lange, 1998.

MODULE DEVELOPMENT TEAM:

Prof E Pretorius,
Prof OM Bachmann,
Dr B de Klerk,
Dr WH Kruger,
Dr EAM Prinsloo,
Me A Beylefeld,
Me MP Jama.

TISSUES OF THE BODY

Module code: *MEE113*
Module type: *Core*
Semester: *First*
Contact time: *36 hours*
Directed learning: *36 hours*
Self-study time: *Minimum 48 hours*
Module leader: *Dr HJ Geyer*

AIM

This module should enable learners to acquire:

- basic knowledge and understanding of cell components, cell organisation and correlation between structure and function
- basic knowledge of the basic tissues of the human body, and how they are organised to create functional units, organs and systems
- understanding of physiological processes that take place in the living human being
- knowledge of what normal tissue looks like as to better understand histopathology
- specialised vocabulary to establish scientific communication skills.
- technological skills that may be used to facilitate self-learning and –monitoring.

PREREQUISITES

Before starting this module, learners should be familiar with basic biological and chemical terminology. They should have some concept of the relative size of structures on the SI scale.

OUTCOMES

By the end of this module, learners should be able to:

- describe the correct use of the light microscope
- describe the basic steps in tissue preparation for microscopy
- discuss the cell components, cell organisation and correlation between structure and function
- describe the basic tissues of the human body, as well as components thereof, with regard to structure and function
- *use computer software (WebCT) to practise learning content and assess themselves.*

STRUCTURE OF THE MODULE

SESSION 1: **Introduction to and method of studying cell morphology**

Lecture (1 hour) *Size, shape and cellular relationships.*
Group work (2 hours): *How to use a light microscope (video). The study of a slide.*
Directed learning (3 hours): *List substances of biological and medical importance that can be shown histochemically. Module Guide assignments.*

SESSION 2: **General characteristics, structure and function of a cell**

Lecture (1 hour): *Cell ultrastructure.*
Group work (2 hours): *Practical of cell ultrastructure - the organelles.*
Directed learning MEE113 (2 hours): *Module Guide assignments.*
Directed learning MEA112 (1hour): WebCT (MEA112).

SESSION 3: **Fluid compartments and homeostatic mechanisms**

Lecture (1 hour) *The internal environment of the body.*
Group work (1 hour): *Fluid compartments.*
Lecture (1 hour): *Homeostasis and homeostatic mechanisms.*
Directed learning: *Revise the purposeful functioning of the organ systems.*
(3 hours):

SESSION 4: **Control of the internal environment**

Lecture (1 hour): *Control systems of the body.*
Group work (1 hour): *Constituents of the extracellular fluid and their physical characteristics.*
Lecture (1 hour): *Feedback control mechanisms. Automaticity of the body.*
Directed learning MEA112(3 hours): *Database searches.*

SESSION 5: **Movement of ions and molecules through membranes (I)**

Lecture (1 hour): *Molecule and ion distribution.*
Group work (2 hours): *Membrane selectivity in the living cell.*
Directed learning: *Review molecule and ion distribution.*
(3 hours):

SESSION 6: **Movement of ions and molecules through membranes (II)**

Lecture (1 hour): *Selectivity of barriers.*
Group work (1 hour): *Changes in fluid compartments.*

Lecture (1 hour):	*Active transport.*
Directed learning: (3 hours):	*Membrane transport mechanisms.*

SESSION 7:	**Tissues of surfaces of the body - epithelium and glands**
Lecture (1 hour):	*Simple and compound epithelia.*
Group work (2 hours):	*Practical of epithelia (video).*
Directed learning (3 hours):	*Metaplasia - define, give examples and state what types of epithelium can undergo metaplasia and why. Module Guide assignments.*

SESSION 8:	**Tissues for support and protection - connective tissue**
Lecture (1 hour):	*Connective tissue.*
Group work (2 hours):	*Practical - microscopy of connective tissues.*
Directed learning (3 hours):	*Study the histophysiology of connective tissue. Make a list of the clinically important components of connective tissue and state the role of each. Write short notes on the regeneration of connective tissue and describe what happens during post-operative wound healing. Discuss the biological association between collagen and vitamin C.*

SESSION 9:	**Tissues for support and protection - cartilage and bone.**
Lecture (1 hour):	*Cartilage and bone.*
Group work (2 hours):	*Practical - cartilage, bone and ossification.*
Directed learning (3 hours):	*Study the clinical implications of this module. Study the histophysiology and histogenesis of cartilage. Make notes on the mechanisms of bone calcification as well as bone growth. Briefly describe how cartilage differ from connective tissue and bone tissue. Briefly describe how a bone will recover after a fracture. Describe the role of fibrous cartilage in the intervertebral discs.*

SESSION 10:	**Special connective tissue - blood and haemopoietic tissue**
Lecture (1 hour):	*Blood.*
Group work (2 hours):	*Practical - differential blood cell count.*
Directed learning (3 hours):	*Module Guide assignments.*

SESSION 11:	**Tissue of movement - muscular tissue.**
Lecture (1 hour):	*Muscular tissue.*
Group work (2 hours):	*Practical - distinguish microscopically between different muscles.*
Directed learning (3 hours):	*Study the ability of muscle to regenerate. Module Guide assignments.*

SESSION 12: Tissues of the nervous system

Lecture (1 hour): *Nervous tissue.*
Group work (2 hours): *Practical - nervous tissue (video).*
Directed learning *Workbook assignments.*
(3 hours):

CLOSELY RELATED MODULES

MEA112. General skills (Phase I).
MEF 113. Structure of the body. (Phase I)

EVALUATION/ASSESSMENT

For formative evaluation learners must at the end of each session convert each learning outcome into a question and answer it, and compile a list of new terms learnt with an own explanation of each term.

The module mark is based on written tests as scheduled, session attendance and group work participation, as well as directed learning assignments. One two–hour examination paper is written at the end of Semester 1. The examination mark and the module mark will each contribute 50%. to the final combined mark.

Learners' level of skills development will be assessed, based on information science activities prescribed by library staff. (Refer to MEA112 *Module Guide*).

PRESCRIBED RESOURCES

- Burkitt H G, Young B, and Heath J W. Wheater's Functional Histology, a text and colour atlas 4th edition. Toronto: Churchill Livingstone, 2000.
- Guyton A C, Hall J E. Textbook of Medical Physiology. A.C. 10th Edition. Philadelphia: W.B. Saunders. 2000.
- Ross M H, Romrell L J. Histology, a text and atlas. 3rd Edition. New York: Williams & Wilkins, 1995.

Module development team: Dr HJ Geyer, Prof A Crous, Ms AA Beylefeld, Ms MP Jama.

Structure of the body

Module code: *MEF113*
Module type: *Core*
Semester: *First*
Contact time: *36 hours*
Directed learning: *36 hours*
Self-study time: *Minimum 48 hours*
Module leader: *Mr AEF Gous*

AIMS

The purpose of this module is to:

- familiarise students with terminology describing position and movements in the body
- introduce the different systems of the body, the anatomical terminology to describe them and some of the physical laws that govern their function
- link the community with its variety of cultural and physical characteristics with the structure of the human body and the variations in its structure and function.

The major aim with skills development in this module is to enable learners, through word-building exercises and computerised practising of medical terminology to communicate accurately and economically about the human body. Decoding the specialised vocabulary of test and examination papers is also attended to.

PRE-REQUISITES

Before starting this module, students should be able to start, use and shut down a networked computer.

OUTCOMES

By the end of this module, students should be able to:

- explain the systemic organisation of the human body and use correctly the terms describing each part of a system
- describe the location or passage of organs and visualise how they are related to the features of the body surface
- explain biophysical principles and the way in which they influence normal body structure, functions or medical treatment
- explain variation in the structure and functions of the human body
- integrate knowledge obtained in this module and use it to solve simple problems with clinical implications
- systematically undertake the preparation for, and the taking of tests and examinations

General skills (MEA112):

- identify and use the basic building blocks (prefixes/suffixes/stems) of words commonly used in science

- identify and appropriately respond to the different action words used in tests and examinations.

STRUCTURE OF THE MODULE

Session 1: **Terms of position and movement**

MEA112:
Lecture (1 hour): Basic science terminology.
MEF113:
Lecture (1 hour): Terms of position and movement.
Group work (1 hour): Terms of position and movement, and regions and systems of the body.
Directed learning: Computer-based exercises and testing on terminology, terms of position and movement, and regions and systems of the body.

Session 2: **Skin and basic embryology**

Lecture (1 hour): Embryonic development of skin, bones, muscles and joints, and their nerve supply.
Lecture (1 hour): Skin and fascia, and the sensory nervous system.
Group work (1 hour): Embryonic development, and skin and fascia
Directed learning: Study museum displays or prosections of the skin and fascia.
Computer tutorials/testing on the skin and fascia.

Session 3: Skeletal system

Lecture (1 hour): Classification and terminology of the skeletal system.
Group work(2 hours): Regions of a skeleton and the classification and description of bones.
Directed learning: Study museum displays of bones.
Computer tutorials/testing on the skeleton and the individual bones.
MEA112:
Lecture (1 hour) Test-taking technique.

Session 4: **Articular system**

Lecture (1 hour): Articular system.
Lecture (1 hour): Muscle compartments and joints.
Group work (1 hour): Classify joints and describe the associated muscle compartments.
Directed learning: Study museum displays or prosections of joints and muscle compartments.
Determine the classification and the functions of particular joints
Computer tutorials/testing on the articular system and muscle compartments.

Session 5: **Muscular system and the motor nervous system**

Lecture (1 hour):	Muscular system.
Lecture (1 hour):	Motor nervous system.
Group work (1 hour):	Name and classify muscles
Directed learning:	Study museum displays or prosections of muscles and muscle compartments. Determine the functions of specific muscles and muscle compartments. Computer tutorials/testing on the muscular system.

Session 6: **Principles of movement**

Lecture (1 hour):	Forces and vectors in the body.
Lecture (1 hour):	The effectiveness of different levers in the body.
Group work (1 hour):	Examples of forces, vectors and levers in the body.
Directed learning:	Revision of forces and vectors in the body.

Session 7: **Gases and fluids in the body**

Lecture (1 hour):	Biophysical principles of gases and liquids.
Lecture (1 hour):	Flow of gases and fluids in the circulatory system.
Group work (1 hour):	Case studies and analysis of different flow abnormalities.
Directed learning:	Review of flow in the circulatory system.

Session 8: **Cardiovascular System and Lymphatic System**

Lecture (1 hour):	Heart and the cardiovascular and lymphatic systems.
Group work(2 hours):	Description of the heart and the anatomical course of blood and lymph.
Directed learning:	Study museum displays or prosections of the heart and major blood vessels. Computer tutorials/testing on the cardiovascular and lymphatic system.

Session 9: **Respiratory System**

Lecture (1 hour):	Respiratory system.
Group work(2 hours):	Descriptions of the anatomical courses of air.
Directed learning:	Study museum displays or prosections of the thoracic cavity and the airways. Computer tutorials/testing on the respiratory system.

Session 10: **Gastro-intestinal and Genito-urinary Systems**

Lecture (1 hour):	Gastro-intestinal and genito-urinary systems.
Group work(2 hours):	Descriptions of the anatomical courses of food, urine and sex cells.
Directed learning:	Study museum displays or prosections of the abdominal cavity including the gastro-intestinal tract, kidneys, bladder, testes, prostate, ovary and uterus.

	Computer tutorials/testing on the gastro-intestinal. and genito-urinary systems.
Session 11:	Human biology and diversity
Lecture (1 hour):	Concepts of evolutionary change.
Lecture (1 hour):	Variations in the structure and functions of the body.
Group work (1 hour):	Discussion on variations in the structure of the body
Directed learning:	Computer tutorials/testing on variations in the structure of the body.
Session 12:	Surface anatomy, revision and case studies
Lecture (1 hour):	Surface anatomy.
Group work(2 hours):	Case studies.
Directed learning:	Computer tutorials/testing on surface anatomy and case studies.

CLOSELY RELATED MODULES

MEA112: General skills (Phase I).
Tissues of the body. (Phase I).
Development of the body. (Phase I).

EVALUATION/ASSESSMENT

The module mark is based on 2 written tests as scheduled, as well as on continuous evaluation (unannounced - 10% of module mark) during each session or during directed learning following a session.
The module mark contributes 50% towards the final combined mark.
One two-hour examination will be written at the end of Semester 1.
The examination mark contributes 50% towards the final combined mark.
Learners' level of skills development will be assessed, based on the results of a conventional pre- and post-test on general science terminology (Refer to MEA112 *Module Guide*).

PRESCRIBED RESOURCES AND REFERENCES

🕮 Clinical Oriented Anatomy. K.L. Moore. (Williams & Wilkins) 4th Edition.

☞ Physics of the Body. J.R. Cameron, J.G. Skofronick and R.M. Grant. (Medical Physics Publishing: Madison, Wisconsin, USA) 1992.

Module Development Team: MEF113 - Mr AEF Gous and Prof CP Herbst.
MEA112 - Ms AA Beylefeld and Ms MP Jana.

Information communicated to students on their role in the assessment process and instruments used to gather assessment results

APPENDIX 9C

4.5 ASSESSMENT OF GROUP PROCESS

Learning outcomes

By the end of this session you should be able to

- *reflect on the functioning and experiences of your group*
- *discuss and rate the contribution of each member in your group*
- *assess the overall work of the group, as well as the level of individual contribution to the group process*

4.5.1 INTRODUCTION

- In small group work it is important to learn from experience and to modify behaviour accordingly.

- How a group is functioning may be monitored by means of direct observation. However, in the development of group work skills, it is not so much observable behaviour as learners' ability to recognise group problems when they see them, diagnose them, act to do something about them and check whether the new way of operating is working, that is important.

- Group members are in a good position to review their own behaviour and their experiences as a group. They can document group behaviour on an ongoing basis and, from time to time, step back to review their experience as a group. On the basis of such review, they may want to review their group contract.

- Involving learners in the assessment of the group work process is advantageous in more than one respect:

  - learners develop social organisational skills;
  - it places the responsibility on the group to deal with conflict and other interpersonal problems;
  - it makes it possible to assess the level of individual contribution to the group process;
  - "strong" members are enabled to identify and help fellow-learners who struggle academically.

4.5.2 AWARENESS OF GROUP WORK SKILLS

- In order to develop your awareness of group work skills, you are required to do the following:

- Keep a group work log in which you regularly write reflective notes on the way your group is operating.

- Use these notes to compile a report on the group process (**Appendix A**). A **group report** (only ONE report per group) must be submitted on ..... and ..... after completion of project work in Modules MEC113 and MED113.

- Compile a **group report** on the leadership skills of each group member (**Appendix B**) - to be submitted by the end of April).

- Complete **individual** confidential evaluation forms (**Appendix C**) to assess individuals' contribution to group work.

- An examination question on the functioning of your group, counting a maximum of 10 marks, will form part of the MEB113 module paper at the end of the first semester. The only way you can "revise" for this question, is to reflect regularly on the operation of your group.

APPENDIX A

REPORT ON THE FUNCTIONING OF GROUP .....

Build your report around the following questions:

1. Did you find the group setting a supportive environment to work in?
2. Did everyone in the group work?
3. What steps have you taken to organise your group work?
4. Have you encountered any problems to work as a team and how did you tackle them?
5. If you were able to embark on a second, similar task as a group, what would be different about the way you went about working as a team, and why?
6. Did you enjoy the project/assignment?
7. What did you not like?

APPENDIX B

GROUP REPORT ON THE FUNCTIONING OF ..... AS A LEADER OF A PROJECT/ASSIGNMENT/DISCUSSION IN GROUP .....

Instructions

For each group member in turn, discuss and rate their contribution to the effective functioning of the team: did he/she contribute above or below average within the group?

Aspect of functioning as a leader	Well below average	Below average	Average	Above average	Well above average
1. Contributing to the forming of good team cohesion.	0	1	2	3	4
2. Leadership in managing meetings, discussions.	0	1	2	3	4
3. Planning and allocating tasks.	0	1	2	3	4
4. Generating ideas and solutions.	0	1	2	3	4
5. Tackling social problems in the group.	0	1	2	3	4
6. Organising individuals to do jobs.	0	1	2	3	4
7. Helping team members to finsish jobs.	0	1	2	3	4
8. Willingness to take on unpopular jobs.	0	1	2	3	4
Sum of marks					

Signatures of group members:

....

....

....

....

DATE: .....

APPENDIX C

CONFIDENTIAL REPORT ON THE FUNCTIONING OF INDIVIDUALS IN GROUP .....

Candidate	Did not participate in group discussions 0	Participated in group discussions. but did not make any significant contribution 1	Participated in group discussions and contributed on average 2	Participated in group discussions and made outstanding inputs 3
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

MONITORING GROUP FUNCTIONING

(*Source:* Gibbs. Rust. Jenkins & Jaques. 1994)

- Learners working in teams are bound to experience all kinds of difficulties. And yet most learners prefer to suffer in silence rather than raise these issues for fear that they may be blamed for criticism of individuals or the group as a whole.

- The purpose of this exercise is to give you the opportunity to

  - openly discuss what you feel and experience within your groups;
  - exchange ideas on how to act on group-related problems;
  - record decisions on how you plan to tackle identified problems.

Activity

- Each individual complete the checklist below to identify what is going wrong in your group (5 minutes).

- Form cross-over groups made up of one member from each group, and discuss in your newly-formed group, the checklist with regard to your own group (20 minutes).

- Be honest and open in your discussions and use the following procedure:

  - Each learner in turn reports: "One thing we have done as a group which has helped us to work effectively is ....."

  - Open discussion.

  - Each person in turn reports: "One thing which goes wrong/which we have trouble within our group is ....."

  - Open discussion - suggest ways to tackle and overcome identified problems.

- Groups re-form and check if the different members have ticked the same things. Once you have agreed that you have some problems, discuss them against the background of what you have picked up from other groups. Make suggestions on how you can build on your successes and overcome your problems in the future (15 minute).

- Each group reports to the whole class one change they plan to make: "One thing we are going to do differently in the way we work, is ....."

GROUP WORK CHECKLIST: WHAT IS GOING WRONG?		
Tick	What might be the problem	Comments
☐	We do not clarify what the group's task or objective is.	
☐	We are not clear on what has been decided and on who is going to do what.	
☐	We do not clarify what has to be done by when.	
☐	We do not have established procedures for handling meetings.	
☐	We do not keep to agreed procedures.	
☐	We keep repeating arguments instead of moving on.	
☐	We do not listen to one another.	
☐	We constantly interrupt one another.	
☐	We just push our own views instead of developing and encouraging others' ideas.	
☐	We put one another down.	
☐	We do not recognise the feelings of group members.	
☐	We allow individuals to dominate the group.	
☐	We allow individuals to withdraw from the group.	
☐	Not everyone in the group is contributing equally to the progress of the group.	
☐	Individuals in the group are not prepared to compromise their wants for the sake of the group.	
☐	Other problems. Specify:	

(Adapted from Gibbs. 1992)

OFFICIAL CONTRACT FOR GROUP B (Green group) MB.ChB 1

OBJECTIVES:

- **Punctuality** – meet 5 minutes before session (notify scribe 1 day/hour? in advance when meetings can't be attended – good excuse: will be decided by group)
- Each member must be **well prepared** for each session: work with passion
- Everyone must **participate**: invaluable contribution
- **Attendance** at all meetings **compulsory**
- **Openness, honesty, loyalty, politeness & frankness** (always contribute despite significance)
- Priority: ACADEMIC
- Meetings **not to be adjourned until goal is reached**
- Conflict dealt with immediately
- Assignments: each member will receive assignment & due date when assignment is handed to group (half time required for assignment to allow time for adjustment)
- Cultivate atmosphere of learning & discipline
- Work to be divided equally

ACTION AGAINST DISFUNCTIONAL MEMBERS

- A warning will be issued as first step in disciplinary action
- A R2 fine is the second step against any group member who does not abide by the rules above
- If a group member is not present during a group meeting (without appropriate excuse and valid reason), the member will be excluded from that activity (i.e. none of the work dealt with will be given to the offender).

I hereby agree to abide by the regulations as set out above

Signed	Date
D. Edmunds	20-02-2001
E. Hunt	20/02/2001
C. Jose	20/02/2001
E. King	21/02/01
R. Lutchman	20:02:2001
I. Taylor	20-02 2001
M. Viljoen	20/02/01
A. Wen	20/02/2001

Examples of group reports

Verslag oor die funksionering van
Groep Groen™

23 April 2002

Na afloop van die groepsopdrag vir MED113 (die ekspo), doen ons hiermee verslag van die groepproses en -funksionering van *Groep Groen*.

Groepopset

Die verdeling van take en opdragte, asook die samevloei van kreatiewe energie, veroorsaak 'n ondersteunende werksomgewing. Die sinergie het maksimale funksionering tot gevolg gehad.

Ons kan met trots bekend maak dat ons in groepsverband optimaal presteer.

Werkslewering van individue

Elke individu het op sy/haar unieke manier bydrae gelewer – ooreenkomstig met sy/haar persoonlikheid en geaardheid. Daar is na groepsbelang, eerder as eie voorkeure gewerk. Elkeen het dus sy kant gebring ten einde 'n sukses van die groepstaak te maak. Almal het dit ook geniet.

Organisering van groepwerk

Aanvanklik is daar op baie informele wyse idees en gedagtes uitgeruil ten einde daar met 'n plan op die tafel gekom is. Daar is ooreengekom dat elke groepslid dié take doen waarvoor hy/sy die mees beskikbare hulpbronne het en oor die beste vaardighede beskik. Daarna het gereelde informele vergaderings plaasgevind, waartydens spesifieke take deur die groep as geheel afgehandel is, bv. die maak van die plakkate. Finale afronding is gedoen deur opbouende kritiek wat in goeie gees tussen groeplede uitgeruil is.

Probleme ondervind en oplossings

Aanvanklik het ons nie genoeg vergader en beplan nie, en eers op 'n later tyd weggespring en die erns van die saak besef. Dit het moontlik 'n klein aantal onnodige druk veroorsaak, wat vinnig deur die groep se goeie gees oorkom is. Met die uitvoer van die take is werkstempo en -effektiwiteit só aangepas dat ons steeds die take betyds kon afhandel.

Moontlike veranderinge

- Meer informele vergaderings
- Vroeër begin met take
- Beter kommunikasie, veral t.o.v. *status quo* op enige gegewe tydstip tydens afhandeling van taak

Werksbevrediging

Die leerproses was intellektueel stimulerend. Die gemeenskaplike vloei van kreatiewe gedagtes het 'n estetiese bevrediging by die groeplede geskep. Groeplede het mekaar beter leer ken, omdat ons saam onder druk moes werk, maar ook saam die vrugte van ons werk gepluk het. Groepskohesie het baie verbeter. Die taak is deurlopend met 'n glimlag en goeie humoristiese gesindheid uitgevoer.

Waarvan het ons nie gehou nie?

Opeenhoping van mense tydens die uitstalling van die projek, asook die kort uitstallingstyd.

GEASSESSEER VIR ALGEMENE VAARDIGHEDE

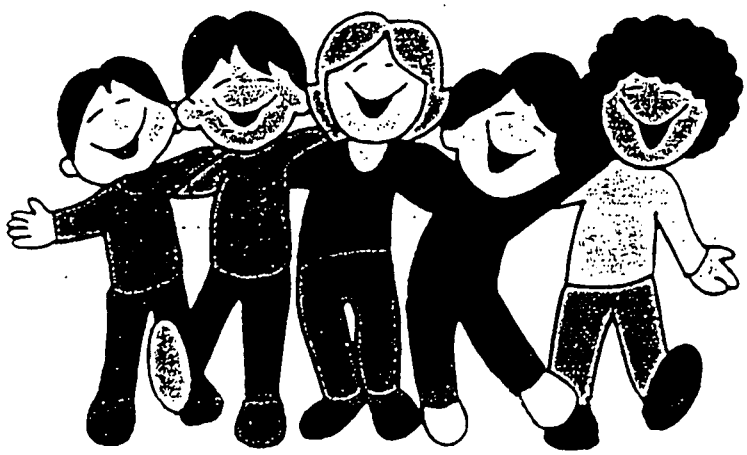
PRESTASIEKATEGORIE: _____

[illegible]	
[illegible]	
Nie aanvaarbaar nie	

ASSESSOR: [illegible]

DATUM: 7/5/02

GROUP FUNCTIONING



DONE BY: PURPLE GROUP
MOHAMMED ASMAL
CANDICE HENDRICKS
MICHELLE KOCH
JACLYN MAHAFFEY
BOLEDI MATHEBE
PRISCILLA MOTHEKHE
MALEBO SEHALE

MODULE: MEA 112

FACILITATOR: MRS JAMA

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1. Introduction

Behind every excellent project is a properly functioning group. Functioning well as a group requires a lot of dedication from each member. Skills of various members need to be combined so that the end product is the best that the group could have achieved. In order to function well, each member should also feel part of the group and feel that they want to participate in the group's activities. The Expo was a great opportunity to test the functioning of our group and in this report we will describe over discoveries under the following headings:

- Supportive Environment
- Did Everyone in the Group Work?
- Organisation
- Problems
- What Would We Do Differently?
- Enjoyment
- Dislikes

2. Supportive Environment

The group setting is a supportive environment to work in. The end result of any project does not only depend on one person but on a group of people. In this way, the skills of different people in the group can be integrated into each other in order to create a diverse and good project. Each person can do what he does best. It is also a supportive environment to work in because members of the group can advise and help each other with their part of the work.

3. Did Everyone in the Group Work?

Everyone in the group was assigned tasks that they had to do before the Expo on Thursday. Every member went dedicatedly about their tasks and did everything that was required of them. When a member felt that he/she would not be able to finish the task given to him/her, another member quite willingly helped that person. We think that the group functioned very effectively because each member worked so hard.

4. Organisation

We took the following steps to organise our group work: Firstly, we allocated times for group discussions where we decided what we wanted to do for the Expo. We also discussed what materials we would need for the final project. We then discussed who had what materials at home that we did not need to buy. Once we had decided what materials we had at home, we decided what we would need to buy and who was willing to buy it. Secondly, we designated two tasks to each member. The tasks we allocated according to the skills a specific member had. For example, the artist was assigned the poster. We had regular group updates where we discussed any problems

we were having with our tasks or brought rough copies of what we were doing for approval from the group.

5. Problems

Our group works really well together and we hardly have any conflict among members. The one problem that we do have is unpunctuality. One or more members often arrive late for meetings and this puts us behind. We have discussed this problem in our group and every member is making a consorted effort to be punctual.

6. What Would We Do Differently?

We felt that we went about our project in a very good way and can only find one thing that we would do differently. We found that everyone was willing to do their tasks once they were told what they were, but very few members came up with any ideas. The brainstorming landed on one or two of the members. We have decided that if we were able to do the Expo again, we would arrange more time for brainstorming and that everyone should contribute ideas.

7. Enjoyment

Everyone enjoyed the project. It was interesting to go out to the NGOs where we learnt a lot more about our topic. Everyone enjoyed making their part of the project and then setting it out on the day of the Expo. We also enjoyed having to organise the whole project properly. The day of the Expo was also a highlight in the project.

8. Dislikes

We felt that the Expo was just a little bit too cramped. The stalls were really right on top of each other and it was hard to get a total view of each stall when judging them. We were unsatisfied with the allocation of table and boards. We were told to write down how many of each we would need, but on the day of the expo, no one had the right amount of tables and boards.

9. Conclusion

In conclusion, we would like to mention that we think that our group functions very well. Every member has a deep dedication to the group and wants it to do well. We are hardworking but also fun-loving. We think it is important to have fun while working on any project. Since the beginning of the year, we have evolved from group members into good friends.

Details of the MED113 poster presentations in 2002

The Health Expo (MED 113 + MEA 113)

Funded by : CHESP (Community- Higher Education Services Program)

Role Players:

- First year medical students
- Lecturers MED 113 + MEA 113
- Frik Scott Library
- Department of communication
- Several NGO's
- Comtech and Navalsig schools (Grade 11)
- MUCPP

MED 113

Before the CBE, two formal lectures were given on health education and Community participation. As part of integrated teaching, MEA 113 (Basic skilla) were involved in helping the students to acquire certain skills for the EXPO.
The CBE consisted of two parts:

1. Community participation

As part of the lecture on community participation in MED 113, the first year medical students were visiting several of the NGO's in Bloemfontein. The groups were then asked to design a poster and brochure for a health stall for the specific organization for the Expo which will be on 18/4/2002 in the foyer of the Faculty for Health Sciences. The NGO's that were visited were:

Lettie Fouche school
Free State Aftercare centre
Hospice
Lebone
Tsepong
KANSA
Society for disabled
Susanna Coetzee Home

2. Health Education

As part of Community based education in MED 113 of Phase 1 of the curriculum 2000, first year medical students visited

1. The Comtech High School (grade 11 students) in Mangaung
2. Navalsig High school (grade 11)

A workshop was held at the two schools and in the process they have developed a needs analysis. The themes / topics that were identified by the scholars helped the students to develop a Health Education programme through posters and brochures

The Scholars will visit the Faculty on 19/4/2002 and will participate in the evaluation of these stalls, posters and brochures. The exhibition material will be used in future for their health promotion programs in the school.

The following topics were agreed upon by scholars:

1. Road safety
2. Alcohol abuse
3. Environmental health
4. Eating disorders
5. Acne
6. Smoking
7. Drug abuse
8. Family planning
9. Depression
10. Sexually transmitted diseases

MEA 113

The major aim with skills development in this module is to empower learners with the skills that will enable them to educate individuals and community groups on the principles and processes of disease prevention and health promotion.

General skills:

- *Find and critically evaluate information (Internet)*
- *Creatively systematise information in the form of a brochure*
- *Use a computer for word processing, data base searches and communication*
- *Visually communicate information in the form of a poster*
  Establishment of criteria for the assessment of presentations
- *Orally present information to an audience of peers and academic staff*

Evaluation of the EXPO will be done by:

- team of "academic" experts
- Outside experts
- Students themselves
- Scholars

According to criteria set by students in group work

Thank you to:

- First year medical students
- Lecturers MED 113 + MEA 113
- Frik Scott Library
- Department of communication
- Several NGO's (Spending a lot of time with our students)
- Comtech and Navalsig schools (Grade 11) Needs analysis workshop
- MUCPP
- Me Viviene Lourens (arrangements re exhibitions)
- Prof Pieter Nel (arrangement with busses etc)

The Health Expo (MED 113 + MEA 112)

NGO's:

Lettie Fouche school
Free State Aftercare centre
Hospice
Lebone
Tsepong
KANSA
Society for disabled
Susanna Coetzee Home

HEALTH TOPICS:

1. Road safety
2. Alcohol abuse
3. Environmental health
4. Eating disorders
5. Acne
6. Smoking
7. Drug abuse
8. Family planning
9. Depression
10. Sexually transmitted diseases

MED 113: HEALTH EXPO 18/4/2002

INDELING - AFRIKAANSE KLAS:

Bruin:	Padveiligheid (Road safety)
Rooi:	Vrystaatse Nasorgsentrum
Oranje:	Alkohol misbruik (Alcohol abuse)
Blou:	Hospice (& AIDS)
Groen:	Omgewingsgesondheid (environmental health)
Geel:	Susanna Coetzee tehuis (& tienerswangerskappe)
Pers:	eetversteurings (eating disorders)
Wit:	Tshepong victim support unit
Grys:	Aknee (acne)

ALLOCATION - ENGLISH CLASS:

Brown:	Family planning
Red:	Smoking
Orange:	Lettie Fouche
Blue:	Drug abuse
Green:	Lebone house
Yellow:	Depression
Purple:	KANSA
White:	Sexually transmitted diseases
Grey:	Society for the disabled

Details of process that was followed in negotiating assessment criteria with students **APPENDIX 9F**

ESTABLISHMENT OF CRITERIA FOR THE ASSESSMENT OF POSTER PRESENTATIONS

- Brainstorm 1: Which criteria?
  - Each individual lists all the items they can think of according to which the poster presentations may be assessed.
  - Each learner names one item, which is listed by the group leader (eliminate overlapping).
  - Leaders of different groups gather. They choose a leader and decide on the final criteria, composed out of each group's contribution.
  - Chosen leader writes their decisions on board for all to see.
- Brianstorm 2: What weight should each criterion carry?
  - Each group takes a decision among themselves on the weight each chosen criterion should carry.
  - Leaders of different groups get together once again to decide on the weights.
  - Their decision is written on the board.
- Class decides cooperatively whether they agree with the leaders' decision.
- The class leaders from the English and Afrikaans groups, and their co-leaders, get together to reach consensus on the final criteria and weights that were decided on in the two language groups respectively.
- The class leaders present the final result to their respective classes and hand it in at the facilitator.
- Facilitator uses the suggested criteria and draw up an assessment scale.

NB: Over and above assessment by a panel of academic staff, groups will also assess one another's presentations.

/c:kriteriaplakaatvoordragte2002

HEALTH EXPO / GESONDHEIDSEKSPO - 18 APRIL 2002

PROJECT PRESENTATIONS / PROJEKVOORDRAGTE

MODULE MED113

CONCEPTS OF HEALTH AND DISEASE /KONSEPTE VAN GESONDHEID EN SIEKTE

PLEASE NOTE: Assessors should take into account the posters, brochures and display of items
NEEM ASB KENNIS: Assessore moet plakkate, brosjures en uitstallings van items in aanmerking neem

Name of assessor / Naam van assessor:

Tel.: E-mail / E-pos:

Scoring scale: *Low 1 2 3 4 5 High* / Punteskaal: *Laag 1 2 3 4 5 Hoog*

CRITERION / KRITERIUM	GROUPS									GROEPE								
1. Visual impact/Visuele impak	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rooi	Oranje	Blou	Groen	Geel	Pers	Wit	Grys
Originality/creativity																		
Oorspronklikheid/kreatiwiteit																		
Relevancy of way in which theme is portrayed																		
Relevansie van manier waarop tema uitgebeeld is																		
Usage of colour																		
Gebruik van kleur																		

Assessment sheet showing details of criteria and performance indicators for use by students

Scoring scale: *Low 1 2 3 4 5 High* / Punteskaal: *Laag 1 2 3 4 5 Hoog*

CRITERION / KRITERIUM	GROUPS									GROEPE								
	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rooi	Oranje	Blou	Groen	Geel	Pers	Wit	Grys
Size/proportion/logical arrangement																		
Grootte/proporsie/logiese rangskikking																		
Overall visual appeal of:																		
Poster																		
Brochure																		
Display of items																		
Algemene visuele indruk van:																		
Plakkaat																		
Brosjure																		
Uitstalling van items																		
2. Transmission of information/ Oordrag van inligting	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rooi	Oranje	Blou	Groen	Geel	Pers	Wit	Grys
Simplicity / clarity																		
Eenvoud / duidelikheid																		
Comprehensibility (Understandability) of content for target group (Grade 11 school children for health topics; the general public for NGO's)																		

Scoring scale: *Low 1 2 3 4 5 High* / Punteskaal: *Laag 1 2 3 4 5 Hoog*																			
CRITERION / KRITERIUM	GROUPS									GROEPE									
	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rooi	Oranje	Blou	Groen	Geel	Pers	Wit	Grys
Verstaanbaarheid van inhoud vir die teikengroep (Graad 11 skoliere vir gesondheidsonderwerpe; die algemene publiek vir NGO's)																		
Usefulness of ideas communicated																		
Bruikbaarheid van idees wat gekommunikeer word																		
Correctness of language usage																		
Korrektheid van taalgebruik																		

NB: Criterion 3 should be completed by subject experts ONLY

NB: Kriterium 3 moet SLEGS deur vakspesialiste voltooi word

Scoring scale: *Low 1 2 3 4 5 High* / Punteskaal: *Laag 1 2 3 4 5 Hoog*																			
CRITERION / KRITERIUM	GROUPS									GROEPE									
3. Accuracy of content Akkuraatheid van inhoud	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rooi	Oranje	Blou	Groen	Geel	Pers	Wit	Grys
Factual correctness																		
Feitelike korrektheid																		

HEALTH EXPO / GESONDHEIDSEKSPO - 18 APRIL 2002

PROJECT PRESENTATIONS / PROJEKVOORDRAGTE

MODULE MED113

CONCEPTS OF HEALTH AND DISEASE /KONSEPTE VAN GESONDHEID EN SIEKTE

PLEASE NOTE: Assessors should take into account the posters, brochures and display of items
NEEM ASB KENNIS: Assessore moet plakkate, brosjures en uitstallings van items in aanmerking neem

Name of assessor / Naam van assessor:

Tel.:

E-mail / E-pos:

Scoring scale: *Low 1 2 3 4 5 High* / Punteskaal: *Laag 1 2 3 4 5 Hoog*

CRITERION / KRITERIUM	GROUPS									GROEPE								
1. Visual impact/Visuele impak	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rooi	Oranje	Blou	Groen	Geel	Pers	Wit	Gryss
Originality/creativity																		
Oorspronklikheid/kreatiwiteit																		
Relevancy of way in which theme is portrayed																		
Relevansie van manier waarop tema uitgebeeld is																		
Usage of colour																		
Gebruik van kleur																		

Scoring scale: *Low 1 2 3 4 5 High* / Punteskaal: *Laag 1 2 3 4 5 Hoog*

CRITERION / KRITERIUM	GROUPS									GROEPE								
	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rooi	Oranje	Blou	Groen	Geel	Pers	Wit	Grys
Size/proportion/logical arrangement																		
Grootte/proporsie/logiese rangskikking																		
Overall visual appeal of:																		
Poster																		
Brochure																		
Display of items																		
Algemene visuele indruk van:																		
Plakkaat																		
Brosjure																		
Uitstalling van items																		
2. Transmission of information/ Oordrag van inligting	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rooi	Oranje	Blou	Groen	Geel	Pers	Wit	Grys
Simplicity / clarity																		
Eenvoud / duidelikheid																		
Comprehensibility (Understandability) of content for target group (Grade 11 school children for health topics; the general public for NGO's)																		

Scoring scale. *Low 1 2 3 4 5 High* / Punteskaal: *Laag 1 2 3 4 5 Hoog*																			
CRITERION / KRITERIUM	GROUPS									GROEPE									
	Brown	Red	Orange	Blue	Green	Yellow	Purple	White	Grey	Bruin	Rooi	Oranje	Blou	Groen	Geel	Pers	Wit	Grys
Verstaanbaarheid van inhoud vir die teikengroep (Graad 11 skoliere vir gesondheidsonderwerpe; die algemene publiek vir NGO's)																		
Usefulness of ideas communicated																		
Bruikbaarheid van idees wat gekommunikeer word																		
Correctness of language usage																		
Korrektheid van taalgebruik																		

NB: Criterion 3 should be completed by subject experts ONLY

NB: Kriterium 3 moet SLEGS deur vakspesialiste voltooi word

MODULE MEA112

GUIDELINES FOR THE COMPILATION OF A SKILLS PORTFOLIO

January 2002

CONTENT

1. What is a portfolio?

2. What is the purpose of a portfolio in Module MEA112?

3. Required content of the portfolio (learner's check-list)

4. Criteria for the assessment of portfolio items

5. Learners' performance profile in the different skills areas

6. General information

1. WHAT IS A PORTFOLIO?

A portfolio is described as follows:

> *A systematic, organised and purposeful process of collecting and evaluating student's products to document progress towards the attainment of learning targets (*Mcmillan, 1997*).*
>
> *It is evidence used by the teacher and learner to monitor growth of the learner's knowledge, skills and attitudes (*Cole, Ryan & Kick, 1995*).*

According to the Department of Education, the best way to achieve a fair and balanced assessment of a learner's progress is to provide each learner with a variety of opportunities of demonstrating their competence in different ways and across different contexts.

This implies, firstly, continuous assessment of a learner's progress over a period of time.

In the second instance employing a variety of assessment strategies to assess a range of skills and abilities much wider than those evaluated with conventional tests and examinations (Malan, 1997).

2. WHAT IS THE PURPOSE OF A PORTFOLIO IN MODULE MEA 112?

In this module a portfolio is used as an assessment instrument to demonstrate your mastering of skills. General skills are regarded as a critical outcome of the learning programme you follow. This means that it is an outcome not restricted to a particular discipline or area of learning, but generically applied in different learning and employment context.

This explains why products required from you in core modules, are also included in the portfolio for assessment from a skills development point of view.

3. REQUIRED CONTENT OF THE PORTFOLIO

(For use by the learner as a check-list)

The following items should be included when you hand in your portfolio

ITEM	WEIGHT IN MEA112	DUE DATE
1. Results of the *computer sifting test*. The signature of the assessor must appear on the report to confirm that you have command of the basic computer skills.	5%	
2. Evidence of other assessed *computer activities*, as specified by the information technology facilitator.	25%	
3. A copy of the group's *broschure* (MEA112: MED113, Session 4).	20%	
Subtotal	50%	
4. Results of the terminology *pre- and post-tests* (MEA112: MEF, Session 1).	5%	
5. A copy of the group's *written assignment* (MEA112: MEC113, Sessions 5 en 6).	10%	
6. A personal *report on the clinic visit* (MEA112: MEC113, Session 3).	5%	
7. Results of your group's *poster presentation*, as assessed by an academic panel and peers (MEA112: MED113, Session 9).	10%	
8. Results of peers' and experts' assessment of your group's *oral presentation* (MEA112: MED113, Session 9).	10%	
9. *Group functioning*. Assessment of individual as leader / group member.	5%	
10. *Critcal incident*: A short account (maximum 200 words) to demonstrate how you have applied a particular skill (e.g. ability to solve a problem, communication skills, sensitivity towards cultural differences, skill in information technology, ability to keep the group process on track) exceptionally well or extremely poor. Motivate why this was the case	5%	
Subtotal	50%	
TOTAL	100%	

The following items should be included in the portfolio in complete format. For every item that is missing or incomplete, a maximum of 5% will be deducted from the main toatal (it means a maximum of 25%)	IN CASE THIS ITEM IS MISSING ...	DUE DATE
11. A complete *learning style* inventory.	-5%	
12. A complete profile of marks that you set for yourself for the *first semester module tests*, as well as the actual marks you received.	- 5%	
13. A copy of the *group's contract*.	-5%	
14. A form on which your group's *self-assessment marks* as well as the *marks allocated to the group by the lecturer / facilitator appear*.	-5%	
15. A *brain chart* summarising your group's view on the difference between African and Western cultural habits and behaviour regarding any of the following: communication style, courtesy behaviour, eating habits, superstitions on disease and health, etc.	-5%	

4. CRITERIA FOR THE ASSESSMENT OF PORTFOLIO ITEMS

4.1 Criteria for the assessment of individual and group products

Criteria that will be used to assess individual and group items will be negotiated with and/or communicated to the learners early.

4.2 Criteria for penalising incomplete items

- Well completed -0%
- Fairly completed -2%
- Incomplete -5%

5. LEARNERS' PERFORMANCE PROFILE IN THE DIFFERENT SKILLS AREAS

(This framework is filled in by the facilitator)

	"Achieved beyond" (B)	*"Achieved"* (A)	*"Partly achieved"* (P)	*"Not achieved"* (N)
1. **Information technology:** - Sifting test - Activities - Brochure				
2. **Communication:** - Written project - Oral presentation - Poster - Report: clinic visit				
3. **Group functioning:** - Assessment as leader - Assessment as group member				
4. **Personal, academic, social self-management and development** - Critical incident - Terminology test				

6. GENERAL INFORMATION

- Since this portfolio serves as an assessment instrument for the module on general skills, a learner who does not complete it will be considered as having failed Module MEA112.

- It is the responsibility of each learner to see to it that the required items are included in the portfolio. If copies have to be made, it is the responsibility of each learner to do so.

- The portfolio should be compiled in a neat and well-organised manner at all times. The use a ring binder is recommended.

- The portfolio will be presented to the facilitators of the module for assessment at stipulated times.

- Any learner who is still not competent in a skill, will be given an opportunity to acquire the desired skill and replace the unsatisfactory product with a better one during the second semester.

- The facilitators of the module will be available to guide and assist learners who experience difficulty.

- Any false and/or suspicious information in the portfolio will be investigated and followed by disciplinary action, if necessary.

- The portfolio remains the property of the learner.

/c:delphi.doc
AB:01-12-01

ASSESSERINGSKEDULE : ONDERHOUD
ASSESSMENT SCHEDULE: INTERVIEW

	Standaard/Standard Vlak/Level			
	Uitstekend Superior 4 = B	Voldoende Adequate 3 = A	Redelik Minimal 2 = P	Onvoldoende Inadequate 1 = N
KRITERIA / CRITERIA	Demonstrates a clear understanding of investigation Observations valid and attention is given to detail. Data presented in an organised fashion, using tables and charts Answers are well-formulated and supported by data. Proposes an explanation that clearly shows relationship between data and conclusion	Demonstrates an understanding of the investigation. Observations are valid and show some attention to detail Data presented in an organised fashion. Answers to most questions are well thought through and supported by data. Few misleading statements. Conclusion reflects ability to analyse data and draw conclusions	Demonstrates some understanding of the investigation. Observations are vague with little attention to detail. Answers to some of the questions have been omitted. Data recorded in disorganised fashion. Answers to questions not well-thought out or supported by data Learner makes wild and misleading statements. Has difficulty to analyse data and come to conclusions.	Learner demonstrates little or no understanding of the investigation they had to do. Observations are poor with no attention to detail. The data collected are haphazardly recorded. Answers to questions are implausible and not related to data. Learner is unable to analyse data and draw a conclusion.

Numeriese Resultaat Numerical Result	/ 4
Omskakeling (%) Conversion (%)	
Uitkoms Outcome	

ASSESSERINGSKEDULE : ONDERHOUD
ASSESSMENT SCHEDULE: INTERVIEW

Kriteria/Criteria	Standaard/Standard Vlak/Level			
	Uitstekend Superior 4 = B	Voldoende Adequate 3 = A	Redelik Minimaal 2 = P	Onvoldoende Inadequate 1 = N
Toon begrip vir die doel van die ondersoek Demonstrates understanding of purpose of the investigation				
Waarnemings wat gemaak is en inligting wat verkry is word in detail weergegee Observations made and information gained are reported in detail				
Antwoorde is goed geformuleer en/of data word op 'n geordende wyse weergegee Answers are well formulated and/or data are presented in an organised fashion				
Bevindinge ondersteun deur data en geldige afleidings word gemaak . Findings supported by data and valid conclusions are reached				
Skryfstyl Writing style				

Numeriese Resultaat Numerical Result	/ 20
Omskakeling (%) Conversion (%)	
Uitkoms Outcome	

ASSESSERINGSKEDULE : WERKSTUK
ASSESSMENT SCHEDULE: ASSIGNMENT

Kriteria/Criteria	Standaard/Standard Vlak/Level			
	Uitstekend Superior 4 = B	Voldoende Adequate 3 = A	Redelik Minimal 2 = P	Onvoldoende Inadequate 1= N
Algehele aanbieding / Overall presentation				
Struktuur van inhoud / Structure of content				
Bronverwysings / Source referencing				
Tegniese korrektheid / Technical accuracy				
Skryfstyl / Writing style				

Numeriese Resultaat Numerical Result	/ 20
Omskakeling (%) Conversion (%)	
Uitkoms Outcome	

7.5.7 ASSESSMENT OF SCIENCE WRITING SKILLS

- Below is the schedule sheet that will be used for assessing your skill in writing a scientific paper. The written assignment you are required to include in your portfolio should show evidence of having mastered the following aspects of science writing:

Aspect of science writing	Marking schedule	Mark given by learner	Mark given by lecturer
1. Initial impression and legibility (overall presentation)	B: Carefully organised, very well-presented, very clear and easy to read A: Presentation generally satisfactory, can follow the sense, but some words eligible N: Unacceptably untidy, careless and messy, very hard to read, almost indecipherable		
2. Essay structure	B: Paragraphed according to IMRAD A: Reasonably structured and logical N: Unstructured and disjointed		
3. In-text referencing	B: Evidence of having consulted relevant Literature, backed up by appropriate citing of references A: Few in-text references and not always cited properly and appropriately N: Little evidence of any supporting reading, some plagiarism		
4. Bibliography	B: References appropriately listed according to requirements of the chosen referencing style, uniform application of rules A: Occasional inconsistency in the listing of References N: Complete absence of bibliograpy, slipshod, inconsistent method of listing references		
5. Figures, graphs, charts, diagrammes	B: Figures, etc. properly presented and used to enhance the essay A: Figures, etc. present not effectively used in the text N: No figures, etc. used		
6. Technical accuracy (spelling, punctuation, grammar, syntax)	B: Correct spelling, very little, if any errors of grammar, syntax, punctuation A: Occasional spelling errors, a few misuses of words and errors of concord, sentence construction, punctuation N: Many spelling and punctuation errors, grammar and syntax need urgent attention		
7. Prose style	B: A fluent piece of writing in an appropriate Register A: Style generally acceptable N: Style inappropriately casual and colloquial		

I. INTERVIEW: CULTURAL DIFFERENCES

Level

85 4. Superior / Excellent / Achieved Beyond

Demonstrates a clear understanding of investigation. Observations valid and attention is given to detail. Data presented in an organised fashion, using tables and charts. Answers are well-formulated and supported by data. Proposes an explanation that clearly shows relationship between data and conclusion.

65 3. Adequate / Good / Achieved

Demonstrates an understanding of the investigation. Observations are valid and show some attention to detail. Data presented in an organised fashion. Answers to most questions are well thought through and supported by data. Few misleading statements. Conclusion reflects ability to analyse data and draw conclusions.

50 2. Minimal / Fair / Partly achieved

Demonstrates some understanding of the investigation. Observations are vague with little attention to detail. Answers to some of the questions have been omitted. Data recorded in disorganised fashion. Answers to questions not well-thought out or supported by data. Learner makes wild and misleading statements. Has difficulty to analyse data and come to conclusions.

40 1. Inadequate / Poor / Not achieved

Learner demonstrates little or no understanding of the investigation they had to do. Observations are poor with no attention to detail. The data collected are haphazardly recorded. Answers to questions are implausible and not related to data. Learner is unable to analyse data and draw a conclusion.

II. ESSAY / CRITICAL INCIDENT

1. Content

Level		
85	4. Content is superior	(ideas stated clearly; provides relevant details; examples are used as evidence for statements)
65	3. Content is adequate	(sticks to topic; focuses on relevant detail)
50	2. Content is minimal	(wonders off the topic; includes some relevant details)
40	1. Content is inadequate	(says practically nothing; focuses on irrelevant detail)

2. Organisation

Level			
85	4.	Superior	(overtly organised; author helps the reader understand sequence and relationships between ideas by using organisational aids such as transition words, summarising)
65	3.	Adequate	(organised; reader does not have difficulty understanding the sequence and relationship among ideas)
50	2.	Minimal	(organisation is such that the writing strikes one as not to the point, it jumps back and forth; random or rambling writing)
40	1.	Inadequate	(organisation of ideas is so disorganised, one cannot understand most of message)

3. Language

Level			
B 85	4.	Language is superior	(almost no grammatical mistakes; sentence construction varies, indicating full control)
A 65	3.	Language is adequate	(grammatical mistakes here and there, but grammatical structure shows fair control of language)
P 50	2.	Language is minimal	(simplistic language and frequent grammatical / spelling mistakes)
N 40	1.	Language is inadequate	(grammar, vocabulary, spelling, and sentence construction are so poor, one cannot understand most of the message)

CONVERSION TABLE

I. Interview: cultural differences (only one rubric = $\overline{4}$)

4	=	85% +	=	B
3	=	65 - 84%	=	A
2	=	64 - 50%	=	P
1	=	49 - 40%	=	N

II. Essay / Critical incident (three sub-rubrics = $\overline{12}$)

12	=	100%	= B	(4)	85% +
11	=	92%			
10	=	83%	= A	(3)	65 - 84%
9	=	75%			
8	=	67%			
7	=	58%	= P	(2)	64 - 50%
6	=	50%			
5	=	42%	= N	(1)	49 - 25%
4	=	33%			
3	=	25%			

III. WRITTEN ASSIGNMENT

1. Overall presentation

Level

85 4. Very well presented, carefully organised, very clear and easy to read.

65 3. Satisfactory presented, organised and makes sense, here and there words that are illegible.

50 2. Demonstrates some competence in presenting content in an organised fashion; however does not get the impression of full control.

40 1. Unacceptably untidy, careless and messy, very hard to read, almost indecipherable.

2. Essay structure

Level

85 4. Structure gives evidence of cogent planning evidenced by a clear, logical structure; content carefully paragraphed according to IMRAD.

65 3. Reasonably structured and logical.

50 2. Structure satisfactory, but paragraphs not logically arranged throughout.

40 1. Unstructured and disjointed.

3. Sources (in-text referencing and bibliography)

Level

85 4. Flawless in-text citing of references; references correctly listed in the bibliography according to the requirements of the chosen referencing style.

65 3. In-text references mostly, but not always cited correctly; uniform application of rules of chosen style in bibliography with an occasional slip-up here and there.

50 2. Inconsistent style of listing references in the text, as well as in the bibliography; some careless mistakes.

40 1. Very few in-text references with indications of plagiarism; where in-text references do appear, they are used incorrectly and inconsistently; slipshod, inconsistent bibliography.

4. Technical accuracy

85 4. Correct spelling, very little grammar, syntax and punctuation mistakes; figures, graphs, charts and/or diagrams used meaningfully and creatively.

65 3. Spelling mistakes apparent here and there, but not serious; grammar and punctuation satisfactory; figures, graphs, charts and diagrams included but not always appropriately.

50 2. Occasional spelling errors, frequent misuse of words and errors of concord; construction and punctuation need some attention; figures, graphs, charts used meaninglessly.

40 1. Many spelling and punctuation errors, grammar and spelling need urgent attention. No figures, graphs.

5. Prose-style

85 4. A fluent piece of writing in an appropriate register.

65 3. Style generally acceptable. Demonstrates adequate control of writing.

50 2. Careless, haphazard writing style.

40 1. Unstructured and disorganised writing style; inappropriately casual and colloquial.

III. WRITTEN ASSIGNMENT (five sub-rubrics = $\overline{20}$)

20	=	100%	=	B (4)	85% +
19	=	95%			
18	=	90%			
17	=	85%			
16	=	80%	=	A (3)	65 - 84%
15	=	75%			
14	=	70%			
13	=	65%			
12	=	60%	=	P (2)	64 - 50%
11	=	55%			
10	=	50%			
9	=	45%	=	N (1)	49 - 25%
8	=	40%			
7	=	35%			
6	=	30%			
5	=	25%			

Checklist used for end assessment of portfolios

LEARNERS PERFORMANCE PROFILE IN THE DIFFERENT SKILLS AREAS

MEA

SKILLS AREA	(B) "Achieved beyond"	(A) "Achieved"	(P) "Partly achieved"	(N "Not achieved"
1. Information technology				
2. Comminication				
- Interviews				
- Written project (MEC)				
- Oral presentation				
- Poster				
- Report: clinic visit				
- Critical incident				
Total				

3. Group functioning				

4. Personal, academic, social management and development (Completion items)	Included	Well completed	Fairly completed	Incom-plete
- Learning style preference				
- First semester test profile				
- Group contract				
- Self-assessment form				
- Pre- and Post Test				
Total minus =				

ASSESSOR: _____

Electronic request for input from key respondents on portfolio assessment design

3 December 2001

Dear .....

Thank you for agreeing to comment on the assessment of skills, as planned for 2002.

True to the collection of perspective by means of the Delphi technique, the first round is aimed at generating ideas.

I therefore request that you freely comment on the included document. Aspects I wish to highlight and would thus like to see included in your comment, are:

1. The appropriateness of portfolio assessment in Module MEA112 (General Skills).

2. The appropriateness of items required for the purpose of assessment.

3. The fact that a percentage is allocated to the different items (par. 3). It is so that he mark is once again translated to a descriptive category (*achieved beyond, achieved, partly achieved, not achieved)* (par. 5), but do you agree in principle that a norm-based percentage should initially be allocated to the items?

4. The negative assessment of "completion' items.

5. Any other comment on any other aspect of the included document.

I am sincerely indebted to you for the time and effort spent on this.

Kind regards

ADRI BEYLEFELD
MODULE LEADER: MEA112

Form used for gathering short comments from students

SHORT COMMENT

How do you feel about the fact that you as learner has a say in the criteria and weights that will apply in the assessment of poster presentations?

How do you feel about the prospect of your group having to assess the other groups' presentations?

What weight should the students' mark allocation carry, in comparison to the lecturers'? Half? One third? Less? MOTIVATE YOUR ANSWER.

Do you think that your participation as co-assessor in this project will be beneficial to you in any way? MOTIVATE YOUR ANSWER.

Thank you for your input!

Questionnaire used for gathering student feedback on MED113 poster presentations

APPENDIX 9O

REFLECTION
2002

Let us not move on from here before we have taken some time to reflect on the assessment of MED113 project presentations . . .

This year, everything has gone so much smoother as a result of the feedback received from last year's learners. Let us continue to streamline and improve learning opportunities in the new curriculum to the benefit of those who come after us.

Please answer the questions below honestly. Thank you for your response.

A.A. Beylefeld
HEAD: DIVISION OF STUDENT LEARNING DEVELOPMENT

---

1. How do you feel now about having fulfilled an active part in establishing criteria for the assessment of expo presentations?

2. What did you like best about the whole process?

3. What did you like least?

4. What did you personally gain/learn from this experience?

5 Would you say that the aims of authentic assessment* have been achieved through this exercise? Motivate your answer.

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4. Did you experience the assessment process as fair? Or unfair? Motivate your answer.

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6. If you could re-live the whole experience, what would you suggest should be done differently?

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7. While we were still negotiating criteria for the assessment of the expo presentations, one learner expressed the fear that the involvement of learners in the establishment of criteria will eventually be little more than window-dressing.
What is your comment?

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8. Any other suggestions for improvement?

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.....

THANK YOU FOR YOUR TIME!

/c:Reflection on expo
AB:11-04-02

* Assessment embedded in learning experiences that enable learners to demonstrate learning by integrating and applying knowledge and skills to real-world tasks.

Questionnaire used for gathering feedback from lecturers on MED113 poster presentations

APPENDIX 9P

REFLECTION
2002

Let us not move on from here before we have taken some time to reflect on the assessment of MED113 project presentations ..

This year, everything has gone so much smoother as a result of the feedback received from last year's learners. Let us continue to streamline and improve learning opportunities in the new curriculum to the benefit future cohorts of learners.

Please answer the questions below honestly. Thank you for your response.

A.A. Beylefeld
HEAD: DIVISION OF STUDENT LEARNING DEVELOPMENT

---

1. What aspect (if any) of the assessment process makes you feel extremely positive?

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2. What is it that you would like to change as far as the assessment procedure is concerned?

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3. Are you aware of any frustrations/objections/complaints raised by learners concerning the assessment of their projects? If yes, please give more details.

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4. Comment on the assessment instrument: criteria, scale, weights?

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5. Any suggestions on how to improve the assessment part of the expo in future?

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c: reflection on expo 2002 by panel
AB:11-04-02

MY VERWAGTINGE AS MODERATOR

STUDENTE

- Aangesien mediese studente die "room" van studente is, verwag ek werk van uitstaande gehalte met min druipelinge.
- Ek verwag baie kreatiewe werk gelewer deur die studente.
- Ek verwag dat die uniekheid van elke student na vore sal kom.
- Ook dat die studente betrokke sou wees by hul eie assessering in die vorm van ewe-knie evaluering en self evaluering.

DOSENTE

- Het duidelik die taak/take en doel van die portfolio gekommunikeer.
- Die kritieke uitkomste is effektief aan die studente gekommunikeer.
- Voorsiening vir formatiewe en summatiewe evaluering is gemaak.
- Geldigheid / betroubaarheid /konsekwentheid van punte is verseker en duidelik.

PORTFOLIOS

- Netjies uiteengesit
- Goeie bewyse – ook van beste werk gelewer
- Gesistematiseerd
- Bewys van leerervaringe
- Bewys van groei en ontwikkeling by die student
- Bewys van reflekterende denke (by die student)
- Bewys van die leerproses (hoe leer plaasgevind het)
- Bewyslewering van toepassing van kennis en vaardighede opgedoen
- Lewer bewys dat 'n leersiklus/eenheid voltooi is

MODERATORSVERSLAG

MEA 112

JUNIE 2002

1. INLEIDING

Die Afdeling Studenteleer moet gekomplimenteer word vir die wyse waarop hierdie module ontwikkel, geïmplimenteer en geassesseer is. Die uitkomsgerigtige benadering in hoëronderwys is nuut en nog in sy kinderskoene. Min voorbeelde bestaan oor hoe kritiese vaardighede in (1) die kurrikulum geïntegreer moet word en (2) geassesseer moet word. Binne die mediese en verwante opleidingsmodel is dit 'n nog nuwer gedagte. Nietemin is hierdie module 'n voorbeeld van innovasie, waagmoed en deursettingsvermoë wat van 'n uitdaging 'n sukses gemaak het. Graag gee ek dan my indrukke van die module.

2. ALGEMENE ASPEKTE

KATEGORIE	OPMERKING
Nasien van alle portfolios	Al die portfolios wat geselekteer is, is nagesien en punte toegeken.
Punte korrek bereken en in rekenaar ingesleutel	Al die punte wat nagegaan is, is korrek verwerk en ingesleutel.
Konsekwentheid van punte toegeken	Bewys is gelewer dat punte konsekwent toegeken is en dat die onderskeid tussen 'n B en A byvoorbeeld konsekwent getref is.
Volledigheid van die portfolios se items	Die portfolios wat geselekteer is, was almal volledig en geen opdragte uitstaande.
Hoeveelheid en toepaslikheid van aktiwiteite ingesluit in die portfolio	'n Wye verskeidenheid relevante aktiwiteite is in die portfolios opgeneem en geassesseer.
Eweknie-evaluering en selfevaluering	Studente is deur hulle eweknieë geëvalueer – hulle het ook hulself geëvalueer.

3. INTEGRERING VAN KRITIESE VAARDIGHEDE SOOS DEUR SAKO EN DIE NKR VOORGESTEL

KRITIEKE UITKOMS	VOORSIENING GEMAAK IN DIE MODULE OF AKTIWITEITE
1. Kommunikasievaardighede	Die module en assessering het ruim voorsiening gemaak vir die ontwikkeling van hierdie vaardighede.
2. Rekenaarvaardighede/wetenskap en tegnologie	'n Kursus in basiese rekenaarvaardighede is gedoen en geassesseer. Grafieke en tabelle is getrek. Interpretasie van numeriese data is gedoen.
3. Sosiale en groepvaardighede	Groepwerk en –assessering is gedoen en klem is gelê op die ontwikkeling van leierseienskappe.
4. Sensitiwiteit vir diversiteit	'n Taak spesifiek hierop gerig, is gelewer.
5. Krities-analitiese vaardighede	Studente moes inligting versamel, krities evalueer en weergee.
6. Wêreld as bestaande uit verwante stelsels en sisteme	Die verband tussen gesondheid, beleid en gemeenskappe is aangespreek.
7. Organisasie van die individu en om sy aktiwiteite effektief te organiseer en te bestuur	Ten einde 'n portfolio in te handig moet die leerder goeie organsiasievermoëns hê. Die portfolios het voldoende bewys hiervan gelewer.
8. Versameling van inligting, die organisasie daarvan en kritiese evaluasie	Inligtingsvaardighede is ontwikkel en is geassesseer deur middel van 'n uitgebreide taak.

Voldoende bewys is gelewer dat die module die ontwikkeling van die voorgestelde kritiese vaardighede deur SAKO en wat deur 'n UGO-benadering veronderstel is, suksesvol in die module geïntegreer het.

4. KRITERIA SPESIFIEK VAN TOEPASSING OP PORTFOLIOS AS ALTERNATIEWE METODE VAN ASSESSERING

KRITERIA	OPMERKING
1. Asessering of leerder die gestelde leeruitkomste bereik het / verband tussen uitkomste en assesseringsaktiwiteite	Die inligting in die gids en die assesseringskriteria korreleer en is konsekwent toegepas.
2. Ruimte is gelaat vir studente om hulle eie belangstellings en vermoëns te demonstreer	Studente het die keuse gehad om self onderwerpe en gevallestudies te kies en om take met kreatiwiteit aan te pak.
3. Aanmoediging van eie trots in werk en selfassessering	Ruim geleentheid is gegee vir selfevaluering en om werk met trots te voltooi.
4. Dokumentering van verbetering in werk	Die portfolios het nie voldoende hiervoor voorsiening gemaak nie.
5. Bewys van formatiewe evaluering	Kan dalk nog verbeter word.
6. Multi-dimensionele benadering en assessering	Bewys is hiervan gelewer deurdat 'n holistiese benadering gevolg is.
7. Assessering geïntegreed binne toepaslike konteks	Take is binne die konteks van die studente se kursus baie sinvol en geïntegreerd aangebied.

Dankie vir die voorreg om by die modereringsproses betrokke te wees. Die ideal sou wees om voort te gaan met die vaslegging en verdere ontwikkeling van hierdie vaardighede in ander studiejare ook.

Prof Driekie Hay'

Interview protocol used for interviewing top leaders in the UFS Faculty of Health Sciences on the assessment of general skills

APPENDIX 9R

INTERVIEWS WITH TOP LEADERSHIP IN THE UFS SCHOOL OF MEDICINE - OCTOBER 2002

1. Assessment makes it possible to explain what students do and gain. It is thus an important part of a school's demonstration that it gives value for money, and thus accountability. This implies that innovative forms of assessment should be implemented within a school-wide framework and not just here and there in a module or two with much going on as usual in other modules. What I am saying, is that innovative assessment[1] is a whole-school matter.

   WHAT ARE YOUR VIEWS ON SUCH A STATEMENT?

2. There is some evidence that world-wide insufficient attention is being given to innovative assessment within academic subjects, with much of the work on innovative assessment being directed to assessment of general skills and competencies through discrete arrangements.

   HOW DO YOU PLAN TO ENERGISE MODULES TO TAKE ASSESSMENT SERIOUSLY AND TO CONSIDER PROMOTING CROSS-CURRICULAR ASSESSMENT OF GENERAL SKILLS?

3. In the literature it is indicated that in trying to negotiate a shared meaning throughout the curriculum of what should be done, the change agent (which in American institutions is the vice-dean) needs to compromise and accept that the process is slow, faltering and incremental. Often they have to settle for change in one area and then preferably in a non-threatening area. For the past few years we have struggled with changed assessment practices in the MEA112-MED113-MEC113 "alliance".

   WHAT ARE YOUR VIEWS ON THE REINFORCEMENT OF CHANGED ASSESSMENT IN OTHER CORE MODULES? OR DO YOU FORSEE THAT IT WILL IT BE A MATTER OF REINVENTING THE WHEEL?

4. From what I can see in the literature, innovative assessment needs a budget. There seems to be a contradiction between the pressure on resources and the pressure to invest in assessment reform.

   COMMENT, PLEASE.

5. More diverse assessment methods go hand-in-hand with innovative curricula. However, innovation is hard, even for those with a background in educational development. Others don't even know what it is that they don't know, but should know.

   Presently, staff development efforts fall somewhere between two imperfect models: A programme of formal instruction by experts or enthusiastic individuals rediscovering the wheel. What is needed, is support of module development.

   WHAT ARE YOUR THOUGHTS ON THIS?

---

[1] Innovative assessment: All forms of assessment that deviates from conventional, standardised select-response type of tests and examinations.

Electronic message for the purpose of triangulation of interview data

Forwarded by:	"Adri Beylefeld (ADSU)" <gndkaab@med.uovs.ac.za>
Forwarded to:	gndktlr@med.uovs.ac.za
Date forwarded:	Thu, 14 Nov 2002 12:23:46 +0200
From:	"GJ van Zyl" <vanzylgj@med.uovs.ac.za>
Organization:	University of the Free State
To:	"Adri Beylefeld (ADSU)" <gndkaab@med.uovs.ac.za>
Date sent:	Fri, 8 Nov 2002 07:26:38 +0200
Subject:	Re: Triangulation of interview data
Priority:	normal

Adri,

100% met my. Geen probleem. Sterkte verder.

Gert

On 7 Nov 02, at 13:22, Adri Beylefeld (ADSU) wrote:

> 7 November 2000
>
>
> Dear Professor Nel/Moja/Van Zyl/Van der Westhuizen
>
> Attached is an excerpt from my thesis, giving details on what I plan
> to report in relation to the interwiew I had with you on the
> assessment of general skills.
>
> Please let me know if there is something that you disagree with.
>
> Yours
>
> Adri Beylefeld
>

Prof. G.J. van Zyl
Hoof Skool van Geneeskunde
Fakulteit van Gesondheidswetenskappe
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This e-mail and any files transmitted with it are confidential and
intended solely for the use of the individual or entity to which they are
addressed. Any e-mail error notify us by e-mail.

APPENDIX 10A

Delineation and suggested utilisation of a conceptual framework for the integration and assessment of critical outcomes in an undergraduate learning programme

◻ Structure

- The structure of the conceptual framework demonstrates the complex interaction between subject knowledge (disciplinary content), subject-specific skills (disciplinary skills), performance in the workplace (workplace awareness and workplace experience), general skills (management of information, management of tasks, management of self and management of others) and assessment (development of self-regulating and self-correcting behaviour) (cf. Chapter Two, par. 2.2).

- The central position of the general skills element, slightly overlapping into the other four elements demonstrates the ideal of "embedded" skills development, as opposed to a "bolt-on" approach (cf. Chapter Eight, par. 8.3.2.2.5).

- The central location of assessment at the heart of the general-skills element represents the view that assessment, firmly embedded into the whole process of core and fundamental learning, is the most effective way to ensure that critical outcomes are integrated into disciplinary content (cf. Chapters Three, Four and Nine).

- The connecting lines between the different elements of the framework indicate the potential links between fundamental, core and authentic learning, real-world contexts. These lines, pointing in more than one direction, indicate the possibility of transfer, without making an assumption about directionality (cf. the controversy about the transferability of skills, Chapter Two, par. 2.3.4).

□ **Content**

- The framework distinguishes between four potential areas in which the achievement of critical outcomes (general skills) may be pursued, namely the subject or disciplinary context, a subject-specific skills context, a workplace-awareness context and a workplace-experience context. The top two elements in the framework represent the learning that takes place in core modules. The two bottom elements represent the learning that takes place in authentic contexts. The workplace-awareness element represents learning experiences such as the MED113 poster project and/or teaching in the clinical skills laboratory. The workplace-experience element represents early clinical contact with patients.

- The great variety of general skills to be found in the literature are broken down into four "manageable chunks" or domains (management of information, management of tasks, management of self and management of others), represented by the four interlocking elements in the centre of the framework. The list below (after Bennett, Dunne & Carré, 2000) provides a "menu" of typical general skills, from which a school could select items to "fill in" the four quadrants of the general-skills element with a view to satisfy its identified needs (Appendices 7E and 9B give an indication of the range of general skills that were selected by the UFS School of Medicine for development in the period 2000 to 2002).

1. Management of information:

   - Use sources of information (library staff, media, etc.)
   - Use IT
   - Handle large amounts of information effectively
   - Use appropriate language and format in a range of activities
   - Interpret and critically evaluate information
   - Present information/ideas competently (orally, in written form, visually)
   - Use information innovatively and creatively

2. Management of tasks:

   - Identify and conceptualise key issues
   - Set and maintain priorities

- Identify strategic options
- Plan and implement a course of action
- Organise sub-tasks
- Use and develop appropriate strategies
- Assess outcomes

3. Management of self:

- Manage time
- Set objectives, priorities, standards
- Use high-order cognitive skills
- Develop and adapt learning strategies
- Show intellectual flexibility
- Use learning in new and different situations
- Plan/work towards long-term goals
- Deal with criticism constructively
- Cope with stress

4. Management of others:

- Carry out agreed-on tasks
- Respect views and values of others
- Work productively in co-operative contexts
- Adapt to needs of the group
- Defend/justify views/actions
- Take initiative and lead others
- Delegate and stand back
- Negotiate
- Offer constructive criticism
- Assume the role of chairperson
- Assist/support others in learning

- Assessment of critical outcomes is represented by the circle in the centre of the framework. Its focus on the development of self-regulating and self-correcting behaviour presupposes the use of alternative forms of assessment (in addition to traditional tests and examinations), encouraging the development of the following assessment-related skills:

5. Self-regulating and self-correcting skills:

- Development of metacognition (learning to learn)
- Self- and peer assessment of products, processes and performances
- Reflection on own learning to identify strengths and development needs

- **Validity**

- The validity of the framework rests on the fact that it is congruent with current theories of teaching, learning and assessment, as well as with the educational agendas of SAQA and the democratic government of South Africa.

- **Utility**

- The utility of the framework lies in its ability to identify (a) where (i.e. in what core modules) the different domains of general skills are addressed, and (b) patterns of skills development in terms of linking general skills development to the teaching of disciplinary knowledge or skills; to experiences which raise students' awareness of real-world circumstances; to authentic workplace experiences; or to a combination of these elements (cf. Chapter Four, par. 4.3.2 and 4.6).

- The conceptual framework may also serve to focus discussions with students, staff and other stakeholders. In negotiations with staff members teaching in core modules, it may serve to capture the essence of agreements on the teaching of general skills and to prioritise action steps.

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