

CHAPTER 4

QUANTITATIVE STUDY: RESEARCH METHODOLOGY AND THE CONTENT VALIDATION OF THE SURVEY INSTRUMENT

4.1 Introduction

The first stage of this research (chapters 1, 2 and 3) consisted mainly of a literature study on the topic of academic staff development as well as educational transformation and innovation in higher education. The theoretical underpinnings helped develop a conceptual framework for the study. The research variables, themes and elements identified as important through the literature search guided the empirical part of this research and are shown in table 4.3.

This chapter is concerned with the research design, methodology and content validation of the quantitative approach to the empirical investigation. The rationale for choosing the survey type of research and the self-administered questionnaire as an instrument, is explicated. While the limitations of using such an instrument are acknowledged, this researcher explains how these deficiencies were overcome. Next, an overview is given of the measures that were taken to enhance the reliability and validity of the questionnaire.

The content validation starts by providing a theoretical framework pertaining to needs analysis and a discussion of needs analysis instruments then follows. Thereafter, the content validation for the questionnaire is outlined. The content validation draws on the literature survey covered in chapters 1, 2 and 3 and provides a conceptual framework and validation for the items in the questionnaire. Several issues that drive staff development were identified from documentary evidence and these were used as a foundation upon which the questionnaire items were built. Additionally, the qualitative study generated variables that were deemed important to measure amongst the academe. These variables were amalgamated in the content validation.

Subsequently, the piloting and pre-testing of the study to heighten its credibility are also discussed, followed by an explanation of the administration of the questionnaire in the main study. The chapter concludes with a description of the analysis of the responses

For greater comprehension and easy navigation through the text, an outline of this chapter is summarised in figure 4.1.

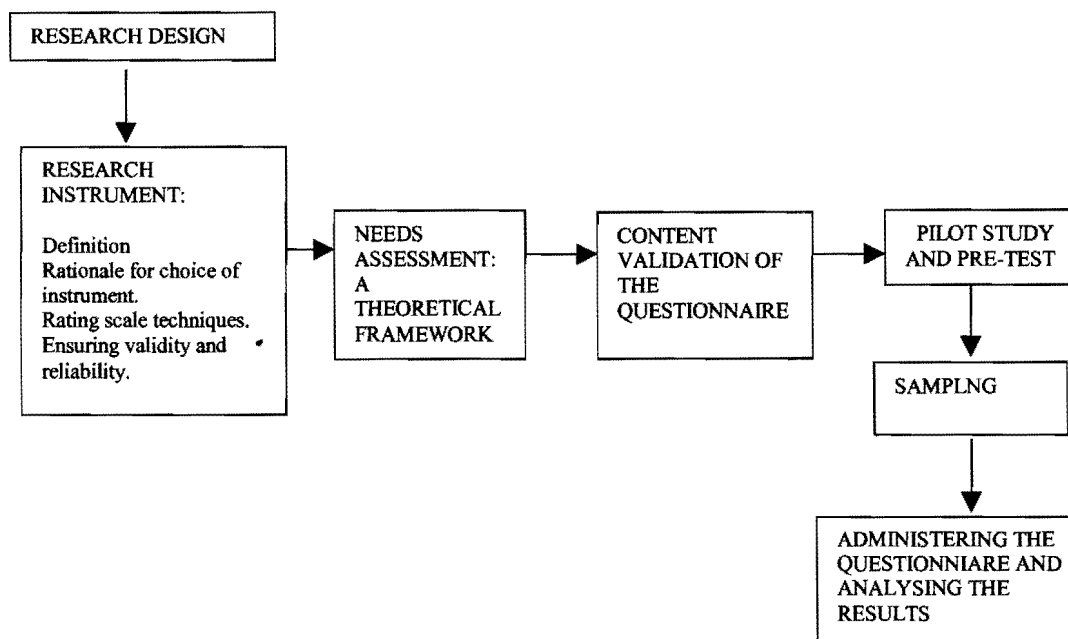


Figure 4.1: Outline of chapter 4

4.2 Research design

One of the purposes of this study was to determine the needs and perception of academics regarding the dynamics of academic staff development at MEDUNSA, that would be in alignment with educational transformational demands while concomitantly achieving academic excellence (see subsection 1.4.2.3). Therefore, the survey type of research was employed in collecting data.

What is a survey? The term survey commonly refers to the collection of standardized information from a specific population, or some sample, usually (but not necessarily) by means of questionnaires or interviews (Robson 1997:49). Surveys gather data with the intention of: 1) Describing the nature of existing conditions, or 2) Identifying standards against which existing conditions can be compared, or, 3) Determining the relationships that exist between specific events (Cohen and Manion 1980: 71).

Usually, surveys are well suited to descriptive studies where the interest may be in how many people in a given population possess a particular attribute or opinion, etcetera. Survey data can also be used to explore aspects of a situation or to seek explanations and provide data for testing hypotheses. Thus, the typical survey is passive in that it seeks to describe and/or analyse, or explore some aspect of the world out there as it is (Robson 1997: 49, 124). The collection of information typically involves one or more of the following data-gathering techniques:

- a) Unstructured (Horner 1995:33), structured or semi-structured interviews conducted by telephone or face-to face (Cohen and Manion 1980: 71 and McBurney 1994:199-201).
- b) Self-completion or postal questionnaires.
- c) Standardised tests of attainment or performance.
- d) Attitude scales (Cohen and Manion 1980: 71).

These data collection methods are summarised in figure 4.2

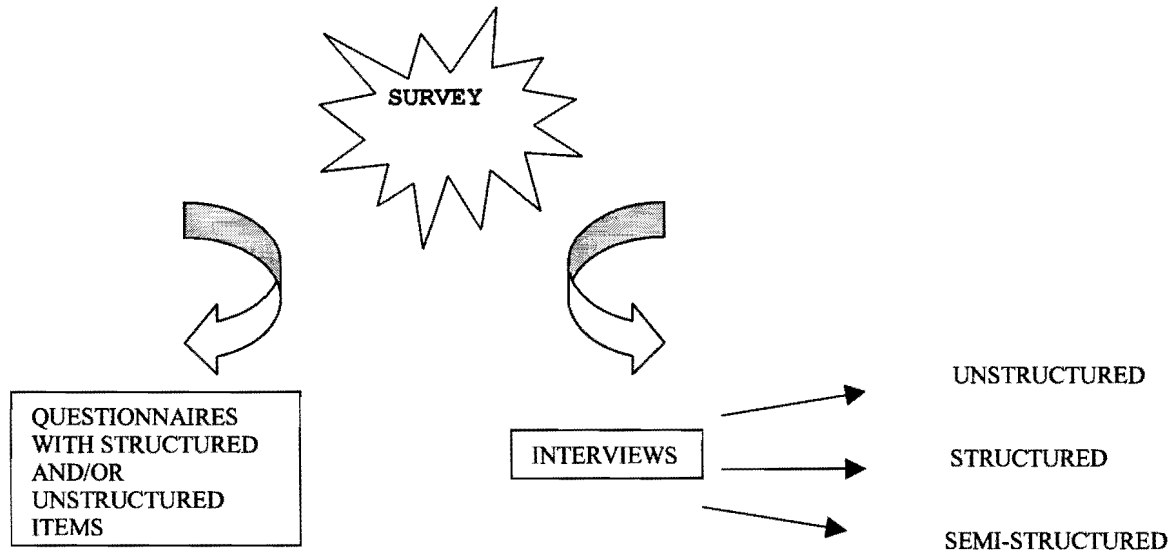


Figure 4.2: Data collection methods using surveys (Adapted from Cohen and Manion 1980:71; McBurney 1994:199-201; Robson 1997:49 and Horner 1995:33).

Why was the survey method used in this research? This decision was guided by the explanation by Van der Merwe (1996:287) that the clarity of the research goal and research question(s) underpins the selection of an appropriate research method. Hence, the following research question prompted the use of surveys (see subsection 1.3.2.3): *Why is there a lack of preparedness among academics at MEDUNSA in dealing with the imperatives of educational transformation? To what extent are the needs and aspirations of staff being addressed by the institution in general and by CADS in particular? What are the perceptions and expectations of academic staff regarding staff development in the context of educational transformation?* There was no treatment and subjects simply had to respond to questions that required them to describe their perceptions, concerns and needs with respect to policies and practices of staff development.

Moreover, the aim of descriptive studies is to document the phenomenon of interest (Marshall and Rossman 1995:41). Descriptive studies focus on describing that which exists, as accurately and clearly as possible, for example an in-depth description of a specific individual or group. Therefore, the quantitative aspect of this study can also be regarded as descriptive. It is descriptive because the

researcher wanted to investigate what the needs, perceptions, concerns, beliefs and attitudes of academic staff are towards academic staff development. According to Mouton and Marais (1991:122) and Marshall and Rossman (1995:41) descriptive research goals can be matched with survey designs, in-depth interviewing, elite interviewing and survey questionnaires.

Additional reasons for selecting the survey type of research is that they provide a relatively simple, cost-effective and straightforward approach to the study of attitude, values, beliefs and motives in a short period of time. They also allow for anonymity which can encourage frankness when sensitive issues are involved (Robson 1997:127-129).

This researcher, however, noted the shortcomings of using surveys. Data is affected by the characteristics of respondents, for example, memory, knowledge, experience and motivation. Respondents won't necessarily report their beliefs, attitudes and values accurately. Another type of external validity problem occurs if one generalises from what people say in a survey to what they actually do. That is, there is lack of relation between attitude and behaviour (Robson 1997:125-128).

The next subsection centres on a discussion of the research instrument that was applied in this investigation. A definition of the instrument is offered, a rationale provided for its choice and an explanation of the steps that were taken to ensure its validity and reliability, ensures.

4.3 The research instrument

Mailed, self-administered questionnaires were used for the quantitative phase of the survey.

4.3.1 Definition of a questionnaire

A questionnaire refers to a "device" for securing answers to questions by using a form which the respondent fills in by him/herself. The administration of questionnaires can take several forms in that some questionnaires are mailed while others are distributed by hand to individuals or to a group (Berdie and Anderson 1974:11 and McBurney 1994:200).

4.3.2 Rationale for the choice of instrument

Why was the questionnaire used in this research? According to the literature the survey questionnaire is appropriate as a data collection technique when the research goal is descriptive in nature. Thus, in the quantitative phase of this research that involved the determination of needs and perceptions of

academic staff regarding academic staff development, mailed questionnaires were used. Further, it would not have been logistically feasible to conduct in-depth interviews or perform observation studies with the 350 academics involved in this study, which was why the choice of self-administered questionnaires was obvious. Endorsing this decision, Cohen and Manion (1980:84) assert that the postal questionnaire is often the best form of survey in carrying out an educational enquiry.

There were numerous advantages that influenced the selection of this instrument. By using self-administered questionnaires, more people could be included in the investigation, giving them a say in expressing their needs and perceptions. Cost was another factor that influenced the decision to employ questionnaires. Also, it would have been difficult transcribing and analysing the data gathered from these interviews. Furthermore, academics are usually busy people and by using self-administered questionnaires, they could complete the questionnaires in their own time and take their time over doing it. The other advantage was that respondents had greater anonymity and were not pressurized to give answers that they might have considered to be socially acceptable. Plus, all respondents received the same questions in the same format making the questionnaire more reliable than interviews (Berdie and Anderson 1974:19 and McBurney 1994:200).

Additionally, in the interests of method triangulation, using self-administered questionnaires as well as interviews (see chapter 5) added more value to the research than if a single method were used. The results could be compared and verified. The identification of correspondences and discrepancies enhanced the value of the research (Robson 1997:383).

One of the limitations of utilizing questionnaires, however, is the low response rate (Berdie and Anderson 1974:20 and Robson 1997:128). This was circumvented by sending out the initial questionnaire with a covering letter indicating the aim of the survey, the importance of the respondent's participation, assuring confidentiality and encouraging respondents to reply. A return date was provided in the accompanying letter and it was decided to grant 14 days for the return of the questionnaire. According to Bell (1993:85), two weeks is a reasonable time for completion and the specific date should be given as this helps to jog memories. To maximise the response rate even further, three follow-up reminders were issued (see appendix F), urging respondents to complete and return questionnaires, re-emphasising the importance of their response to the research (Hoinville and Jowell in Cohen and Manion 1980:87-88). A further ploy that was adopted to improve the response rate was to inform respondents that for every completed questionnaire that was received, R1.00 would be donated to charity.

Yet another strategy that was used to secure a good response rate was to ensure that the questionnaire had an attractive, easy to read layout with clear instructions to guide the respondent. Berdi and

Anderson (1974:31) state that the appearance and arrangement of the survey form is vital to a successful study while Mouton (2001:104) cautions that a poor and confusing layout of the questionnaire can lead to non-responses or other errors.

Also, attitude questions were asked to allow respondents to air their views. Open-ended questions were included to allow respondents to express themselves in their own words (Foddy 1993:127). In addition, questions that might have caused offence were omitted. Age, which was considered a sensitive category, was placed in categories rather than asking respondents to give their exact age. Furthermore, the researcher had to guard against questions that asked for information that the respondents might not have known. If respondents had to search for information there was a possibility that they might have decided to abandon the entire questionnaire. Care was also taken to word questions unambiguously and to omit double-barrelled questions so as not to frustrate respondents. If respondents were confused or hesitated over an answer, they might not have answered the question (Bell 1993:77-8) which would have affected the response rate (Bailey 1987:96).

Therefore, in choosing the questionnaire as an instrument, this researcher had to ask whether the questionnaire was likely to be a better way of collecting information than interviews or observations, for example. Once the choice was made, a well-designed questionnaire needed to be produced to give the information needed and which would have given no problems at the analysis and interpretation stage (Bell 1993:75). The researcher had to be careful in selecting question type, in question writing, in the design, piloting and administration of questionnaires. These issues are discussed in the subsections to follow.

The following subsection is concerned with rating scale techniques and the Likert scale is explained in detail since it was adopted in this research.

4.3.3 Rating Scale techniques

Three general procedures have been widely used, namely, differential or Thurstone scales, cumulative or Guttman scales and summated or Likert scales. They differ mainly in their assumptions about the relationship between the respondents' underlying attitude and the response that will be given to the individual items that make up the scale (Judd, Smith and Kidder 1991:158).

In this research, it was decided to use a five point Likert scale (strongly agree, agree, neutral, disagree and strongly disagree) in the design of the questionnaire. Respondents were instructed to select the response option that best reflected their positions on each item (Foddy 1993:154). Weights of 1, 2, 3, 4, or 5 were assigned to those alternatives, with the direction of weighting depending on whether the

statement is positive or negative (see table 4.1). For example, 5 for strongly agree if the statement is positive and strongly disagree for a negative statement (Robson 1997:257).

Table 4.1: Likert rating scale for a positive and negative item

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Positively stated item	5	4	3	2	1
Negatively stated item	1	2	3	4	5

The reason for opting to use the Likert scale was ascribed to its many advantages as reported in the literature. This form of summated scale is one of the most widely used in the social sciences today. It is simpler to construct and more reliable than Thurstone scales, of the same length. The range of agreement-disagreement responses permitted with Likert items may make respondents more comfortable in indicating their position than the simple agree versus disagree choice forced by Thurstone items. The graded responses may also give more precise and reliable information about the respondent's opinion. Also, Likert scales can be used in many cases (for example multidimensional domains) in which Thurstone and Guttman scales cannot (Judd et al. 1991:163,166).

On another point, a review of the literature reveals that the trend is often to omit the middle category (neutral) since very few people are indifferent or in the middle (Sudman and Bradburn 1982:141). Others (Swanepoel and Mulder 1989:52) claim that a four-point scale (leaving the middle category out) is recommendable because it prevents the respondent from adopting a neutral stance on a certain item. Sudman and Bradburn (1982:141), however, argue that the middle category should be included, as this will give as much information about the ratio of general favourableness to unfavourableness as will a question that omits the middle category. The size of the response to the middle category can give extra information about the intensity of attitudes. Also of importance is the fact that respondents should not be forced to express opinions. Concurring with this sentiment is the assertion by Robson (1997:248) that there is evidence that if no option is given then a substantial number of people will manufacture an opinion for the survey. Additionally, because a problem is of importance, the researcher should not assume that everyone will have an opinion on it.

Following on the preceding discussion, in this research, it was decided to include the middle category (neutral) as it was felt that respondents should not be compelled to state an opinion on an item which they feel neutral about as this could have influenced the validity and reliability of the results.

The foci of the next two subsections are on reliability and validity and an exposition is given of the precautions that were taken to ensure that the instrument was reliable and valid.

4.3.4 Ensuring the reliability of the questionnaire

Good questions should be reliable in that they should provide consistent measures in comparable situations. That is, when respondents are in comparable situations, they should answer the questions in the same way (Fowler 1993:70). When employing questionnaires, a potential problem is using words that are not universally understood. Hence, in this investigation, simple words that were short and widely understood, were used. When necessary, respondents were provided with definitions to words they may not have understood (Fowler 1993:74).

Questions that were ambiguous were omitted. It is suggested in the literature that words which have a common meaning to the researcher may mean something different to other people. For this reason, this researcher had to consider what the questions would mean to different people. Additionally, double barrelled questions (which ask for one answer yet include two issues) were avoided (Bell 1993:77-81).

Moreover, Foddy (1993:49) suggests that the use of double negatives should be avoided because they have to be translated into positives and can cause confusion. For example, “Teachers should not be required to supervise students in halls”: agree/disagree. In the design of the questionnaire for this project, negatives like “not”, “cannot” were avoided for this reason. At the same time it was considered important to include items that were both positive and negative towards the construct being measured in order to create a balance. An example of a negative item would be: “I feel disillusioned with the educational changes taking place in this country” (see appendix A, item 10). This circumvents the use of a double negative and minimises confusion.

The rationale for including negative items, in this investigation, was influenced by the literature. Judd et al. (1991:158) cite that it is important to include items worded in both positive and negative directions so that the attitude being measured is expressed by a “yes” or “agree” approximately half the time and by a “no” or “disagree” half the time. This reduces the tendency to agree with statements regardless of their content, that is, avoiding an “acquiescent response style”. If a scale were composed of all positively worded items, a person who simply agreed a lot would be incorrectly classified as having a high level of the attitude.

Open-ended questions were also included in the questionnaire since they allowed respondents to express what was really on their minds without being influenced by suggestions from the researcher. (Foddy 1993:127).

4.3.5 Ensuring the validity of the questionnaire

Regarding validity, there are several types that the researcher had to take note of.

Validity means that the researcher's conclusion is true or correct and that it corresponds to the actual state of the world (McBurney 1994:119). Further, they should produce answers that correspond to what they are intended to measure (Fowler 1993:69-70).

External validity refers to the "extent to which one can generalize the results of the research to the populations and settings of interest in the hypothesis". This means that one can generalize the results to the rest of the population.

Construct validity focuses on whether the results support the theory behind the research (McBurney 1994:122). Stated differently, construct validity is the degree to which the independent and dependent variables accurately reflect or measure the constructs of interest (Judd et al. 1991:28). A test has construct validity if it actually measures whatever theoretical construct it supposedly tests and not something else (McBurney 1994:122-123).

Foddy (1993:140) argues that even if every respondent has been exposed to the same words, there is no guarantee that they will have understood the question in the same way. This is a counter argument against that which assumes that because all respondents answer the question in the same way, the answers can be meaningfully compared. They may adopt a perspective that includes assumptions about the sort of information the researcher "really wants". For this reason it is important to set similar questions at different points in the questionnaire to measure a certain construct. Hence, this researcher made an effort of setting similar questions at different points in the questionnaire to measure a certain construct. For example, items 38 and 60 (see appendix A) were included to essentially measure the same construct, relating to skills in OBE.

Furthermore, questions where respondents could have been led or influenced to give a certain response through the wording of the questions were avoided (Mouton 2001:103). The use of emotive language or the way the question is phrased could lead respondents to answer in a certain, socially acceptable way and this could impact on the validity of the research (Bell 1993:77-81). Therefore,

questions in the questionnaire in this study were worded with a neutral tone and did not lead respondents.

Variables, however, seldom measure only the construct of interest; they measure other irrelevant characteristics as well. For example, an achievement test will also measure ability to read English (Judd et al. 1991:30). In a study that has high construct validity, all the constructs in the hypothesis that motivates the research have been successfully measured or captured by the specific variables on which the data has been gathered (Judd et al. 1991:28) with minimal contributions from constructs of disinterest and random error. This study has construct validity since the variables in the questionnaire reflect the constructs of interest, for instance curriculum development, quality assurance, ICT, and so forth, and pertains to the needs and perceptions of the academe regarding academic staff development.

In addition, definitions were provided when words or phrases were used which the respondents might not have understood. The goal of this research was to measure needs and perceptions but not knowledge of staff development issues. Therefore, when a term like “action research” was used, it was followed by an explanation. In this way, the measuring of fictitious constructs, which Mouton (2001:103) warns about, were alleviated. That is, asking people about matters of which they have no knowledge, which would measure constructs that do not exist.

Regarding content validity, which is the notion that a test should sample the range of the behaviour that is represented by the theoretical concept being measured (McBurney 1994:123), in this research content validity was ensured by linking the items in the questionnaire with discussions and parameters existent in the literature. All factors relating to academic staff development in an epoch of educational transformation were covered in the questionnaire and included: curriculum development, ICT, QA, equity and redress, scholarship, innovations in teaching and learning and the paradigm shift in teaching and learning. For a more detailed account of the content validation, reference should be made to subsection 4.4.2.

4.4 The content validation of the instrument

The link between the literature evidence derived from chapters 1, 2 and 3 and the quantitative dimension of this project, is made. Prior to that, a discussion on the theoretical underpinnings if a needs analysis is presented since the quantitative investigation was, in a part, a needs analysis.

4.4.1 The place of the needs analysis in the context of the quantitative study: A theoretical framework

A literature review on needs analysis is given to put this type of study into perspective. Firstly, a definition of needs analysis is provided. Next, the need for a needs analysis as well as change and needs analysis, are discussed. Lastly, an overview of needs analysis instruments concludes the discussion.

A needs analysis is a diagnostic and decision making mechanism that utilizes questionnaires, interviews, observations and other measures to identify the educational needs of a specific target group (McMahon and Merman 1996:717). At the same time, a needs analysis is a process, not a product. It is more than gathering information. Decision making based on the information received, and not the survey results *per se*, is the crux of the needs analysis process. The staff developer has the responsibility of deciding “what should be done” on the basis of analysing participants’ needs (Engelberg 1991:216).

According to Horner (1995:25), a needs analysis is a means of establishing the gap between what people do at work and what the employer would like them to do. Translated, it is the process of validating the gaps and inconsistencies between current output and that which the system hopes to achieve. In a similar vein, Kaufman and English (1979:8) define needs analysis as:

“A formal process which determines the gaps between current outputs or outcomes and required or desired outcomes or outputs; places these gaps in priority order and selects the most important for resolution”

The identification of gaps in outcomes is called a needs analysis, as illustrated in figure 4.3.

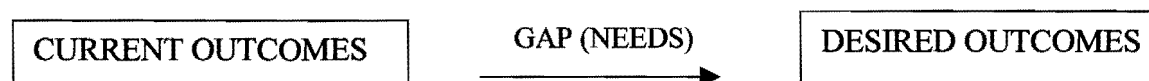


Figure 4.3: Needs analysis is determining the gap in outcomes (Adapted from Kaufman and English 1979:8)

Therefore, a needs analysis is an identification and selection of gaps to be closed. To this end, a needs analysis is central to selecting problems for resolution and will provide the necessary information for

determining appropriate interventions. If we are to change, it makes sense to correctly identify what should be changed. With this information we will be in a better position to decide what interventions to use to bring about the required change (Kaufman and English 1979:8).

4.4.1.1 The need for a needs analysis

That needs analysis is the essential first step in developing an effective staff development plan is well documented (Engelberg 1991:221, Horner 1995:25 and McMahon and Merman 1996:717). Many of the models discussed in chapter 3 emphasise the importance of conducting a needs analysis study (see paragraphs 3.4.1.2, 3.4.1.3, 3.4.1.4 and 3.4.1.9). Despite the cost in time and materials and notwithstanding the pitfalls and delays, needs analysis is inseparable from staff development (Engelberg 1991:221).

When employed as an intrinsic component of the programme development process, needs assessment can be instrumental in identifying weaknesses, information gaps or areas of educational need for professionals who are aiming to improve on the levels of excellence. Furthermore, staff development can be interesting and entertaining but if it does not address participants' needs, it is unlikely that it will improve their professional performance. While a needs analysis is no guarantee that an educational activity will be successful in improving practice, it can substantially increase the possibility that staff development activities will meet their intended goals and be relevant to the enhancement of professional practice (McMahon and Merman 1991:717). Horner (1995:25) advises further that the purpose of a needs analysis is not to make decisions about priorities but rather to identify those areas where solutions are most required and to set criteria for their solution.

4.4.1.2 Change and needs analysis

Needs analysis begins with the clients. Their involvement is crucial because one must have their acceptance, including their experience and understanding of the current and predicted educational contexts and requirements (Kaufman and English 1979:25, 188). Change, however, might be resisted by some people and a needs analysis might be threatening to them. The following quotation by Kaufman and English (1979:175-176) attests to this:

“Change is one of the most powerful things a person can be asked to endure. People are not stubborn merely for the sake of being stubborn but are expressing genuine concern and apprehension. The built-in desire to survive is very strong and needs analysis strikes many as a threat to existence, stability and the known and

comfortable rather than as a growthful experience”.

For this reason, current concerns of participants should be identified and an attempt made to help people find new anchoring points. Also, getting the commitment and acceptance of people to participate in a needs analysis is vital and usually the most difficult part of doing a needs analysis (Kaufman and English 1979:189, 202).

4.4.1.3 Needs analysis instruments

The needs analysis methods that could be used by a staff developer can be categorized as shown in table 4.2.

Table 4.2: A category of needs analysis methods (adapted from McMahon and Merman 1996:718 and Engelberg (in Engelberg 1991:217).

Method	Examples
Basic needs assessment methods	Self reports, focus groups, nominal group process and use of key informants (McMahon and Merman 1996:718).
Survey-based methods	Written-on-site, mail and media questionnaires, oral, personal and telephone interviews (McMahon and Merman 1996:718).
Job analysis and performance assessment methods	Review of products of performance, performance observation and performance simulations (McMahon and Merman 1996:718).
Social indicators and statistical research methods	Research data from institution (Engelberg in Engelberg 1991:217).

Basic methods can be used by staff developers with little or no assessment experience (McMahon and Merman 1996:718). Using a specific example of this method, Engelberg (1991:220) describes how group process was adopted in assessing staff development needs in two settings. Firstly, the professional development committee at Prince George’s Community college was taken on a retreat to discuss the need for staff development. A list of goals was drawn up and were incorporated into the college's master plan. The second use of group process involved focus groups as a means of better understanding the staff development needs of new faculty. The needs of new faculty differed from

those of established, full-time faculty with respect to a greater need for general information about the college, students, standards and resources. Subsequent to these findings, special workshops were held for those staff members and a special handbook developed.

Regarding survey-based methods, the use of questionnaires is the most common method of obtaining information. A distinct advantage of this instrument is that a large number of respondents can be reached with the same tool. Also, questionnaires can be designed to elicit a variety of information in the sense that different types of questions can be asked. Questionnaires are useful in the identification of topics or specific skills where the respondent is offered a series of topics or skills to choose from or to prioritise. Another survey method is the interview. An interview can vary from very structured to very unstructured. Questions can be closed seeking yes/no or quite specific details or open, seeking individual interpretation of the information that is required. Interviews can be standardised so that they remain the same for each person or they can remain unstructured (Horner 1995:33).

Performance assessment methods assess actual or simulated performance characteristics and are most effective in identification of needs reflected in professionals' daily tasks (McMahon and Merman 1996:718). Horner (1995:34) maintains that while observation methods can be a very effective instrument if well planned, they require careful consideration in order to avoid feelings of intimidation by those observed. The observer needs to identify precisely what it is they wish to look for: behaviour, lack of behaviours, specific activities, verbal and/or non-verbal communication, the existence or absence of skills and so on. After this information is collected, it will have to be laboriously analysed, coded and made sense of.

Engelberg (1991:220) describes how social indicators and statistical research were used to analyse staff development needs based on changes and trends in staff/student demographics at Prince George's Community College. It was discovered that there was an increase in minority student enrolment and that there was a growing racial gap between students and faculty. In an attempt to alleviate this problem, special curricula and instructional staff development programmes were created as were cross-cultural workshops and projects to integrate the scholarship of other cultures into the curriculum.

Therefore, although needs analysis methods tend to take on a variety of forms, what they all have in common is the central aim of determining discrepancies regarding what is currently being done and what should be done for the enhancement of professional practice and excellence. Furthermore, some authors (Horner 1995:32) argue that a through needs analysis should include more than one instrument at a time in order to develop a comprehensive staff development programme. Others (Engelberg 1991:217) caution that an institution may not have sufficient resources to use more than

two or three of the tools tabulated in table 4.2. Ultimately, it is up to the staff developer to decide which method(s) is most feasible while at the same time best suited to identifying the wants and needs of staff. In this study, the self-administered, mailed questionnaire was used as an instrument in assessing the needs of academic staff at MEDUNSA, mainly because of its convenience, ability to reach a larger target group and cost-effectiveness.

In the next subsection, the content validation which forms the nexus between the content of the literature and the empirical aspect of this study, is explicated.

4.4.2 The content validation of the self-administered questionnaire

At this stage it is important to address the following questions: Why should academic staff development take place? What is forcing the need to think about re-skilling and developing the academe? Why do academics have to go through a process of training and development? What is driving academic staff development? The assumptions to these questions are given below in a summarized version of concepts already discussed in the preceding three chapters. This provides a template for the expansion of issues and validation of the items in the questionnaire given in appendix A.

Globalisation, the knowledge explosion and technological advancements are having a profound impact on the manner in which tertiary institutions must function (see subsection 2.2.2). New information is generated daily and much of that is rapidly becoming obsolete (see subsection 2.4.1). This has created new education and training demands (refer to subsection 2.4.1) in that the methods of teaching and learning will need to be modified (see subsection 2.5). Also, there is pressure to produce a highly skilled labour force capable of handling new information and new technologies while providing quality service (see subsection 2.4.1). As a consequence of these phenomena, the role of the educator will no longer be to disseminate data but to facilitate learning, if the quality of education is to be improved (see subsection 2.5). In this regard, that training and development of knowledge workers like academics is crucial, cannot be disputed.

Additionally, in our technologically driven society, technology is being used more and more in the classroom to enhance teaching and learning (see subsections 2.3.1 and 2.3.2). Hence, academic staff would need to be trained in the use of technology as it relates to classroom practices, in order to reap the benefits that technological innovations might offer and to keep abreast with global educational and technological trends (see subsection 2.3.3).

In most countries, educational transformation is occurring at macro-level (see subsection 2.7). An important component of this transformation is curricula reform (see subsections 1.2.1, and 2.5.1.2). The rigid, hierarchical, teacher-dominated curriculum is perceived to be no longer serving the needs of a changing, modern society. In South Africa, the implications this has on academics is that they will have to adopt a new curriculum, namely OBE (see subsection 2.5.1. and 2.5.1.2). This would help graduates cope with a complex, changing society while equipping them with internationally competitive skills (see subsections 1.2.2, 1.4.1 and 2.2.2). This would also culminate in a paradigm shift in the teaching/learning process (refer to subsection 2.4.1). The mission of tertiary institutions is no longer one of instruction but rather that of producing learning, implying that innovative methods of teaching and learning will have to be developed (see subsection 1.2.2). For any curricula innovation and/or paradigm shift in the teaching/learning process, staff development is necessary (refer to subsections 1.7.1 and 2.4.2).

From another perspective, most academics have never received formal training in education (see subsections 1.4.3 and 1.7.1) and are expected to implement novel methods of teaching and learning as well as adopting new, sophisticated, complex curricula. Change is being demanded of individuals who do not have the experience and capacity to implement it. It is argued in the literature that simply informing someone of an innovation does not mean that they will be able to implement it. Often academics don't understand the principles of a new curriculum (especially OBE) nor how to implement it if they do not receive training in curriculum development (see subsection 1.2.3). Therefore, it would be expedient to offer professional development services to academics in order to expand their knowledge and skills so that curricula innovations like OBE can be implemented effectively (refer to subsection 2.5.3.1).

It must be recognised that while the old systems of training may have served us well in the past, they do not work in the current environment of change. Previously, faculty could easily self-educate to keep abreast with new developments. Now, new information and knowledge is advancing at such a rate that long-term faculty development strategies are vital for educators to keep abreast with modern trends in higher education (refer to subsection 1.7.1). The impact of educational reform is that educators will need to become more reflective, engage in collaboration, become involved in continuous learning and adapt to novel methods of teaching and learning (see subsections 1.2.3 and 1.7.4).

Fortunately, there is renewed societal concern for the quality of teaching and learning at higher education institutions. Specifically, the quality and professionalism of academics as educators have become matters of public interest. In South Africa, SAQA, the NQF, ETQAs, NSBs and SGBs have a responsibility towards ensuring that tertiary qualifications have national and international credibility

and that graduates are globally competitive. This would entail improving the quality of the academe. Therefore, the onus is on the institution to provide opportunities for academics to improve their intellectual and scholarly skills and thus enhance accountability (see subsection 2.7.1.4).

A summary of the preceding assumptions would assist in providing the thesis or argument of this research project: In our information-based, technological society, academic staff would require updating of their knowledge and skills in order to enhance academic excellence and for tertiary institutions to become internationally competitive. This is necessary so that graduates would have the ability to compete in the global marketplace and make a positive contribution to the development of a civilized society.

Further, important questions that were stimulated from the literature search were: What drives staff development? What specific forces can be identified as being a fulcrum around which staff development revolves? What factors need to be attended to in the development of academic staff in a milieu of educational transformation? That is, what needs to be developed? From the literature survey conducted thus far and which have been analysed, synthesised and summarized in chapters 1, 2 and 3, various parameters have been identified that drive staff development. These factors are outlined in table 4.3 and discussed in greater detail in the rest of this subsection. Where additional literature have been used, they have been referenced. These parameters have formed the framework and provided a template for the design of the needs analysis and perception survey.

Table 4.3: Issues that drive staff development

<ul style="list-style-type: none"> • The widespread use of technology in education • The impact of educational change on academics • The demands of educational transformation in higher education • The challenges of implementing curricula innovations • Adapting to a paradigm shift in the teaching/learning process • The enhancement of excellence in higher education • The influence of the scholarship of research and teaching on academic development • Changing trends in staff development: An analysis of models and strategies • Time: The availability of academics to attend staff development programmes
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The imperatives in table 4.3 are explained in more detail in the subsections that follow to illustrate the connection with the design of the questionnaire.

4.4.2.1 The widespread use of technology in education

To remain globally competitive in the new millennium and to improve the quality and accessibility of teaching and learning, universities must effectively integrate technology into the classroom (see paragraph 2.3.1). There are many applications of technology with respect to the teaching/ learning situation, for example use of e-mail, web-based learning and e-learning which was discussed at length in subsections 2.3.2.1, 2.3.2.2 and 2.3.2.3.

Implementing high technological skills in higher education calls for the training and development of staff if they are to cope adequately with the challenges that technology would present in the teaching/learning process (see paragraph 2.3.3). For example, faculty would have to be trained to integrate their teaching/ learning materials like lecture notes, syllabi etcetera, by creating richer, more interactive materials. An important consideration in effective utilization of technology is whether faculty would buy-in to the idea (see paragraph 2.3.3).

Therefore, in the context of this study, would faculty support the idea of computer-based education (CBE) and e-learning as topics in staff development programmes? Item 70 provides an opportunity for respondents to state whether they feel CBE and e-learning should be included as staff development topics. **Item 70 reads: Which of the following do you feel you would benefit from training in? The application of CBE and e-learning are given in a list of options and respondents are required to indicate their choice(s).**

Adapting to technology implies adapting to change which will be perceived differently by different people. The following paragraph deals with the response to change and strategies that can be used to effect change during the staff development process.

4.4.2.2 The impact of educational change on academics

As society is changing and demanding new skills of graduates, curriculum and instructional methods cannot remain the same. It makes sense that as society changes, so too, should educational institutions. In South Africa, educational change has become integral to the democratisation of society (see paragraph 1.8.4). Although educational change has positive connotations for the advancement of society, it might not always be embraced with enthusiasm.

This might be especially true of "systemic change" (as referred to in subsection 1.8.4) where a total metamorphosis of the culture of the organisation is required. This would require changes in beliefs, values, rules, relationships and orientation. It could be said that the type of change being implemented at educational institutions is at the level of systemic change. In this case (as was explained in paragraph 2.6.3), people's values, beliefs and attitudes are being challenged which could give rise to uneasiness, fear and resistance. Educators might resist change if they see it as a personal or professional attack. Also, when change is regarded as unmanageable and when educators are not prepared for the complexity of change, this could serve as a barrier to change. Reversing this resistance is an important component of staff development programmes (see subsection 2.6.3).

In referring to the CBAM for change, Loucks-Horsley and Stiegelbauer (1991:17-19) claim that one of the dimensions of this model is that the individual is the key player in the change process. Through the lens of the CBAM, change is a highly personalised experience. Everyone encountering change, initially implementing an innovation or developing skills in using an innovation will have certain perceptions, feelings, frustrations or satisfactions about the innovation and the change process (see subsection 2.6.2).

So, since change is effected through individuals, their personal feelings will contribute to the success or failure of a change initiative. The most relevant and supportive staff development can be planned only if staff developers "diagnose" where participants are in the change process and design activities that address those expressed needs. Thus, novices to an innovation can benefit if they are given support (for example through staff development programmes), in the form of discussions that focus on where their current skills are applicable and where new skills will be developed

What the CBAM also brings to the fore is that the concerns of the individual will focus on his/her role in relation to the reward structures of the organisation. Concerns about financial or status implications of the innovation for oneself and colleagues may be reflected. (Loucks-Horsely and Stiegelbauer 1991:20, 25). Will MEDUNSA staff be willing to participate in educational change if they are not going to be rewarded? **This question was included in the questionnaire as item 28: "I would be unwilling to participate in a faculty development programme to improve myself as an educator if I am not going to be rewarded by my institution".**

People respond to change in different ways-they may adapt, be sceptical or totally resist change (see paragraph 3.2.2.1 and 2.6.4). Additionally, it was explained in subsection 2.6, that change is not affected by groups of people but through the efforts of individuals. While it could be argued that groups of people can have a major impact on change, the motivation to be involved in change (or not to) starts with the individual. As Loucks-Horsely and Stiegelbauer (1991:17-19) explain, change is a

personal experience (see previous two paragraphs). Each educator will react to change in terms of how it will influence their teaching, research, planning time and students. For this reason, change must focus on the people who will implement it.

This is why gauging the attitude of staff towards change and how it will affect their performance as professionals is important. For instance, could it be likely that academics would rather spend time engaging in research which is more recognised and better rewarded than to be involved in transformational curricula and teaching/learning issues. **Item 16 focuses on this issue: "I would rather spend time doing scientific research than be concerned with educational transformation".**

Strategies to effect change were covered in subsections 2.6.2 and 3.2.2.1 in which three categories were identified: 1) power/coercive strategies, 2) empirical/rational strategies and 3) normative /re-educative strategies. In paragraph 1.8.4, it was critiqued that the power-coercive strategies of government in implementing curricula change could result in resistance and resentment by those who have to implement this change. For this reason a participative bottom-up approach that investigates the feelings and concerns of academics, in the midst of academic change, is also necessary. This is so that remedial measures can be adopted and opportunities given for free expression of opinions and feelings (see paragraph 2.6.1).

The empirical/rational strategy suggests that people will adapt to change if it is shown to be desirable and of benefit to the person. By educating people about change and giving them the facts as to why change is important, they will be more likely to have a positive attitude towards the change process (see subsection 2.6.1). Thus, how much do staff know about higher educational changes (transformation) occurring in South Africa? **This question takes the form of item 31 in the questionnaire: "I am unfamiliar with national issues on transformation in higher education".**

Do academics feel that their institution should be responsible for informing them about educational transformation? **Item 26 addresses this issue: "More should be done at institutional level to keep us informed of educational transformation".**

Answers to items 26 and 31 will give an idea as to whether to include topics on educational change in staff development programmes.

Normative/ re-educative strategies, similar to the bottom-up approach (see paragraph 2.6.2) emphasise that change cannot be imposed externally but occurs within the individual. With this approach educators must participate in their own re-education with some help from the staff developer who acts

as a change agent. To what extent will educators be willing (or not) to be involved as individuals in the change process? **This question is listed as item 11 in the questionnaire: "I am unwilling to participate in the educational change process at my institution".**

Therefore, determining the attitudes of staff towards educational change was considered important enough to be included as specific objective of this study. The relevant objective stated in paragraph 1.4.3.3 is: "To investigate the feelings, attitudes and readiness of respondents towards educational transformation". It is important that staff be made aware of changes occurring in this country. Some educators might resist change and transformation and might become disillusioned with their jobs which could affect the quality of outputs.

It was also discussed in paragraph 2.6.3 that change implies a loss of control when a person perceives his/her paradigm to be challenged, resulting in resistance. This resistance which mitigates against change will most likely be encountered by staff developers. Overcoming this resistance by allowing for therapeutic ventilation of opinions will be paramount to the successful implementation of any innovation.

In this respect, it was deemed important to determine if academic staff are in favour of the current changes or if there is any resistance. (Responses to items 10, 11 and 16 already discussed will give an indication of the level of this resistance). **Item 10 will further determine if respondents are resentful towards change: "I feel disillusioned with the educational changes taking place in higher education".**

The answers to these types of questions will give some indication of what to expect from participants when staff development programmes are to be implemented. Those resistant to change might be unwilling to participate in programmes that are concerned with aspects of educational change, transformation and innovation. Such people would have to be won-over.

Will educators' response to educational change be positive or negative? Will they perceive change as something which is temporary and nebulous, which they could ignore until it goes away? **Item 15 was designed to elicit an answer to this question: "The current changes in education are just another educational fad which will soon pass over".**

One of the major educational changes occurring in this country is that of educational transformation. What knowledge do staff have regarding educational transformation and do they feel they need more information? The next subsection pays attention to these issues.

4.4.2.3 The demands of educational transformation in higher education

Nationally and internationally, educational transformation occurs in tandem with the demands of a technocratic, knowledge-based, globalised society to enable learners to become internationally competent and competitive (see subsection 1.8.5). The old, traditional curriculum is perceived as fast losing its relevance in a changing society (see subsections 1.2.1, 2.5.1.1 and 3.2.4.1). In accordance with this reasoning, much of educational transformational gravitates around curricula reform and innovation.

To put educational transformation in this country into context, a brief exposition will be given of what was covered in chapter 2. In 1996, the NCHE report was initiated in South Africa, in response to the needs for educational transformation. In conjunction with the Green paper on Higher Education Transformation, the NCHE showed a commitment towards changing higher education to facilitate South Africa's entry into a global economy and meeting the basic needs of the population (see subsection 2.7.1.2). In 1997, the Education White Paper 3 was released, describing a pressing need for transformation based on the existing deficiencies in the higher education system. A major challenge was to do away with the fragmented education system of the past in favour of a single co-ordinated higher education system. In the report by the CHE it is stated that higher education must provide opportunities for social advancement through equity of access and opportunity. For South Africa to become globally competitive, knowledge workers and professionals with globally equivalent skills would have to be developed.

In this regard, it was recognised that academic development structures and programmes are needed at all higher education institutions to enhance teaching skills and improve curricula and courses. As far as curriculum design is concerned, the National Curriculum Development Committee wrote up several principles which would form the structure in informing curriculum design. These are: 1) lifelong learning, 2) learner-centeredness, 3) relevance, 4) integration, 5) differentiation, 6) nation-building, 7) critical and creative thinking, 8) flexibility, 9) progression and 10) credibility (This is expanded in greater detail in subsection 2.7.1.3). It is stipulated in the White Paper on Education and Training that South Africa stands to gain from "open learning principles", some of which are learner-centeredness, lifelong learning, recognition of learner support and the maintenance of quality assurance over the design and delivery of learning materials (see subsection 2.7.1.3).

Further, in 1995, SAQA was established with a view to enhancing the quality of education and training, making education more accessible and contributing to the development of the learner and socio-economic development of society. One of the functions of SAQA was to oversee the development of the NQF to provide for the registration of national standards and qualifications. The

establishment of the NQF represents an attempt by the state to impose curriculum change on tertiary institutions. This would culminate in more appropriate programmes, instructional strategies and courses being designed and implemented. The NQF will also require providers to have quality management systems to ensure national and international credibility (see subsection 2.7.1.4).

According to the Green Paper on Higher Education Transformation released in 1996, one of the underlying principles for transformation of the higher education system is the improvement of quality. SAQA, linked to the NQF is one of the main mechanisms for ensuring and promoting quality (see subsection 2.7.1.4). It is evident that significant educational change has been taking place at national level since 1995. Are educators aware of and knowledgeable about national issues related to educational transformation? This awareness is important since they are required to implement policies regarding change at grassroots level. This question was included in the questionnaire as item 31 (already discussed).

More specifically, an outcomes-based approach has been adopted by other countries, namely New Zealand, Australia and the UK (see subsections 2.7.2, 2.7.3 and 2.7.4). In an effort to make its own educational system internationally competitive, South Africa established the NQF and SAQA to facilitate the transformation process. (This was explained in paragraphs 2.5.1.2 and 2.7.1). With this move came the adoption of an outcomes-based approach to education (refer to paragraph 2.7.1.4). Within the NQF, OBE would be able to respond to demands for growth and development by preparing a workforce to meet South Africa's human resource needs (see paragraph 2.5.1.2).

Also, do educators feel they are being adequately informed of these changes by their institution? In the busy life of academics, it is possible that many would not find the time to read up about fluctuating educational transformation matters and how it will affect them. In this case, they may want more support and guidance from top management. To what extent do staff perceive top management as being instrumental in driving educational transformation? **This question was incorporated in the questionnaire as item 32: "There should be more involvement in matters regarding educational transformation from top management".**

An integral part of educational transformation is the adoption of innovative curricula which would impact on how educators engage themselves in their teaching/learning tasks. Will they have the confidence and knowledge to be able to implement an innovation? The following subsection focuses on these issues.

4.4.2.4 The challenges of implementing curricula innovations

The restructuring of curricula is taking place in response to the effects of globalisation, information overload and technological advances (see paragraph 2.5.3). In South Africa educational reform is occurring mainly in the form of adopting OBE. There are numerous advantages to the outcomes-based approach. Firstly, since OBE focuses on the process of achieving outcomes, the learning process can be made more relevant to how outcomes are achieved in the workplace. Thus, education and training is outcomes-based and related to real work situations and not simply related to textbook information (see paragraph 2.5.1.1). Also, the goal of OBE is to produce graduates who are self-directed learners, collaborative workers, complex thinkers and quality producers. OBE provides an opportunity for students to think critically and creatively and work on problem-solving in a learner-centred environment (see paragraph 2.5.1.1). This would enable them to better survive in a complex, changing, competitive workplace (see subsection 1.2.2).

While there are many advantages of OBE if implemented properly, research in South Africa has shown that many educators lack the knowledge and skills to implement the innovation. They have limited knowledge of curriculum planning and are often confused about aims, objectives and assessment strategies. Sometimes, even when training in OBE was given, participants were still uncertain about how to implement OBE (see subsection 1.2.3).

Indeed, the shift to OBE would lead to major changes in the way educators would have to view and design curricula, instructional processes and assessment tools (see subsection 1.2.2). Therefore, the development of the educator in an era of educational transformation is crucial. Additionally, it could well be said that whether or not educators will become good facilitators of OBE will depend on the quality and type of training and development they will receive. Staff development will also need to take into consideration that educators may need to buy-in to the idea of OBE, given the lack of knowledge of OBE (see paragraph 2.5.1.3).

What is more, research has shown that educators are often unable to recognise their own shortcomings and do not know when or where they need help. At tertiary level, these problems are exacerbated by the fact that few educators have a formal teaching qualification. Thus, educational change is being expected of academics who lack a strong educational background. It is a further paradox that while faculty have not even been formally trained to educate in the traditional curriculum, they are expected to implement a novel curriculum (see paragraph 1.2.3).

An assumption that can be made from the preceding discussion is that often educators struggle with OBE terminology and are not very confident with designing and implementing OBE learning

programmes. They also have a vague idea about OBE assessment strategies. Adding to this, many might have a negative attitude towards OBE. Would the perceptions and sentiments of MEDUNSA staff be any different? Do staff at MEDUNSA have the prerequisite knowledge and skills to implement OBE? As was explained in subsections 3.2.4.1 and 2.5.1.1, OBE principles encompass integration of the disciplines, student-centeredness, an emphasis on competence, application of knowledge in real life situations, creative and critical thinking as well as self-directed, life-long learning. Educators must have sufficient knowledge of the philosophy, design and implementation of OBE if they are to be successful in its implementation. Do they feel confident of their knowledge of OBE principles? Are they familiar with OBE terminology? Can they design OBE learning programmes? These questions were incorporated in the questionnaire as items 13, 38 and 39, shown below:

Item 13: "I feel that I have sufficient knowledge of the philosophy of OBE to be able to implement the novel curriculum".

Item 38: "I am unable to design OBE learning programmes".

Item 39: "I am unfamiliar with OBE terminology".

These items were inserted to establish whether it will be necessary and viable to include discussions and seminars on the topic of the philosophy, design and implementation of OBE, in staff development programmes. Further, item 70 afforded an opportunity for staff to choose whether they would like to have OBE included in staff development programme topics. They were required to choose from a list of options, one of them being the implementation of OBE.

A crucial issue in the OBE process is the attainment of outcomes. Hence, assessment of these outcomes is a major factor in determining the success of OBE. Assessment in the context of OBE takes different forms, namely, formative and summative assessment and is usually criterion-referenced rather than norm-referenced (see subsection 2.5.1.2). One could argue that the application of different assessment strategies in the classroom could pose a challenge to educators with no prior experience in OBE-aligned assessment. In OBE, multiple assessment strategies are adopted, namely portfolios, reflective journals, oral interviews, self- and peer-assessment, etcetera (see subsection 2.5.1.2). Can educators claim that they can competently adopt various student assessment strategies that are in alignment with OBE principles? **This question is located as item 19 in the questionnaire: "I feel I need to improve my knowledge and skills regarding student assessment using OBE principles".**

More generally, do staff require more guidance by their institution regarding the transition towards OBE? **This question takes the form of item 34: "At this institution, effective leadership in the transition towards OBE is lacking".**

The needs analysis was also used to establish the level of knowledge regarding innovative methods of teaching and learning that are associated with innovative curricula, namely, co-operative learning (item 35), self-directed learning (item 25) and facilitation in a multi-disciplinary setting (item 3). Items 25 and 35 will be discussed under the "teaching/learning process". Innovative curricula like outcomes-based education and problem-based learning follow an integrated approach; information is not learnt in isolation (see paragraph 2.5.1.1, 2.5.1.2 and 2.5.2.2). Generally, educators are accustomed to the traditional curriculum where disciplines are usually kept separate. How well will they adapt to an integrated system? **Item 12 was constructed to determine that: "I may find it difficult to facilitate an integrated course in a multidisciplinary setting".**

Problem-based learning is another innovation and is used in many medical schools, for example McMaster University, Maastricht University, University of Newcastle in Australia and the University of Transkei. As was discussed in subsection 2.5.2.2, the rationale for implementing PBL is to make medical education more relevant to real life so that graduates would be better prepared for their professional tasks when they enter the job market. In fact PBL is considered to be "tailor-made for medicine". Problem-based learning in medicine starts with a problem in the form of a clinical scenario. Through a clinical reasoning process, data is gathered from history summaries, physical examination results and laboratory analyses, to support or reject generated hypotheses. Thus, in PBL, the student learns clinical reasoning skills which are paramount to being an effective clinician. Also, since students search for their own knowledge they gain experience in self-directed learning.

Since MEDUNSA is a medical university, it could be likely that there might be some interest in PBL among staff. How much do educators at MEDUNSA know about PBL and would they like to see it being covered as a staff development topic? Item 18 was designed to ascertain how much staff feel they know about PBL. Item 41 was included to determine if staff would like to learn more about the implementation of PBL. Answers to item 18, 41 and item 70 would give an idea as to whether to include PBL as a staff development topic or not. **Item 18: "I am familiar with the learning methodology of PBL". Item 41: "I would like to learn more about implementing PBL". Additionally, item 70 includes PBL in a list of potential topics for staff development.**

An adoption of any innovative curriculum will entail shifting from teaching to learning which constitutes a paradigm shift. The next subsection covers novel methods of teaching and learning, for

example, self-directed learning and co-operative learning. How effective are educators in implementing these novel methods of teaching and learning?

4.4.2.5 Adapting to a paradigm shift from teaching to learning

To cope with the challenges and complexities of a learning society, graduates will need to think critically and creatively, work collaboratively and possess good interpersonal, communication and leadership skills. These qualities are the hallmark of the information age. Workers in the information age must also be adaptable and innovative while showing excellence in a complex, high-technology, globally competitive marketplace. Preparing graduates with such qualities would require a paradigm shift in the teaching/learning process. The emphasis is not just on acquiring knowledge and skills but applying them to real life problems and situations (see subsections 2.4.1 and 3.2.3). This is why there is now more pressure than ever to innovate in teaching/learning methods (see paragraph 3.2.3).

For example, students must now take responsibility for their own learning and become self-directed learners. They should be able to learn how to learn, become lifelong learners and be able to select and integrate information in the most effective and efficient way (see subsection 2.4.1). This self-directedness is essential when graduates have to update and acquire new skills and knowledge in the workplace. Shifting the focus towards self-directedness will necessitate a change in the role of the educator from dispenser of information to that of facilitator of learning (see paragraphs 2.4.1 and 3.2.3). If not adequately trained and developed, however, educators might perceive this shift to a more student-centred approach as being very stressful and difficult (see paragraph 2.4.1).

To reiterate, in order to implement the ideas and innovations of new paradigm thinkers, training in novel methods and philosophies of facilitating and learning, is essential (see paragraph 2.4.2). For example, educators will need to be trained in the implementation of collaborative and self-directed learning (refer to paragraphs 2.4.2 and 3.2.3). A lack of knowledge and even negative attitudes regarding novel methods of teaching and learning would be to the detriment of students (see subsection 3.2.3) and may compromise the quality of education. So, it is paramount to determine if staff at MEDUNSA possess the knowledge and skills to be effective facilitators and if they are able to implement self-directed, co-operative learning (see subsection 3.2.3).

In the first place, do MEDUNSA academics feel there is a need for them to improve their facilitation skills? **Item 14 deals with this issue: "I feel there is a need for staff development programmes that would help me improve my facilitation skills".**

Furthermore, could it be that educators might prefer to remain in their comfort zone and might have a negative attitude towards the implementation of novel methods of teaching and learning? This question takes the form of item 30 in the questionnaire and responses will raise awareness of any negative perceptions amongst staff regarding the paradigm shift from teaching to learning. **Item 30: "I would much rather stick with lectures as the main mode of teaching and learning than introduce novel methods"**.

Another question was: Do academics perceive themselves as being adequately capable of fostering self-directed learning skills in students? Also, what if staff do not have enough confidence in being able to implement co-operative learning? If this is the case then surely it would be unfair to expect them to effectively adopt this teaching/learning approach in the classroom without prior training and development. Items 25 and 35 address these questions. **Item 25: "I need to improve on my skills to help students become self-directed (independent) learners"**. **Item 35: "I feel I need more skills to be able to implement co-operative learning in my class"**.

Further, it could be argued that a knowledge of educational theories would help educators better understand why these innovative methods of teaching and learning are necessary (see paragraph 3.2.3). Consider also that most tertiary educators have not been formally trained to educate (see paragraphs 2.4.2 and 3.2.5.1) and would lack knowledge of educational theories. **This is why item 36 was included: "A knowledge of educational theories would help me in my role as an educator"**.

Adapting to novel methods of teaching and learning and becoming self-directed learners themselves, is a move towards the enhancement of academic quality. This is further explained in the next paragraph.

4.4.2.6 The enhancement of quality in higher education

One of the principles underlying the vision of a transformed higher education system is the improvement of quality. Quality is linked to the capacity and commitment of the educator, the appropriate curriculum and assessment of standards (see paragraph 2.7.1.4). Furthermore, in subsection 2.7.1.4, it was discussed that in order to facilitate transformation and a shift to quality in higher education, the NQF, SAQA and the CHE were established. According to SAQA (2000:19), quality will also be ensured through ETQAs, Standards Generating Bodies (SGBs) and NSBs. This will provide an opportunity to implement a total quality approach to education and training in South Africa that is in line with the objectives and principles of an integrated lifelong learning system which enjoys national and international recognition and credibility (SAQA 2000:19).

The objectives of the NQF offer a basis for the understanding of quality. The NQF aims to bring about a coherent, integrative education and training system that provides for an integrative approach. Objectives will encompass quality in the following way:

- 1) Integration: Qualifications and standards would be expected to integrate theory and practice, skills, knowledge, values and attitudes.
- 2) Learning outcomes: Qualifications and standards would be expected to clearly state the expected skills, knowledge, values and attitudes to be acquired and level of standard expected in order to guide learners and facilitators of learning.
- 3) Access, mobility and progression: Qualifications and standards would be expected to be designed such that they allow for continued learning and improved employment opportunities.
- 4) Redress: Qualifications and standards would be expected to ensure that the potential of citizens previously denied equal training is unlocked for individual and national development.
- 5) Personal and national development: Learners are developed so that they can be responsible for their own socio-political-economic development as well as for the country (SAQA 2000:4).

The principles that underpin the objectives are: 1) integration, 2) relevance, 3) credibility, 4) coherence, 5) flexibility, 6) standards, 7) legitimacy, 8) access and 9) articulation. These objectives and principles embedded in them constitute the quality indicated for the national outcomes and requirements of the NQF. All standards and qualifications registered on the NQF are evaluated against these objectives and principles to ensure that they fulfil the criteria for an integrated lifelong learning system. Integral to the management of quality is the quality assurance and management of assessment. It is the task of registered assessors to ensure that learners are assessed in a fair, reliable and valid manner (SAQA 2000:5-6).

Additionally, QA is linked to accreditation where the principal stakeholder and funder is assured that quality of education justifies funding. Quality assurance also has an improvement and accountability function in that information must be provided to the clients of higher education to influence choices. Attention towards quality has resulted in the acknowledgement of the importance of education and training as an integral part of an academic's working life since every academic will have to be involved in QA. Therefore, QA is associated with (amongst others) academic support which should encourage academics to aim at quality enhancement (see paragraph 2.7.1.4 and 3.2.7.1).

For example, in the U.K. recommendations by the Dearing Report instigated the establishment of the Institute of Learning and Technology which would (*inter alia*) oversee the improvement of quality in teaching and learning (see paragraph 2.7.3). In New Zealand, the NZQA together with the NQF

ensures the QA of educational provision. This has impacted on academics whose skills and knowledge would have to be updated through staff development programmes (see subsection 2.7.2).

What aspects of education and development would ensure that the quality of the academe is being improved? To be able to answer this, one needs to first answer the question: What constitutes academic quality and excellence? For some authors, this constitutes improvements in educating, research and scholarship skills as well as mentoring ability (see paragraph 3.2.7.2). This is covered in greater detail in the imminent subsection (4.4.2.7). Another angle is that when educators are globally competent in their professional tasks and can produce educational materials as well as learning and research outputs that are internationally recognised, then that would constitute quality or academic excellence.

Therefore, achieving academic excellence would also entail being competent in one's subject area. Would MEDUNSA academics want to improve their knowledge in their area of specialisation through staff development programmes? This question is located as item 42 in the questionnaire.

Item 42: "I would like to acquire more knowledge in my field of specialisation through staff development programmes".

Quality assurance is also related to assessment which in turn is linked to specific outcomes and critical cross-field outcomes. For academics to be competent assessors in the context of the OBE paradigm, it is very likely that they will need to receive training in outcomes-based assessment methods and techniques. Should staff development focus on OBE aligned assessment methods? Item 19 concentrates on assessment as related to OBE principles and was already discussed in subsection 4.4.2.4.

In fact the issue of quality is an all-encompassing factor and relates to all aspects of an academic's professional function. That is to say that there is no single issue that can be developed to ensure quality and excellence. A holistic, flexible, integrated perspective would have to be adopted (see paragraph 2.7.1.4 and 3.2.7.2) which should take into account educational transformation as well as innovation with respect to curricula, teaching and learning. In this sense, issues already discussed in previous subsections would also be linked to quality since the overarching functions of these issues are to enhance quality in education and training.

Quality is linked to the NQF which advocates critical outcomes that encompass various thinking styles. Learners would have to be taught to become analytical, critical, creative thinkers. If educators are to instil these thinking styles in their students, would there be a desire for them to learn more

about it themselves? This question is incorporated in the questionnaire as item 70. Respondents were asked if they would benefit from training in the enhancement of creative thinking.

Furthermore, according to the professional-artistry paradigm described by Gore, Bond and Steven (2000:3-6) quality in education should be self-regulating, relying on reflection rather than external inspection by quality assurance agencies. The emphasis is on involvement of individuals in self-and peer-assessment, in developing effective communication, critical reflection and creating a collegial, collaborative, sharing culture. Through sharing of ideas, staff can solve problems collaboratively (Honey and Mumford in Main 1985:88-89) and determine their own meaning of quality. It was pointed out in paragraph 1.7.3, that academic staff are usually lonely people working in professional isolation. Will staff at MEDUNSA acknowledge a need for greater collaboration and collegiality as a factor in professional enhancement? Item 33 was designed to elicit an answer to that question. **Item 33: "The sharing of experiences with other academics during staff development programmes, will be valuable in my professional development".**

Additionally, peer-assessment is also important when it comes to the improvement of quality (see subsection 3.4.2.2.2). Do staff want to know more about peer assessment and how it can be implemented to enhance quality by improving professional performance? Do they also want to learn about collaborative and reflective practices in teaching/learning, for example action research? See subsection 3.4.2.2.5. Item 70 addresses these particular issues by providing options such as "peer observation and assessment of teaching" and "action research" as options for staff development topics.

From a synthesis and analysis of the relevant subsections in chapters 2 and 3 as well as other referenced literature, it is evident that the notion of quality is holistic and cannot be viewed in isolation. That is, quality is related to the scholarship of research and teaching, the planning and designing of appropriate curricula, including assessment, innovative methods of teaching and learning with an emphasis on lifelong learning and preparing graduates to cope in a competitive marketplace, as well as educational transformation. It also has an influence on development of staff in the sense that ideally educators should become more reflective in their tasks and be involved in greater collaboration and collegiality. What knowledge do MEDUNSA academics have of the concept academic quality? **This question is located in the questionnaire as item 43: "I would like to learn more about the concept of academic quality".**

It was debated in paragraph 3.3.1.5 as to whether improving teaching ability alone will result in improved quality or whether quality could also be affected through improving capabilities in research. What should be developed: teaching or research or both? This was covered in subsection 3.3. and will

be discussed in more depth in the next subsection. Although these are also issues of quality, the broad scope of the discussion warrants a separate subsection.

4.4.2.7 The influence of the scholarship of research and teaching on academic staff development

Chapter 3 (subsection 3.3) dealt with what should be developed regarding staff development. Two main components were identified, namely teaching and research. Should the research and teaching skills of academics be developed to an equal extent or should one take precedence over the other? In the transformation process, staff would have to place a lot of emphasis on updating their teaching/learning skills for which a lot of guidance is needed. This is the information age and research is also important and needs to be developed as well. What must also be noted is that MEDUNSA is a HBU with relatively low research outputs (see paragraph 3.2.2.4) and staff will need development and encouragement in that area.

Robertson and Bond (2001:5-19) describe a study that explored how academics experience teaching and research and their inter-relationship. There was substantial variation in the views of academics regarding this relationship. Whilst some maintained that research and teaching are incompatible, others saw them as sharing a symbiotic relationship. Some claimed that “teaching is a means of transmitting new research knowledge”.

In the context of MEDUNSA, what would be the perceptions and experiences of academic staff regarding the scholarship of teaching and research? What would these findings mean for an academic staff development unit like CADS which has invariably reinforced the division rather than the integration of research and teaching? What would the results suggest for the promotion of scholarship through academic staff development in the context of educational transformation and innovation? These issues would need to be carefully considered during the planning of future academic staff development programmes.

Further, documentary evidence emphasises the discrepancy that teaching/learning is often perceived as being undervalued and under-rewarded as compared to research (see paragraph 1.4.4), and yet staff will have to focus on improving their teaching/learning skills in a transforming educational climate. This might result in resentment if educators feel that excellence in teaching is not adequately rewarded by their institution. This could discourage them from attending staff development programmes that focus on teaching/learning issues. Is there any dissatisfaction regarding this matter?

Item 61 was constructed to determine this: “Excellence in teaching is seldom rewarded by my institution”.

Moreover, there is increasing pressure to be involved in research because promotion is based on publication outputs. That said, would staff be willing to participate in staff development programmes to improve themselves professionally if this is going to go un-noticed by their institution? The response will give an indication of the level of enthusiasm for staff development among staff. The statement to determine this perception towards staff development is located as item 28 in the questionnaire. **Item 28: “I would be unwilling to participate in a faculty development programme to improve myself as an educator if this is not going to be rewarded by my institution”**

Boyer argues that scholarship exists in all aspects of academic work and not focussed in one area alone. Academics should be involved in more than one activity relating to the different areas of scholarship (see subsections 3.3.1 and 3.3.1.2). In the context of research, it is argued that academics should be encouraged by staff developers to research not just their own areas of specialisation but that of the teaching/learning process as well. In this way the scholarship of teaching can be better promoted (see subsection 3.3.1.3) and more synergy created between research and teaching (see paragraph 3.3.1.5).

Additionally, there are many advantages to being involved in teaching while doing research. Studies have shown that academics who are involved in research are more enthusiastic, have more relevant, updated knowledge and teach from immediate experience (see subsection 3.3.1.5). Current staff development programmes at MEDUNSA focus heavily on the development of teaching/learning skills but should research in the disciplines be covered as well? What are staff perceptions about this? **Item 20 addresses this question: "A staff development programme should not only focus on teaching/learning but research as well".**

There is a drive internationally to forge together teaching/learning strategies and research (see paragraph 3.3.1.5). Through collaborative research efforts on teaching /learning (see paragraph 3.4.2.2.1), the quality of teaching and learning can be enhanced. It was also discussed in paragraph 3.3.1.4 that for teaching to be seen as scholarship, the work must be made public and available for peer review and critique. Scholars should be members of active communities who gather to exchange findings, discuss, share, reflect and build on existing knowledge (see subsection 3.3.1.5). Action research will give academics an opportunity to be members of this active community. To be internationally competitive educators, it would be wise for staff at MEDUNSA to also learn about research methods on the teaching/learning process. Will educators want to see classroom-based research being covered in staff development programmes? Also, are they interested in knowing about

action research? The former question is located as item 62 in the questionnaire. The latter appears as an option in item 70. **Item 62: "I would be interested in learning about research methods on the teaching/learning process"**.

Another aim of scholarly teaching is to be kept informed of the theoretical perspectives and literature on teaching and learning in a certain discipline. The idea is also to use information contained in the literature to improve on one's teaching skills through inquiry, reflection, evaluation and communication (see subsection 3.3.1.4). Therefore, academics should not only attend to literature within their subject area but also on teaching /learning issues, to be able to integrate the two. On another note, it also makes sense that if educators are to instil life-long learning skills in their students, then they should become life-long learners themselves (see subsection 2.4.2). Staff development programmes can aspire towards this by offering articles and references for further reading to assist educators acclimatise towards educational literature.

How will educators react to articles and references on the teaching /learning process being handed out at staff development programmes? It might be theoretically expedient to distribute such literature but if participants are not interested in extra reading, it might be a waste of effort, time and money. For these reasons it is important to know the responses to items 37 and 47. **Item 37: "Literature given during workshops will help direct me towards extra reading"**. **Item 47: "It would be good if references to relevant literature were given during staff development programmes"**.

Furthermore, in subsection 3.3.1.4, it was explained that research was done to determine what academics knew of the scholarship of teaching. It is vital to know how academics think and make sense of the idea of scholarship of teaching. This would make for interesting discussions in staff development programmes while stimulating thought about how one could improve as an educator. What notions would MEDUNSA staff have regarding the scholarship of teaching? **Item 17 was constructed to elicit an answer : "I am familiar with the concept of scholarship of teaching "**.

Regarding research, the criteria that researchers would have to comply with to access funding from the National research foundation (NRF) would be the quality of their research. That is, the NRF would invest money in people with a track record of doing good research. This has led to a relatively new concept of peer evaluation and the rating of individual researchers in higher education, based on their performance as researchers. Previously (1984-2001), the evaluation and rating system applied only to scientists in the natural scientists, engineering and technology. In June 2001, it was decided to apply the rating system to all researchers which culminated in researchers in the social sciences and humanities being included since 2002 (NRF 2002: 3-4).

There is a set procedure that has to be followed when an individual applies for a NRF rating. This includes the submission of relevant documents which are reviewed by peers as well as appropriate specialist committees before a rating is finalised. The documentation is rated according to the following criteria:

- 1) Quality of research output of the last seven years.
- 2) An estimation of the applicant's standing as a researcher from a national and international perspective.
- 3) The quality and appropriateness of the journals, books and conference proceedings in which the applicant's work is published.
- 4) The outputs of postgraduate students.
- 5) Other research-based contributions that emanated from collaboration with industry and/or societal organisations.
- 6) Planned future research (NRF 2002:5-7).

Specialist committees assess the standing of applicants amongst their peers and give a rating according to a category. There are six categories, namely A, B, C, P, Y, and L according to the experience and quality of the researcher (NRF 2002:9). Therefore, in order to obtain funding for research, researchers would have to go through the process of applying for evaluation and subsequent categorisation. Being rated according to a certain category would involve peer review and evaluation by specialist committees. Are all MEDUNSA staff aware of this rating of researchers by the NRF and what the procedures are for obtaining funding? Would they be interested in knowing about the process involved in applying for a NRF rating? Would they want guidance in this regard? Items 51 and 52 address these questions. **Item 51: Through staff development programmes, we should get guidance on how to apply for a National Research Foundation (NRF) rating as a researcher. Item 52: I would like to receive more information about how to apply for funding from the NRF.**

Yet another issue that drives staff development is a knowledge of models and strategies of staff development. Staff development is dynamic and it is essential to know what the current trends are in order to be on a par with international training and development initiatives in this field. A further analysis of staff development models and strategies is described in the next subsection.

4.4.2.8 Changing trends in staff development: An analysis of models and strategies.

Studying the various models of staff development from an international perspective is pivotal for the staff developer to find out what the relevant, current trends are regarding staff development design

and implementation. This is important so that updated, appropriate learning methods and topics can be used to improve on the professional capabilities of educators. Models can also be modified and combined to serve specific needs (see subsection 3.4.1).

Under subsection 3.4.1 various models of staff development were outlined. Many models, for example the input, output, process model (3.4.1.2), the problem-based learning model (3.4.1.8), the shop-floor model (3.4.1.1), the developmental model (3.4.1.3), the RPTIM model (3.4.1.4) and the prototypic human resource model (3.4.1.9), imply that staff be given the opportunity to identify their professional needs through a needs analysis so that those needs can be more adequately and appropriately addressed. Models that disregard the perceptions and needs of staff are seen as limiting and stifling, for example the management and authoritarian models (see subsection 3.4.1.1).

Additionally, the identification of needs and designing objectives to meet those needs would be important in determining learning content for staff development programmes. In this respect an objective was stated in 1.4.3.3 regarding the needs analysis: " To involve academic staff in the planning of the content and process of future staff development programmes". There is a growing humanistic person-centred involvement in adult education that recognises the needs, aspirations and motivation of individuals. Educators learn best when they are given freedom of choice and when their learning is facilitated rather than controlled (see paragraph 3.4.1.3).

It was felt that a participative, bottom-up approach (in addition to a top-down approach) was important so that staff would have a say in the staff development process (see paragraph 2.6.1). The literature is also supportive of this philosophy. Brookfield (1986:214) maintains that it is important to negotiate meaningful areas of exploration with learners rather than sticking to preconceived objectives only. A set of objectives cannot always be specified in advance. Similarly, Wood et al. (1981:74) advise that objectives, activities and materials should be selected during the training stage and should be determined during the needs analysis. This enables participants to select those topics they believe will have the greatest potential for helping them improve their job performance and makes them responsible for their own professional growth.

Is another staff development programme necessary at all? Are the existing staff development initiatives at MEDUNSA adequately addressing the needs and aspirations of educators? Items 63 and 64 focus on this. Respondents are asked if they feel that enough is currently being done at this institution regarding opportunities for professional growth and development of academics in an era of educational transformation. They are also required to explain their answer if they answered in the affirmative.

Note also that Thaman (in Main 1985:69) advise that educators must first feel there is a need to improve their teaching/learning skills before they can be persuaded to act to bring about that improvement. This was also discussed in subsection 3.2.4.2. Do staff at MEDUNSA feel there is a need for staff development for improvement of their professional skills. Item 29 was designed to gauge the extent to which staff will support new staff development programmes and to what extent they feel these programmes are necessary. **Item 29: "We should have access to programmes for the continued improvement of our professional skills".**

It may well be that educators would respond that they don't need staff development programmes. In that case it would be important to determine what knowledge they already possess about educational transformation and innovative curricula. What are the gaps in their knowledge that would prevent them from becoming competent in their professional tasks? Can they identify their own strengths and limitation? This question appears items 67 and 68 in the questionnaire. **Item 67 : "What do you see as being your main strength as an academic?"** **Item 68: "What do you see as being your main limitation as an academic?"**

Additionally, if they are in favour of staff development programmes being implemented, in what areas would they like to see development take place and can they identify topics for imminent staff development programmes? A list of staff development topics in vogue was included as they might not be aware of them. Items 69 and 70 pertain to choice of staff development topics. It must be noted however, that although, participants were given some say in the process of programme design, the staff developer can step in with her knowledge and expertise. **Item 69: "What topics would you consider to be relevant in a staff development programme and please give reasons for your choice?"** **Item 70 gives a list of topics to select (see appendix A).**

Another point worth considering is that staff development is in a constant state of flux and never static. It is important for staff to attend staff development programmes on an on-going basis to be current with change in higher education. How involved are MEDUNSA academics with staff development issues. **Item 66 was designed to extract an answer: "Please specify the number of times you have attended any of the staff development programmes listed below in the last two years".** (A list of staff development programmes is given from which respondents can choose).

Staying with this theme, item 70 gives a list of topics that are in keeping with the paradigm shift in education (see paragraph 1.7.4), so that a transformational staff development model can be designed in the future.

Besides having topics that are pre-planned, Brookfield (1986:251-252) argues that incidental, unplanned learning is favourable so that staff can have an input on activities of a staff development programme as it unfolds. **Item 27 is in line with this argument: "A faculty development programme that allows for unplanned, unanticipated learning will be preferable to one that only allows closely specified objectives predetermined by the facilitator".**

There are many methods of staff development and it is expedient to involve participants in the selection of activities and methods. In this way they will choose those variables that are most likely to enhance professional growth (see subsection 3.4.1.4). Hence, a needs analysis should provide information about the learning styles for prospective participants. Information about when and how one learns best and what learning modes, activities and rewards are preferred, are needed to ensure that these factors receive attention in the design and implementation of programmes. Some individuals learn best through watching and listening (for example through lectures and seminars) and others through talking and exchanging ideas within a group. It must also be noted that some staff might be reluctant to attend workshops because of their participative, interactive nature. They might prefer more passive, non-threatening settings (see subsection 3.4.2.1).

In the context of this study, what learning models and activities would be preferred by MEDUNSA academics? Would they prefer workshops to lectures? Would individual study be preferable to group work? To determine which strategies or methods would be preferred, respondents would be asked to state preferences. In this regard, item 22 asks about a preferred staff development method. Item 65 also gives respondents a list of methods to choose from. In this way, participants have the option of choosing what learning activities they prefer. **Item 22: "In a staff development programme, workshops involving small group discussions will be more effective in promoting deeper understanding than lectures".** **Item 65: "What would be your preference as regards the method used in a staff development programme?"** (A list of methods is provided from which respondents can select).

Furthermore, after sifting through the models discussed in paragraph 3.4.1 and an outline of strategies in subsection 3.4.2.2, a number of potential, relevant topics have been identified for staff development. These strategies include peer observation and assessment (see paragraphs 3.4.1.5, 3.4.1.10 and 3.4.2.2.2), action research and teaching portfolios (see subsections 3.4.1.5, 3.4.2.2.1 and 3.4.2.2.5) which are fast becoming popular at institutions around the world (refer to paragraph 3.3.2.2.4). Peer observation and assessment, action research and teaching portfolios allow for critical reflection and collaborative sharing of ideas and problems within a group (see paragraph 3.4.1.5) with the aim of enhancing the quality of teaching/learning and research. For example, peer assessment

allows academics to determine the quality of their work themselves without external imposition (see subsection 3.4.2.2.1).

To keep abreast with current staff development trends and to be globally competent, MEDUNSA staff should also be exposed to the above mentioned methods of staff development. Do they want training in action research and peer observation and assessment? Item 70 was included to give respondents an opportunity to answer this question. **Therefore, item 70 asks if respondents feel they would benefit from training in action research as well as peer observation and assessment of teaching.** Are they interested in learning about teaching portfolios? **Item 40 corresponds to this query: "I would like to learn more about teaching portfolios in a staff development programme".**

On another level, according to the personal growth model discussed in subsection 3.4.1.3, there should not only be an interest in a person's ability to improve his/her professional performance, but respect for the development of the person as a whole. So, there is an emphasis on a holistic approach to developing the individual. Even from the definitions of staff development (discussed in paragraph 1.8.1), it is evident that personal development features as being a crucial component in the growth and development of staff as individuals. It could be argued further that for educators to survive in a changing academic environment, development and adaptability to change should start with oneself. This is in line with the bottom-up approach for implementing change. Only then can the goals and mission of the institution, as it strives for excellence, be realised. Will MEDUNSA educators perceive personal development to be important enough to be included as a topic in staff development programmes? **Item 21 was included to provide an answer: "Topics on personal development should be an integral part of any faculty development programme".**

The twinning model, career lattice model and the job-embedded learning model (see subsections 3.4.1.11, 3.4.1.10 and 3.4.1.5 respectively) emphasise mentoring and peer coaching where training occurs in the educator's workplace as part of the normal work routine. Mentoring of new educators is considered to be essential since a mentor can help a colleague identify weaknesses and suggest remedies. Mentoring can also alleviate isolation (see subsection 3.4.1.5) and help impart knowledge and skills (see subsection 3.4.2.2.3). Should mentoring of new educators be part of a staff development programme at MEDUNSA? This question is found as item 44 in the questionnaire. **Item 44: "Mentoring of new educators should be part of a staff development programme".**

In continuation, formal peer coaching programmes could entail staff assisting peers implement new instructional practices learnt during staff development programmes. Feedback offered by a peer coach can be objective, encourage reflection and help in solving problems. Peer coaching can also help apply what was learnt during staff development programmes to the classroom situation.

Therefore, staff development need not be in the traditional format of workshops, seminars and so forth, but can be integrated into daily professional tasks (see subsection 3.4.1.5). These types of cross-organisational collaboration are a cost-effective way of providing staff development (see paragraph 3.4.1.9). What are the perceptions of MEDUNSA educators regarding formal peer coaching as an approach to staff development? **Item 45 emanated from this query: “Formal peer coaching programmes at this institution would be beneficial in the enhancement of professional development”.**

It was explained in subsection 3.4.2.1 that there is an abundance of expertise at any institution and this could be tapped into by inviting staff with the appropriate expertise to deliver seminars, workshops, etcetera. How will MEDUNSA staff feel about having their colleagues being integrally involved in running staff development programmes? Will this approach be considered acceptable by academics? **This question is found in the questionnaire as item 46: “Staff employed at this institution, who may have the appropriate expertise should be invited to conduct staff development programmes.**

It was stated in paragraph 3.4.1.5 that learning takes time and time has to be created for any staff development programme. Time is needed for reading, observation, collaboration, reflection and attending staff development programmes. The next subsection pertains to time and the availability of academics to attend staff development programmes.

4.4.2.9 Time: The availability of academics to attend staff development programmes

It is possible that when educators with heavy teaching loads are still expected to do research, that time will be a major constraint, preventing them from attending staff development programmes.

Attendance will be further influenced by whether staff at MEDUNSA are busy with lectures or not. Also, some educators in the Medical and Dental faculties attend to patients, making it difficult for them to participate in staff development programmes. Further, Moses (1988:225) argues that research-orientated staff might prefer to spend time on research for promotion and salary purposes.

On that note, Wood et al. (1981:85) declare that administrative support in the form of release time is important for the implementation of staff development programmes. Main (1985:37) talks about a programme which was run at the University of Ontario, whose central philosophy was that of assisting the individual educator on his/her terms with the improvements he/she wished to make. Ingrained in its philosophy was the premise that release time for academics is crucial for the improvement of teaching/learning skills. What do MEDUNSA staff feel about release time for attending staff development programmes? Item 24 deals with release time and the responses help

indicate whether staff development programmes will be well attended. **Item 24: “Release time for staff to attend staff development programmes is crucial for the improvement of professional skills”.**

Stopera and Scully (1974:393) claim that time spent away from a unit or department, attending staff development programmes will yield functional returns in improved quality of work which could only benefit the institution. Will academics find staff development stimulating or just a waste of time? Item 23 addresses this question. **Item 23: “Being away from my department during a faculty development programme will be stimulating for me”.**

When will be the best time (s) for them to attend? Item 72 was designed to determine which period in the academic year would be best suited for implementation of programmes. **Item 72: “What type of staff development model would you prefer?”**

- 1) **A model where staff development has been reserved for one month a year only.**
 - 2) **A model where staff development is distributed evenly over a ten month period of time.**
- If you chose option 1 in question 72, please indicate which month would be the most convenient for you to participate in staff development activities.**

4.4.2.10 Items identified as important through the interviews with Executive Management, Management of CADS and the Deans

The qualitative study which involved interviews with management was a useful source of additional items for the questionnaire (see chapters 5 and 6). There were some areas of discussion that needed the input or perceptions of academics to cross check responses and to get a more holistic picture of the staff development situation at MEDUNSA. This is further explained in sections 6.4 and 6.5.16. The items gleaned from the interview studies as being important for further investigation in the quantitative study are given below. Points 1-6 were taken from the interview with the Executive Manager and CADS Manager while points 7-10 emerged from the interview with the Deans. No items were obtained from the interview with the HODs.

- 1) **Item 54: “I have no time to attend staff development programmes”.**
- 2) **Item 56: “I am unaware of the staff development workshops run by CADS”.**
- 3) **Item 71: “What more needs to be done to better prepare academics for OBE implementation”?**
- 4) **Item 53: “I support the university’s practice of rewarding research more than it does teaching”.**

- 5) **Item 55: “Only academics who have been through a formal education programme of teaching should be allowed to be educators”.**
- 6) **Item 57: “I seldom receive information regarding national issues in higher education through my department”.**
- 7) **Item 58: “There should be staff development programmes to guide academics to improve the quality of their teaching and learning”.**
- 8) **Item 59: “Attending staff development programmes is a waste of time in this uncertain period of the merger”.**
- 9) **Item 60 : “I feel I need support on the writing of courses in an outcomes-based format”.**
- 10) **Item 49: “If a postgraduate programme in higher education were offered at MEDUNSA, I would be interested in enrolling for such a programme”.**

The following subsection describes the piloting and pre-testing of the main study.

4.5 Piloting and pre-testing the main study

Pilot studies provide a means of understanding the phenomenon of interest better through praxis and reflection of the research (Kezar 2000:385). So, in order to enhance the credibility of this research, the main study was preceded by pilot work (McBurney 1994:185). In accordance with suggestions in the literature, piloting was effected on a group of academics, similar to that which formed the population of the final study (Bell 1993:84).

The self-administered questionnaire was piloted to determine how long it would take recipients to complete them and to check that all questions and instructions were clear. Another purpose of the pilot exercise was to get the “bugs” out of the instrument so that subjects in the final study would not experience difficulties in completing it and to ensure the wording and format of questions did not pose problems when the main data was analysed (Bell 1993:84).

A pilot study and pre-test were done in this project. The pilot study involved a group of ten men and ten women and was conducted in October 2001. The reason that an equal number of men and women were involved in the study was to undertake studies on gender issues. The literature is reflective of the fact that women are employed at the lowest levels in the academic hierarchy and are poorly represented at professor level. They are promoted less often than their male counterparts because their research records are weaker and/or they are under-qualified (Forster 2001:28-38). Therefore, it was considered important to examine gender issues in academic staff development in the pilot study to determine its feasibility in the main study.

Respondents were informed that it was a pilot study and were asked to complete the questionnaire as well as to make comments about question construction, layout of the questionnaire and any other factors which may have hindered their ability to complete the questionnaire effectively. A follow-up was done telephonically and by mail, reminding them to return the questionnaire if they had not already done so. Six out of ten (60%) women and seven out of ten (70%) men returned the questionnaire.

The pilot study, which found that there are differences in the needs and perceptions of respondents regarding academic staff development, was presented as a paper at a conference hosted by the South African Association of Women Graduates, in Cape Town and as a poster at MEDUNSA's 22nd Academic Day (Hassan 2002). The poster also served as an "advertisement" at MEDUNSA, for the imminent main study.

Also, changes to the questionnaire were made according to the feedback received. This included rephrasing some questions that were not well understood. It was also decided to undertake a more thorough analysis and synthesis of the literature to derive a more comprehensive conceptual framework which would ultimately serve as the content validation of the questionnaire that was used in the main study. This resulted in an increase in the length of the questionnaire. Further, from interviews conducted with management, additional items were included in the questionnaire for the purpose of data triangulation.

A second pilot study or pre-test, which Yin (in Robson 1997:165) defines as a "formal dress rehearsal", was undertaken in March 2003, just before the main study. In the pre-test, ten questionnaires were distributed to academic staff with the request that they scrutinise the instrument for errors and ambiguous questions and to make general comments, in addition to completing the questionnaire. Upon receipt of the questionnaires (response rate=40%), there were no changes since the feedback indicated that the respondents had understood the items in the questionnaire and no inherent deficits in the instrument were described.

The following subsection is concerned with the study sample for the main study.

4.6 The selection of the study sample

The choice of a sample size and the target population is given attention in this paragraph.

4.6.1 Sample size

How big should a sample be? The correct sample size is dependent upon the nature of the population and the purpose of the study. For example, in studies that deal with small populations, the entire population is desired, that is a 100% sample is used (Bailey 1987:95). Bailey (1987:96) argues that regardless of the theoretical sample size decided upon, the actual number of cases from which data are ultimately collected may be substantially fewer because of respondents who cannot be located or who don't return questionnaires. Moreover, sample size available for data analysis actually varies from question to question depending on the percentage of respondents who fail to answer a particular question (Bailey 1987:96).

As far as this research was concerned, it was decided to involve all full time, permanently employed academic staff in the quantitative study. It was felt that these staff members might have a greater commitment towards staff development than employees on contract who would leave after a few years. Part-time employees might have other interests, for example clinical practices and might be less concerned with staff development and completing surveys. In this sense the technique of sampling used was purposive. In purposive sampling, the researcher uses his/her own judgement about which respondents to select and chooses only those who best meet the purposes of the study. The advantage of this method is that the researcher can use his/her own research skill and prior knowledge to choose respondents (Bailey 1987:94).

The sample chosen was representative of the academic population at MEDUNSA in that respondents from all four faculties were selected proportionately. For example, the majority of respondents were from the Faculty of Medicine since this is the largest faculty on campus.

The number of respondents chosen from the various faculties are shown below:

- 1) Faculty of Medicine : 255
- 2) Faculty of Dentistry : 47
- 3) Faculty of Science : 39
- 4) NSPH : 9
- TOTAL : 350

Further, the type of sampling must help in answering the research question (as given in subsections 1.3.2.3 and 4.2). If all full-time, permanently employed staff are involved, this question would be answered more accurately.

4.6.2 Target population

All full-time, permanently employed academic staff in the four faculties were involved in this study. They included educators at all levels: junior lectures, lecturers, senior lecturers, associate professors, professors including HODs and Deans. Some educators had joint appointments with the Garankuwa Hospital and MEDUNSA.

The administration of the questionnaire in the main study is given exposure in the subsection that follows.

4.7 Administering the questionnaire

Self-administered questionnaires together with a covering letter were administered to all full-time, permanently employed academics (n=350) via MEDUNSA's internal mailing system in April 2003. The covering letter (see appendix A) explained the purpose of the study, elucidated the importance of the respondent's input, assured confidentiality and informed respondents that the study was endorsed by the Research, Ethics and Publications Committee at MEDUNSA in addition to receiving the personal written approval of the Deputy-Vice Chancellor.

Three reminders were sent to improve the response rate. The first reminder, sent two weeks after the questionnaire was mailed, was in the form of a letter that was sent to each respondent (see appendix F). A week thereafter, a second reminder in the form of an e-mail message was sent to the MEDUNSA community using the global address list. A fortnight later, the third reminder was sent to all HODs requesting them to remind members of staff in their departments to complete and return the questionnaire if they had not already done so. Ultimately 106 questionnaires were received giving a response rate of 30%. Table 4.4 illustrates the response rate achieved when the questionnaire was first sent out and subsequently with each reminder.

Table 4.4: Response rate achieved with each reminder

	Number of responses received	Response rate
Questionnaire	36	34%
First reminder	34	32%
Second reminder	22	21%
Third reminder	14	13%
Total	106	30%

The final response rate for each faculty is shown in table 4.5, illustrating that the respondents are representative of the MEDUNSA population (see subsection 4.6.1).

Table 4.5 The response rate for each faculty

Faculty	Frequency	Percentage
Medicine	74	71, 15
Dentistry	11	10, 58
Science	18	17, 31
NSPH	1	0, 96

Following on the promise in the covering letter that for every questionnaire that was completed and submitted, R1.00 would be donated to charity, a cheque for R106 was made out to the South African Red Cross Society.

4.8 Analysis of the results

The analysis of data was two-pronged, employing descriptive (modes and frequencies) and inferential (chi-square testing) statistics. The responses to the structured items in the questionnaire were statistically analysed using the Statistical Analysis System (SAS) for the calculation of frequencies, modes and to perform chi-square testing. A chi-square test (of independence) is a single sample statistical test of no relationship between two categorical variables (Glasnapp and Poggio 1985:431). Further, the chi-square test was applied to determine whether the observed frequencies differed significantly from the expected frequencies (Mulder 1989:159).

In this research, it was a common occurrence that chi-square testing indicated a possible significance because the probability (p) value was low (0,01). The computer program, however, issued a warning that the cells had expected counts less than the tolerance level of five and that the chi-square might not be a valid test. Subsequently, the categories were collapsed to render fewer cells but the same

warning persisted (Sirkin 1995: 364-365). This meant that most of the results of chi-square testing did not have any statistical significance and therefore, could not be reported.

When the statistician who had assisted in the statistical analysis of data for this study was consulted about the warnings that were issued, she had advised that the sample size be enlarged to produce a higher response rate and to achieve a broader opinion. Also, to verify that the researcher had interpreted the data correctly, a report of the results was sent to the same statistician, for cross checking and sanctioning. In this way the objectivity of the study was enhanced. She had identified a few variables that were unreliable in the sense that they were in conflict with each other.

The responses to unstructured items in the questionnaire were captured by means of coding, categorisation and the identification of themes. The results of the quantitative study are reported in chapter 7.

4.9 Conclusion

This chapter focussed on the survey method of research and in particular the self-administered questionnaire as a research instrument. What was brought to the fore was that whilst there are several advantages to using this type of instrument there are some disadvantages that needed to be taken cognisance of. To this end, this researcher explained what procedures were adopted to address these limitations, thereby optimising the questionnaire as a research instrument. Measures were also taken to enhance the validity and reliability of the questionnaire and these were explained in some detail.

Following this, the concept of needs analysis was discussed, as was the content validation for the questionnaire. What was covered thereafter was a description of the study sample and target population. Finally, the conducting of the pilot study and pre-test, including the administration of the questionnaire in the main study and the subsequent analysis of the results, were explained.

The next chapter focuses on the qualitative dimension of this study where the research methodology and the content validation are outlined.

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