

## **CHAPTER 5 : EMPIRICAL RESEARCH DESIGN**

### **5.1 INTRODUCTION**

The purpose of this chapter is to outline the design of the empirical research regarding the management of internal quality assurance in the training of student teachers in teacher training institutions in the Gauteng Province.

### **5.2 THE AIM OF THE EMPIRICAL RESEARCH**

The empirical investigation aims to gather information about the understanding of internal quality assurance, the existing practices regarding the management of internal quality assurance and the needs regarding the management of internal quality assurance in teacher training institutions in the Gauteng Province.

### **5.3 THE RESEARCH INSTRUMENT**

For the purpose of this research a structured questionnaire was selected as the research tool. The rationale for the use of the structured questionnaire will now be presented.

#### **5.3.1 The questionnaire as a research tool**

A questionnaire is a self-report instrument used for gathering data about variables of interest to the researcher and consists of a number of questions or items that a respondent reads and answers (Best & Kahn, 1993:230). According to Tuckman, (1994:216) a survey questionnaire is a tool used in the collection of research data and is ultimately dependent on the purpose of the study. Questionnaires are used by researchers to convert information directly given by people into data. In this sense the questionnaire is appropriate to gather data for this research in that it would elicit factual data about the management of internal quality assurance in the training of student teachers in teacher training institutions.

The suitability of the questionnaire in this research is based on the fact that the respondents are all managers of teacher training institutions or managers of quality assurance units at these institutions. The respondents will profoundly be interested in the final outcome of the research and its implications for the improvement of internal quality assurance practices in teacher training institutions.

According to Fraenkel and Wallen (1990:336) the questionnaire has both advantages and disadvantages. This will now be discussed.

### **5.3.2 The advantages of questionnaires**

The following are some of the advantages of the questionnaire as used in this research (Fraenkel & Wallen, 1990:421; Best & Kahn, 1993:230; Tuckman, 1994:216; Smith, 1987:6):

- It can be distributed to respondents with financial and time cost effectiveness and has a wide coverage.
- It reaches people who would be difficult to reach, thus obtaining a broad spectrum of views.
- Since the questions are phrased identically, the questionnaire allows for uniformity and elicits more comparable data.
- Anonymity of respondents is assured since respondents are not required to expose their identities, addresses and institutions.
- It is relatively easy to plan, construct and administer.
- Anybody can administer it on behalf of the researcher.
- Respondents can answer the questionnaire without pressure for immediate response.
- The influence that an interviewer might have on the respondent is obviated.
- Processing is made easy by the questionnaire being well constructed.
- Due to its impersonal nature, the questionnaire may elicit more candid and objective, thus more valid, responses.
- The questionnaire enhances progress in many areas of educational research and brings to light much information, which would otherwise be lost.

### **5.3.3 Disadvantages of questionnaires**

According to Fraenkel and Wallen (1990:336), Best and Kahn (1993:230), Tuckman, (1994:216) and Smit (1987:6) questionnaires have the following disadvantages:

- Questionnaires might be interpreted and understood differently by respondents.

- As the motivation of the respondents is difficult to check, misleading responses might be received.
- It is difficult to determine who really completed the questionnaire.
- A low response rate is the biggest disadvantage of the questionnaire and may lead to misleading responses.
- Respondents may feel that their personal opinions are left out.
- Respondents may be unwilling to respond to questions on private matters or controversial issues and may consequently provide what they regard as desirable responses.
- The length of the questionnaire may lead to careless or inaccurate responses and may result in low return rates.
- Questionnaires that do not probe deep enough, do not reveal a true picture of opinions and feelings.
- Respondents might have little interest in a particular problem and therefore might answer the questionnaire indiscriminately.

Wolf (1997:422) states that careful and sensitive developmental work will help to identify and make full provision for the limitations of questionnaires. The researcher must be satisfied that the questions are stated with sufficient clarity to function in the impersonal interaction and must maximise the likelihood that a respondent will answer the questions and return the questionnaire (Ary *et al.*, 1990:423).

### **5.3.4 The design of the questionnaire**

#### **5.3.4.1 Preparing the questionnaire**

The design of a questionnaire must be well organised by a thorough process. A well-designed and administered questionnaire can serve as an appropriate and useful data-gathering device and can increase the reliability and validity of the data. As suggested by Ary *et al.* (1990:422-424) and Gall *et al.* (1996:294), the following factors were considered in the preparation of this questionnaire:

- The questionnaire should reflect scholarship as to elicit high returns.

- The questionnaire should be as brief as possible so that answering it requires a minimum of the respondents' time.
- The questionnaire should not include unnecessary items.
- Questionnaire items should be phrased in a manner which is understandable by all respondents.
- Items in the questionnaire should be phrased in a way that will elicit unambiguous responses. Words such as "often" and "sometimes" should be avoided.
- Items should be phrased in such a manner that it avoids bias or prejudice that might predetermine respondents' answers.
- Alternatives to questions should be exhaustive.
- Questions that might elicit embarrassment, suspicion or hostility in the respondents should be avoided.
- Questions should be arranged in the correct psychological order. If both general and specific questions are included, the general should precede the specific.
- The questionnaire should be attractive, neatly arranged and clearly duplicated or printed.
- Questions should allow for respondents to review their own relevant experiences in order to arrive at accurate and complete responses.
- Questionnaires should communicate necessary rules about the process of answering so as to reduce complexities.

#### **5.3.4.2 Construction of the questionnaire items**

Questionnaire items must be constructed carefully in order to measure a specific aspect of the study's objectives or hypotheses. The construction of the questionnaire items in this study was done carefully. The aim of the empirical research was taken into consideration.

A total of 43 questions were used in the questionnaire (Appendix A). The literature study was used to construct items relating to the following:

- understanding of internal quality assurance (Section B);
- existing internal quality assurance practices (Section C); and
- needs regarding internal quality assurance (Section D).

Section A required general information regarding the respondents. Section B was constructed in such a way as to elicit responses that would give an indication of the respondents' understanding of internal quality assurance. The ranking scale used required respondents to indicate their understanding of internal quality assurance on a three point scale (1=Yes; 2=No; 3=Unsure). Section C required the respondents to indicate the existing internal quality assurance practices in their institutions. The ranking scale used required the respondents to indicate their existing internal quality assurance practices on a three point scale (1=Yes; 2=No; 3=Unsure). The data obtained from this section would be an indication as to whether teacher training institutions have internal quality assurance systems or mechanisms in place.

Section D was constructed in such a way as to elicit responses that would give an indication of the internal quality assurance needs of the managers of teacher training institutions. Respondents were required to prioritise the internal quality assurance needs identified for teacher training institutions on a three point scale (1=High; 2=Medium; 3=Low).

#### **5.3.4.3 The questionnaire format**

According to Ary *et al.* (1990:429) the questionnaire items and the covering letter are the main sources of information that the respondent will refer to in deciding whether or not to complete the questionnaire. The following rules of questionnaire formatting must be adhered to:

- The questionnaire must be made attractive.
- Questions should be laid out or organised in such a way that the questionnaire is easy to complete.
- Questions should display a natural ordering or flow so that it keeps the respondent moving towards completion.
- Questionnaire items and pages must be numbered.
- Brief, clear and bold-type printed instructions should be included.

- The questionnaire should start with a few interesting and non-threatening items.
- Questionnaires should not be too long and should include enough information so that items are interesting to the respondents.

The above stated rules were taken into consideration in the formatting of this questionnaire. Instructions for answering and keys for ranking the items were provided in each section.

#### **5.3.4.4 Pilot study**

In addition to the preliminary check made on the questions in order to locate ambiguities, it is desirable to carry out a pre-test of the questionnaire before using it in the research. For the pre-test, a sample of individuals from a population similar to that of the research subjects should be selected. The pre-test form should provide space for respondents to comment about the questionnaire itself in order to indicate whether some questions seem ambiguous and to indicate other aspects that can lead to improving the questionnaire (Tuckman, 1994:235).

The questionnaire was submitted to the researcher's promoter for his scrutiny and comments. Thereafter, the questionnaire was piloted to a sample of managers of teacher training institutions (N=5). The sample group was drawn from the intended target population. The pilot group was requested to comment on the questionnaire in terms of its length, unclear or ambiguous questions and any further suggestions as is advised by Ary *et al.* (1990:42).

The pilot study responses were analysed and revealed satisfaction with the questionnaire.

#### **5.3.4.5 Questionnaire distribution**

The final questionnaire was then distributed. The accompanying cover letter was aimed at orientating the respondents to the questionnaire as well as assuring them of confidentiality and anonymity.

The researcher distributed the questionnaires in order to minimise the disadvantages of postal questionnaire surveys and to ensure a high return rate as well as to exercise control over the time for returning the questionnaires.

## **5.4 POPULATION AND SAMPLING**

The target population for the research was identified as managers and/or units or departments concerned with quality assurance at teacher training institutions in the Gauteng Province.

Firstly the number of teacher training institutions were determined (N=8). Secondly the number of managers concerned with quality assurance at these institutions were determined (N=66). The target population included all managers of teacher training institutions in the Gauteng Province.

## **5.5 RESPONSE RATE**

A total of 66 questionnaires were distributed to all teacher training institutions in the Gauteng Province. Of this number 60 (90.0%) were returned. Since a response rate of 70.0% provides a quantity of data large enough to draw valid and reliable conclusions (Ary *et al.*, 1990:453), generalisations from the research can be made to the whole population of teacher training institutions in the Gauteng Province.

## **5.6 ADMINISTRATIVE PROCEDURES**

### **5.6.1 Follow-up on questionnaires**

The response rate was very good. Only six questionnaires were not returned by the time requested and were therefore not considered.

## **5.7 STATISTICAL TECHNIQUES**

The Statistical Services of the Vaal Triangle Campus of the Potchefstroom University for Christian Higher Education analysed and processed the data collected by means of the SAS-programme. The programme was used to find the frequencies.

## **5.8 CONCLUSION**

In this chapter the research design was presented briefly. The research method, development and the pilot study were outlined.

The next chapter will present the research data analysis and interpretations.