CHAPTER 5

METHODOLOGY

The research methodology directs the whole endeavor (Leedy & Ormrod, 2004:6).

5.1 INTRODUCTION

Research is the process by which information is analysed and interpreted to reach certain conclusions (Leedy & Ormrod, 2004:2). The situation-specific data and knowledge acquired in this process may be developed for implementation in practice (Leedy & Ormrod, 2004:xxi; Delport & De Vos, 2002:50).

In South Africa, many research projects on multilingualism are currently being undertaken (Harmse, 2005; Moodley, Chetty & Pahl, 2005; Naudé, 2005). However, as research on macrolevel holds little relevance for the educational team, contextual research is necessary to explain the local context (Mafisa, 2001:36, Harber, 1999:7).

Multilingualism is an exceedingly complex phenomenon. Hence, the decision to choose English as Language of Learning and Teaching (ELoLT) in a multilingual country like South Africa needs to be taken cautiously. Acquiring ELoLT should be a positive experience at no cost to the learners' mother tongue (L1). Speech-language therapists know how to facilitate additional language acquisition, and could expand their role by consulting and collaborating with preschool teachers (Jordaan, 1993:1), but research has to indicate whether a need for such services exists in the South African urban preschool context (Wiener, Bergen & Bernstein, 1983:22).

This study was undertaken to answer the following research question:

What are the needs of preschool teachers and multilingual preschool learners regarding the acquisition of ELoLT in the context of urban preschools in the Pretoria Central Business District (CBD) and Sunnyside area?

The aim of this chapter is to describe the methodology of the research. The research aims, design, participants, materials and apparatus, as well as procedures are described to explain the manner in which this study proposes to answer the research question.

5.2 CONCEPTUAL FRAMEWORK

Conceptual frameworks serve as guides to researchers in determining acceptable theories and methods to solve identified problems. The conceptual framework is dynamic and can be adjusted as the researcher accumulates knowledge (Le Grange, 2000:194; De Vos, 2002b: 36).

The research paradigm can be defined as the basic belief system that guides the researcher (Guba & Lincoln, 1998: 195). In this research the positivist paradigm is adopted. The aim of positivist inquiry is to explain phenomena and to add to a particular domain of knowledge, which ultimately may be used for prediction and control of phenomena (De Vos & Schulze, 2002:6; Guba & Lincoln, 1998: 211; 212). The researcher is also an objective observer who employs experiments or surveys as strategies of inquiry to collect data, with predefined instruments that yield statistical data (Creswell, 3002:18). Criteria such as internal validity, external validity, reliability, and objectivity are applied in the presentation and interpretation of findings (Denzin & Lincoln, 2000:21).

This study aimed to describe the educational context of multilingual preschools in a demarcated geographical area, based on the needs expressed by preschool teachers, as well as the assessment of multilingual preschool learners. The research focused on a small social unit (preschools

and preschool learners in the Pretoria CBD and Sunnyside area) of which a close-up view of an identifiable ability (proficiency in ELoLT) was obtained. As the research was conducted in a demarcated geographical area, and because of the small scale of the research, the findings were not generalised to the larger population. The researcher observed learner participants from a different culture to describe and explain the communication behaviours of multilingual preschool learners learning a new language (Johnson, 1992:134), but, as the study merely aimed to describe language and not the entire culture, the culture itself was not analysed. However, as language reflects cultural values, beliefs, and needs, language needs to be understood as a cultural issue (Kaschula & Anthonissen, 1995:10). The current study, therefore, was not only interested in the linguistic competence of preschool learners, but also in their communicative competence that may be influenced by cultural aspects of communication.

As both quantitative and qualitative researchers may apply triangulation (De Vos, 2002c: 341), the researcher employed *data triangulation*, where a variety of sample strategies was used (De Vos, 2002a: 365; Hornberger, 1994:689) to increase the reliability of the observations. The data were obtained from two different types of sources in an attempt to cross-validate the results, for example the questionnaire was completed by the preschool teachers and the multilingual preschool learners were assessed. To provide a detailed description of the learners' communicative abilities, *interdisciplinary triangulation* was employed (Janesick, 1998:47) where valuable assessment information was obtained from multiple perspectives (the preschool teachers and the speech-language therapist), broadening the explanation of the context.

Information was elicited from the teacher participants in a systematic way, as described by Spindler and Spindler (as cited by Johnson, 1992:142). The teacher participants' constant contact with the multilingual preschool learners in the natural setting of the classroom context offered many opportunities for interaction and observation, enabling them to engage in the research and communicate information by completing the questionnaires. In addition, the

researcher assessed the learner participants systematically in a standardised manner (as described by Schurink, 2000:243) to obtain a contextually bound view of their linguistic abilities in ELoLT.

5.3 MAIN AIM OF THE STUDY

The main aim of this study was to describe the specific educational context of multilingual preschools in the Pretoria CBD and Sunnyside area, in order to explain the local context, describe the language needs of multilingual preschool learners acquiring ELoLT, and explore the role of speech-language therapists in support of preschool teachers and multilingual preschool learners in the acquisition of ELoLT.

While the main aim reflects the broader concept of the result toward which the research is directed, the objectives indicate the steps taken in order to attain this aim (Fouché, 2002a:108; De Vos, Schurink & Strydom, 2000:7). The following sub-aims and objectives were formulated to realise the main aim.

5.3.1 First sub-aim

To determine the needs and strengths of preschool teachers and multilingual preschool learners in the Pretoria CBD and Sunnyside area in the acquisition of ELoLT by learners.

OBJECTIVE ONE

To determine the needs and strengths of preschool teachers regarding their role in facilitating communication development in multilingual preschool learners acquiring ELoLT.

OBJECTIVE TWO

To determine the perceptions and opinions of preschool teachers regarding the language needs and strengths in English of multilingual preschool learners acquiring ELoLT.

5.3.2 Second sub-aim

To determine the language and communication proficiency in ELoLT of multilingual preschool learners in the Pretoria CBD and Sunnyside area (in order to determine the needs of these preschoolers in learning English by assessing their expressive and receptive language, as well as pragmatic skills, and establishing patterns in language errors).

OBJECTIVE ONE

To describe the language characteristics of multilingual preschool learners acquiring ELoLT in a given context relating to expressive and receptive language, as well as pragmatic abilities.

OBJECTIVE TWO

To compare the preschool teachers' perceptions and opinions regarding the language needs and strengths in English with the language characteristics of multilingual preschool learners acquiring ELoLT.

5.3.3 Third sub-aim

To explore the role of the speech-language therapist in the acquisition of ELoLT by urban, multilingual preschool learners.

OBJECTIVE

To explore the role of speech-language therapists in the multilingual preschool learners' acquisition of ELoLT, based on the opinions and needs expressed by the teacher participants in Phase One, as well as language abilities displayed by learner participants in Phase Two.

5.4 RESEARCH DESIGN AND METHOD

An exploratory, descriptive, contextual research design, implementing the quantitative research method, was selected to best achieve the research aims and objectives of this study.

The research design describes adaptable guidelines that connect theoretical paradigms to strategies of inquiry and research methods (Denzin & Lincoln, 2000:22). According to Fetterman (1998:8), the *research design* links theory to method and enables the researcher to conceptualise the steps towards knowledge and understanding. The aim of the research design is to guide the researcher by setting the limits of the research. The research design of this study was determined by the research aims as stated in Section 5.3, which required a research design that provided a detailed description of the needs and strengths of the multilingual preschool learners when acquiring ELoLT and learning about its form, content, and use. In addition, a description was needed of the perceptions of preschool teachers involved with multilingual preschool learners.

The selection of the *research method* was secondary to the choice of paradigm as both quantitative and qualitative research methods may be suitable within any research paradigm (Guba & Lincoln, 1998:195). However, the nature of the data to be collected needs to be considered before choosing the research method, as data and methodology are inextricably interdependent. In fact, the data dictate the research method (Leedy & Ormrod, 2004:94). The research design, research method, and data collection methods selected for this study will be described forthwith.

5.4.1 Research design

This study utilised an exploratory, descriptive, contextual research design.

- **Exploratory:**

The objective of exploratory research is the exploration of relatively unknown research areas (Mouton & Marais, 1990:43). Exploratory research is therefore utilised to gain information in new areas of interest. In the South African context, multilingual classrooms can be viewed as relatively unheard of as such classrooms only recently became the norm (Smalle-Moodie, 1997:17).

This study aimed to explore and explain the perceptions and opinions of preschool teachers with practical experience of the problems that may arise when acquiring ELoLT. The subjective perceptions and opinions of preschool teachers enabled the researcher to explore the existing situation and to develop insight and comprehension of the local context. The researcher further identified communication patterns in multilingual preschool learners, which were compared and contrasted to develop insight and understanding from these patterns of language behaviour (Fetterman, 1998:96; Johnson, 1992:148). In addition, the study aimed to utilise new insights and understandings as underpinning to explore the role of speech-language therapists in support of preschool teachers and multilingual preschool learners acquiring ELoLT.

- **Descriptive:**

The descriptive paradigm is used to describe that which exists as accurately as possible (Mouton & Marais, 1990:44). Descriptive research is therefore employed to provide an accurate impression of a situation as it is. In this study, the objective of descriptive research was to describe and explain how the preschool teachers perceived their own needs and strengths and those of the multilingual preschool learners, enabling the researcher to understand and describe these needs and strengths. The use of a descriptive survey allowed the researcher to collect accurate information on the domain phenomena which were under investigation and to describe a variety of concepts that were of importance in this research (Dane, 1990:137).

- **Contextual:**

According to Mouton and Marais (1993:49), a phenomenon needs to be studied in terms of the immediate context. Contextual research is therefore employed to obtain context specific information. This contextual study was conducted in the specific context of preschools in the Pretoria CBD and Sunnyside area, where English is the Language of Learning and Teaching

(ELoLT) although not necessarily the mother tongue (L1) of the learners. In this unexplored multilingual context, a need was identified for speech-language therapists to make their expertise available to the multilingual learners, as well as the preschool teachers. The current research was initiated in response to the needs of this specific community and was conducted in the natural setting in which the participants normally spend their days, and, thus, did not seek generalisation.

5.4.2 Research method

This study implemented the quantitative research method. Quantitative research methods are employed to answer questions about relationships between variables with the purpose of explaining, predicting, and controlling phenomena (Leedy& Ormrod, 2004:94). Quantitative researchers identify, develop, and standardise methods of measuring, while attending to the validity and reliability of the measuring instruments (Leedy & Ormrod, 2004:95). Quantitative variables are usually obtained by measuring or counting, and take on numerical values (De Vos, Fouché & Venter, 2002:225). Data analyses are conducted with predetermined statistical procedures (Leedy & Ormrod, 2004:96).

When employing the quantitative method, the causal relationships among variables are identified by extracting these variables from their natural setting to neutralise extraneous variables; research questions are formulated as hypotheses in advance of the data collection phase; and results are generalised from samples to populations (Nunan, 1993:69). With the qualitative method, on the other hand, the context in which the variables occur is of central importance; there is an interaction between the questions and the data and the questions can be modified and redefined for subsequent studies; and statistical generalisation is not possible (Nunan, 1993:69; Johnson, 1992:140).

According to Leedy and Ormrod (2004:97), quantitative and qualitative research is not mutually exclusive, and it is not unusual for quantitative

researchers to also report on qualitative aspects of research. Creswell (2003:17) reports that in some forms of data collection both quantitative and qualitative data are collected. This study implemented the quantitative method. However, the data obtained with the questionnaire as measuring instrument were augmented through limited open-ended observations by the participants, as described by Creswell (2003: 17; 18). This combination best achieved the research aims and objectives.

5.4.3 Data collection methods

A descriptive survey was conducted to allow the researcher to examine and describe the specific phenomenon with great accuracy as suggested by Leedy and Ormrod (2004:198). Survey research obtains information directly from a group of individuals, generally about facts, opinions, and behaviours (Leedy & Ormrod, 2004:183; Dane, 1990:120; 121). The purpose of a survey is usually to acquire a snapshot of conditions, attitudes, and events at a single point in time (Nunan, 1993:140).

Researchers often employ survey methods to study bilingualism, bilingual and multilingual education, as well as foreign languages (Johnson, 1992:105). In this study, the researcher employed a questionnaire as first survey technique (Leedy & Ormrod, 2004:185; Dane, 1990:120) to obtain data. The items in the questionnaire were designed to collect information, and to investigate perceptions of preschool teachers in a demarcated geographical area (Dane, 1990:143). Items in the questionnaire were both closed-ended and open-ended in format, which provided mostly quantitative information but also limited qualitative data respectively (Johnson, 1992:114). The needs and strengths of preschool teachers were determined in a structured and systematic manner, building on theory and previous research to improve the validity of the information (Johnson, 1992:113).

As the study further required data to be collected on the language and communication proficiency of multilingual preschool learners acquiring ELoLT, a test battery in checklist format was employed as a second survey technique

(Leedy & Ormrod, 2004:185). The survey examined a subset (sample) of a group of multilingual preschool learners in a demarcated geographical area to study their language and communication characteristics (language proficiency) in the specific context (Johnson, 1992:104). The collection of language data is a basic procedure in quantitative survey research (Johnson, 1992:115), and the use of standardised measuring instruments to assess the multilingual preschoolers created a favourable situation in which responses by the learners could be elicited.

Although surveys are widely used to collect data (Nunan, 1993:140), special care should be taken to protect the data of descriptive surveys from distortion through bias. The researcher acknowledged that data gathering are highly sensitive to distortion and attempted to remain impartial in the selection of participants, as any influence that may disturb sample selection is a potential source of bias. Non-probability sampling was employed, utilising convenience sampling in the selection of teacher participants and quota sampling in the selection of learner participants. Care was taken to avoid response bias and/ or incomplete responses to sensitive topics by ensuring the anonymity of the participants and the confidentiality of information (Dane, 1990:143). As it is also important in survey research to assess the degree to which non-respondents introduce bias into the sample data (Johnson, 1992:119), the researcher provided information on non-respondents, allowing readers to assess if acceptable response rates were achieved. Furthermore, the researcher stated the percentages of unreturned questionnaires, and if consent from parents and learner participants was withheld (Leedy & Ormrod, 2004:208-210).

To assist the researcher in formulating correct and valid conclusions, data were organised into categories relevant to the research problem and presented systematically before being analysed (Leedy & Ormrod, 2004:245). The focus of the data analysis was descriptive and quantitative measures were mostly employed to analyse the results. The ultimate aim of survey research is to solve problems through the interpretation of data (Leedy & Ormrod, 2004:212).

5.5 ETHICAL ISSUES

When research deals with people, the following four ethical considerations must be emphasised, as most of the ethical issues in research fall into these categories (Leedy & Ormrod, 2004:101).

5.5.1 Protection from harm

None of the participants in this study suffered any negative, physical or psychological consequences (Punch, 1998:176). The learner participants in Phase Two (the multilingual preschool learners) were fetched individually from their classrooms, assessed in a safe therapy room on the school premises and returned to their classrooms by the researcher. Learner participants experienced no discomfort, unusual stress, or embarrassment during the assessment. The learner participants were under no pressure to respond and lack of response was only noted.

5.5.2 Informed consent

The teacher participants in Phase One were informed about the nature of the study, possible future publications of the results, and contact details of the researcher, and were assured of confidentiality as suggested by Leedy and Ormrod (2004:101). Participation was voluntary and teacher participants who were unwilling to take part in the research study, did not have to return their questionnaires.

The parents or caregivers of learner participants in Phase Two were asked to complete an informed consent form (Appendix D) on which permission could be granted or refused. The researcher acknowledged the rights of parents or caregivers and learners to transparent assessment and ensured their understanding of and right to access all the assessment results, as recommended by the National Commission of Special Needs in Education and Training (NCSNET) and the National Committee on Education Support Services (NCESS) (RSA, 1997:84). The parents or caregivers were informed

about the identity of the researcher and the organisation conducting the research, the purpose of the research, the extent to which their children were protected with respect to confidentiality, and assured that cooperation was voluntary, as suggested by Fowler (1993:132). Communication with the parents or caregivers of learner participants was in English, as English was the Medium of Instruction (MoI) in the preschool and also the language of communication between the preschool staff and parents or caregivers. If parents or caregivers did not understand the informed consent form, the content thereof could be clarified with their class teachers. All parents and caregivers gave their consent for the assessment. Upon fetching the learner participants from their classrooms, the researcher asked them individually if they were willing to participate. All learner participants assented and were very eager to take part in the research.

5.5.3 Right to privacy

All participants were assured of confidentiality as recommended by Punch (1998:175). The names of the teacher participants in Phase One did not appear on any of the questionnaires. The researcher allocated a number to each teacher participant to ensure their privacy, and only the allocated numbers were used in any analysis or reference. The same will apply to future publications. The names of learner participants in Phase Two appeared on the record forms only to aid the researcher in compiling the correct individual profiles, and to provide parents or caregivers with appropriate feedback on their children. For statistical analysis and publication only the allocated numbers were used.

5.5.4 Honesty with professional colleagues

The researcher attempted to present the results of the study truthfully and honestly. The researcher's own perspectives and bias did not influence the findings. No data were misrepresented (Leedy & Ormrod, 2004:102), credit was given to other authors whose suggestions were used to compile the

questionnaire and test battery (checklist), and ideas from other printed material were acknowledged, as suggested by Leedy and Ormrod (2004:102).

5.6 RESEARCH PHASES

To reach the aims and objectives of the current study, the research consisted of three research phases - which are schematically presented in Figure 5.1 - to form the framework for the following description.

5.6.1 Phase One: Needs and strengths of preschool teachers and preschool learners

Phase One of the study was conducted to achieve the first sub-aim of the research.

5.6.1.1 Research aim

The aim of Phase One was to determine the needs and strengths of preschool teachers and multilingual preschool learners in the Pretoria CBD and Sunnyside area in the acquisition of ELoLT by learners. The following objectives were formulated:

- To determine the needs and strengths of preschool teachers regarding their role in facilitating communication development in multilingual preschool learners acquiring ELoLT.
- To determine the perceptions and opinions of preschool teachers regarding the language needs and strengths in English of multilingual preschool learners acquiring ELoLT.

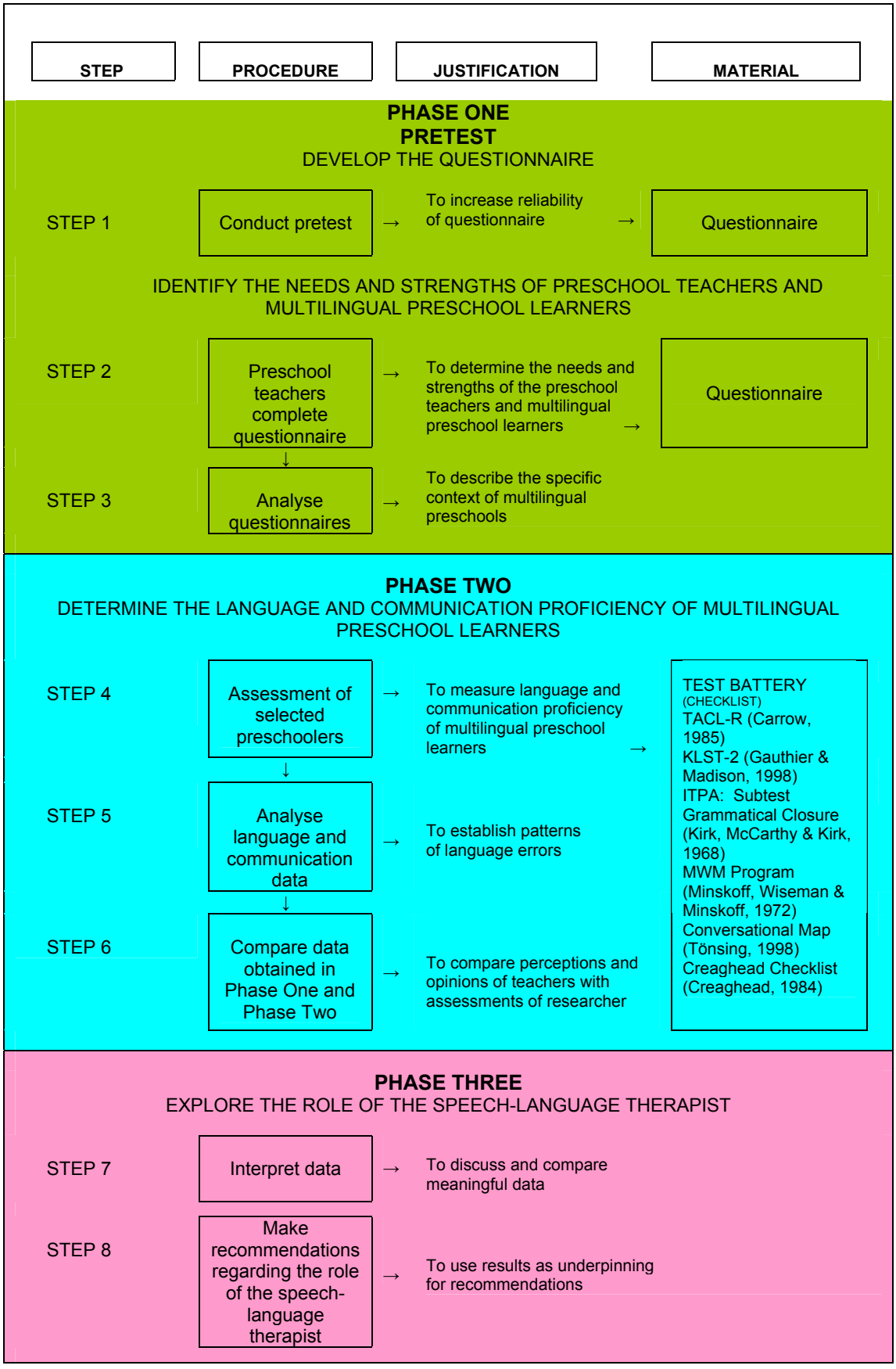

FIGURE 5.1: RESEARCH PHASES

5.6.1.2 Context

Preschools were targeted as the context in Phase One of the research and will be discussed in the following section.

- **Geographical area**

The geographical area identified for the study was the Pretoria CBD and adjacent Sunnyside suburb. As the research aimed to target a specific context, all participating preschools had to fall in the specified physical area.

Entwisle & Astone (1994:1523) state that it is important for the researcher, when investigating people, to take into account the geographical area in which the participants live, including the metropolitan area, the size of the place, and the size of the neighbourhood. The geographical area identified for the study is depicted in Figure 5.2.

FIGURE 5.2: THE GEOGRAPHICAL AREA SELECTED FOR THE RESEARCH IN RELATION TO ITS IMMEDIATE SURROUNDINGS

- **Socio-economic status**

When research involves children it is important that the adults responsible for the youths' resources be identified (Entwisle & Astone, 1994:1525). According to Hauser (1994:1542), the occupational status of the child's parents or caregivers will characterise the likely flow of economic resources. The income level is also a prediction of learners' academic achievement, as economic stress may have a negative impact on learners' performance at school (Patterson, Kupersmidt & Vaden, 1990:491).

The South African census indicates that the income of the population in the demarcated areas falls into the middle to lower income groups. A large number of the population is unemployed and not economically active (Statistics South Africa, 1996). A substantial informal economic sector is also present (Wolhuter, 2000:155).

The dwellings in the Pretoria CBD and Sunnyside area are mostly rented flats. According to Hauser (1994:1544), rented housing as opposed to owned housing is also indicative of income status, with renting having a negative connotation.

- **Population group**

As the research targeted Black multilingual learners, all the participating preschools had to have Black learners enrolled. To gain insight into human and individual development it is important to understand the given context (Entwisle & Astone, 1994:1522). The Pretoria CBD and Sunnyside area underwent a radical change in population composition because of the political changes in South Africa since 1994. The former exclusively White population changed to a racially integrated population when many people from the previously disadvantaged communities moved into these areas. Since this trend towards urbanisation is continuing (Wolhuter, 2000:155) and more Black

families are moving into the Pretoria CBD and Sunnyside area, most of the preschool learners in these areas are Black (Du Plessis & Naudé, 2003:124).

- **Type of schools**

Independent preschools, as well as preschools subsidised by the Gauteng Department of Education (GDE), were included in the research. Convenience sampling was conducted and all identified preschools were included, as recommended by Leedy and Ormrod (2004:206). As the number of preschools was limited, all the data available from the small population in the specified geographical area were collected. Schools were identified by consulting the GDE, the *Suid-Afrikaanse Vrouefederasie*, a research list compiled by Kommunika, the telephone directory, and preschool principals.

- **Age range in schools**

Preschools enrolling preschoolers between the ages of three and six years were selected to participate in the research. The preschools were organised into three age groups, namely Junior, Middle, and Senior groups, to cover the complete developmental spectrum in the preschool, as discussed by Nelson (1998:289). Learner participants in Phase Two of the research were selected from each of the three groups.

- **Language of instruction**

In accordance with the aims of the study, English had to be the language of instruction in the participating preschools.

5.6.1.3 Teacher participants

Thirty-six preschool teachers were selected as teacher participants in Phase One, according to specific criteria.

- **Criteria for selection**

The following criteria were applied for the selection of teacher participants.

> **Language**

The preschool teachers had to be proficient in English since they were teaching learners acquiring ELoLT. Proficiency in English was also essential for them to be able to complete the questionnaire that was compiled in English. The questions being fully comprehended by the teacher participants increased the validity of the research and provided better quality results, as indicated by Johnson (1992:114).

> **Employed as preschool teachers**

To satisfy the requirements of the study and to depict a valid representation of facts in the context, the researcher wanted to collect all the applicable information in the demarcated area, as recommended by Leedy and Ormrod (2004:206). Therefore, irrespective of training and experience, all the preschool teachers teaching at the identified preschools in the Pretoria CBD and Sunnyside area were selected as teacher participants, thus maximising the size of the sample. A description of the characteristics of the teacher participants is presented in Chapter Six, as such a description is an integral part of the results.

- **Selection procedures**

As all preschool teachers at the qualifying preschools were selected as teacher participants, convenience sampling (a type of non-probability sampling) was done. Participants are then selected because of their accessibility (Leedy & Ormrod, 2004:206; Johnson, 1992:110). Permission was obtained telephonically from the principals of the identified preschools, as described previously. The principals accepted only after consulting with their

staff. Preschool teachers unwilling to take part in the research were under no obligation to return the questionnaires.

- **Response rate**

Thirty-six teachers were selected to participate in Phase One, and thirty-two returned the questionnaires (a response rate of 88%). By returning the completed questionnaire the teacher participants indicated their willingness to participate in the research.

The excellent response rate of the teacher participants in Phase One may be attributed to two important factors. First, the researcher used the *drop-off* method to distribute the questionnaires, which assured personal contact with the preschools' principals, and, second, the researcher utilised telephonic follow-up procedures, as discussed by Delport (2002:177) and Fowler (1993:59; 67).

5.6.1.4 Material and apparatus

The material and apparatus used during Phase One of the research will be described in the following section.

- **Pretest**

A pretest was conducted to develop the survey instrument (questionnaire) for Phase One, as recommended by Fowler (1995:135).

> **Aim**

The objective of the pretest was to identify potential problems in the questionnaire prior to finalising the content and to increase the validity and reliability, as suggested by Fowler (1995:104).

> Pretest participants

The pretest participants had to be similar to the participants who were to take part in the main study to enable the researcher to detect potential problems that may by experienced by a similar group of people. Convenience sampling was done, and four preschool teachers from four different preschools in the Pretoria CBD and Sunnyside area were randomly selected from a list of identified preschools to form a trial group of pretest participants, as stated by Nunan (1993:142) and Johnson (1992:111-114). Table 5.1 contains a description of the pretest participants.

As shown in Table 5.1, all the pretest participants had been trained as teachers. Their ages varied from the 18 to 25 years age range to 55 years or older. The mother tongue (L1) of 75% of the pretest participants was Afrikaans. The pretest participants were therefore a set of participants representative of the range of teacher participants who took part in Phase One of the main study.

TABLE 5.1: PRETEST PARTICIPANTS

PARTICIPANT	HOME LANGUAGES	ADDITIONAL LANGUAGES	HIGHEST QUALIFICATION	AGE	TEACHING EXPERIENCE
1	Afrikaans	English	BA Primary	55 + Years	10 + Years
2	Afrikaans English	None	Teacher's Diploma	55 + Years	10 + Years
3	Afrikaans	English	HED	18 - 25 Years	1 - 3 Years
4	Afrikaans	English	THED Preprimary	26 - 35 Years	10 + Years

> Procedure

The procedure as set out below was followed during the pretest:

- The questionnaire was developed after an in-depth literature review.
- The questionnaire was presented to the staff of the Department of Statistics at the University of Pretoria, as well as the Kommunika project leader, for comments and approval.

- Permission was obtained from principals and preschool teachers (pretest participants) to conduct the pretest. The purpose of the pretest was explained to the pretest participants.
- During a structured interview the researcher completed the questionnaire with each pretest participant individually.
- The researcher discussed the questions and response tasks with each pretest participant, and noted the recommendations.
- After the recommendations of the pretest participants were studied, changes were made to the questionnaire.

> **Results**

The results of the pretest are summarised in Table 5.2.

TABLE 5.2: A SUMMARY OF THE FINDINGS OF THE PRETEST

AIMS OF PRETEST	PROBLEMS IDENTIFIED	CHANGES MADE TO QUESTIONNAIRE
To identify any typographical errors in the questionnaire	• Questionnaire appeared too lengthy • Too much writing needed in the demographic information section • Inadequate arrangement of questions in demographic section • Participants were not interested in the different headings of sections in questionnaire	• Questionnaire was changed to a more compact format • Answers were changed to fixed response alternatives • The order of questions in the demographic information section was changed to separate the participant and school information requested • Headings of sections in questionnaire were removed
To determine if the response tasks were clear	• An "x" should be added to the instruction to read: "Tick the appropriate block with an x"	• No change was made as any form of indication of choice was acceptable
To determine if all the participants understood the questions correctly	• Section 3 (Variable 67 and 68) was unclear and posed a problem to participants	• Explanatory examples were added to Section 3 (Variable 67 and 68)
To determine if the wording was clear	• The word "echo" in Section 7 (Variable 153) was not clear and caused uncertainties	• The word “echo” was changed to "repeat"
To identify if the rating scales had enough options	• Too many questions had "yes/no" answers and were found to be too restrictive	• The rating scales were changed and more options were given
To identify any inadequacies in questions as posed	• Participants wanted to share information in narrative answers	• Open questions were included to allow participants to add information not covered by the questionnaire

The pretest assisted the researcher in minimalising the possibility that technical problems with the wording or layout may affect the results obtained by the questionnaire as survey instrument. On completion of the pretest the questionnaire was finalised.

- **Questionnaire**

To realise the first sub-aim of the study, a questionnaire (Appendix A) was compiled as survey instrument in order to collect information, and to investigate the needs and strengths of preschool teachers and multilingual preschool learners.

The questionnaire enabled the researcher to gain insight into the firsthand experience of preschool teachers who, in their current teaching position, were involved with multilingual preschool learners acquiring ELoLT, as suggested by Fowler (1995:78) and Johnson (1992:108), and thus to determine the needs, strengths, perceptions, and opinions of these teacher participants.

> **Questionnaire development**

The questionnaire was designed to address the specific research objectives of Phase One of the research. The development of the questionnaire was based on theory and earlier relevant studies (Johnson, 1992:113). Building on theory and previous research helped to improve the quality of the questionnaire and to increase *content validity*. In the questionnaire, teacher participants were questioned about their firsthand experiences, as the strength of survey research is to collect information on the current situation and the participants' feelings and perceptions, as suggested by Fowler (1995:78). The *construct validity* of the questionnaire may only result from continued use to measure the underlying construct over a period of years (Litwin, 1995:44). The validity and reliability of the questionnaire will be further discussed in Section 5.7.

The following principles provided guidelines during the development of the questionnaire (Leedy & Ormrod, 2004:190-192; Fowler, 1995:78-103; Johnson, 1992:114; Dane, 1990:125).

- Each section started with either the instruction or the question written in capital letters to provide a consistent convention and to make the task of reading questions and following instructions as easy as possible.
- Attention was given to the format of the questionnaire allowing enough space between items to contribute to neatness and easy completion of the instrument.
- The wording of instructions and questions in the questionnaire was clear, using non-technical language that was easy to comprehend by all participants.
- Items of the questionnaire did not contain negative phrasing that is often difficult to process.
- Only one idea to be considered was given per item to prevent confusion.
- Examples of words and phrases were given at certain questionnaire items to clarify specific language features listed in the item.
- Items in the questionnaire were open-ended, allowing teacher participants to respond in their own words, or closed, requiring the participants to select from a limited number of responses. Open-ended questions were useful in gathering qualitative information, whereas closed question formats allowed for quantitative information.
- The discourse structure of the questionnaire was structured in a logical way to avoid confusion among teacher participants. The questionnaire moved from general questions regarding demographic information, to more specific questions regarding the teacher participants' needs.
- The questionnaire was designed to make the task of recording answers by teacher participants as easy as possible, by adhering to a consistent convention for such recording throughout the questionnaire. Most of the questions were closed-ended and answers could be ticked off, which shortened the time needed for the completion of the questionnaire.

> Questionnaire limitations

Although a pretest was done to assess the need for adaptations in the procedures or wording of the questionnaire, the researcher acknowledges that all the limitations of the questionnaire may not have been identified during pretesting. The following limitations of the questionnaire have since been recognised.

- In Section Eight of the questionnaire the teacher participants' opinions on general issues of additional language (L2) acquisition were requested. The questions were of a general nature, covering issues that are currently fervently debated in the printed and visual media, as well as in academic journals. Although the researcher paid attention to the wording of questions in order not to reveal existing knowledge, the questions in Section Eight of the questionnaire may be regarded as leading questions. This will be recognised when the results are discussed in Chapter Six.

- The pretest participants comprehended the questions and recommended options in the rating scales that they perceived appropriate. It is recognised that in Section Four (Part One) and in Section Five the rating scales selected by the participants may not have been appropriate for the type of question asked.

- As a substantial amount of information was requested, the questionnaire contained mainly close-ended questions to shorten the duration for completion (Delport, 2002:179). However, it is recognised that the inclusion of more open-ended questions may have enabled the researcher to explore multilingual classrooms in the research context in more detail.

- Counter-test items in questionnaires increase the validity of participant responses. It is recognised that the rephrasing of selected items in the questionnaire may have ensured reliable and consistent responses by the participants.

Despite these limitations, it is postulated that the questions were clearly understood as such was indicated by the participants during structured interviews. The answers also corresponded to what they intended to measure. The participants' answers to the questions in the questionnaire therefore met the objectives of the questions.

> Sections of the questionnaire

The questionnaire was divided into ten sections, and teacher participants were asked to respond according to the Lickert Scale, that is an ordinal attitude scale. The number of response categories was developed by the researcher and tested in the pretest. The number of response categories was respectively two, three and four and was alternated in the questionnaire to prevent bias (Delport, 2002:182). Open questions were included to allow teacher participants to comment freely, and to afford the researcher the opportunity to collect information that might have been omitted from the questionnaire (Department of Statistics, University of Pretoria, 1996:4; 7).

The subsections of the questionnaire are presented in Figure 5.3.

SECTION		INFORMATION
Section One	→	Demographic information
Section Two	→	Exposure to multilingualism
Section Three	→	General observations
Section Four	→	Vocabulary development
Section Five	→	Syntactic abilities
Section Six	→	Pragmatic skills
Section Seven	→	Strategies
Section Eight	→	Beliefs
Section Nine	→	Need for training
Section Ten	→	Open question

FIGURE 5.3: SECTIONS OF THE QUESTIONNAIRE

- **Section One: Demographic information**

In *Section One* of the questionnaire demographic information was requested. These questions were important for the classification of information. Personal information included the age, qualification, and teaching experience of the teacher participants. The L1 and an indication of additional languages spoken by teacher participants were requested. This section also covered the language groups represented in the various preschools; the proportional representation of each language; the language of instruction in the various schools and in the individual classes. Section One was included based on discussions in the literature by Brits (1996:62) and Johnson (1992:105).

- **Section Two: Exposure to multilingualism**

Section Two investigated the exposure of teacher participants to multilingualism. This information was required to gain insight into the teacher participants' preparations to accommodate learners acquiring ELoLT in their classes. Information was requested on the nature of formal teacher training (including specific training in teaching ELoLT learners), self-studies, workshops attended, collaboration with speech-language therapists, as well as the teacher participants' perceptions of their own competency in teaching ELoLT learners. Six open questions and one response choice question were formulated. The open questions gave teacher participants the opportunity to report and describe individual experiences. Section Two was included based on discussions in the literature by Calderon (1997:74) and Woodbridge (1994:68).

- **Section Three: General observations**

Data on teacher participants' general observations regarding ELoLT learners were collected in the *third section* of the questionnaire. The aim of this section was to investigate coping strategies, specific emotional and social characteristics displayed by learners, as well as general ELoLT comprehension. Not only the behaviour, but also the frequency of occurrence had to be indicated. Sixteen questions were posed and had to be answered by using a rating scale with the options o*ften, seldom,* or *never*. Section Three was included based on discussions in the literature by Johnson (1992:108).

- **Section Four: Vocabulary development**

Section Four consisted of two parts and covered the teacher participants' perception of the development of vocabulary in learners. The information provided insight into both the receptive and expressive vocabulary of learners during the acquisition of ELoLT. The first part contained five questions on English vocabulary proficiency and was of a positive nature. Questions had to

be evaluated on a rating scale with the options *all, some, and none.* The second part of Section Four collected information on the comprehension of specific words and concepts. The fifteen questions could be answered with the options *always, often, seldom, never.* Section Four was included based on discussions in the literature by Jordaan (1993:74, 216); Johnson (1992:108) and Morris (1992).

- **Section Five: Syntactic abilities**

Specific syntactic abilities of preschool learners, as perceived by the teacher participants, were investigated in S*ection Five*. The aim of this section was to evaluate the teacher participants' ability to first, differentiate between specific expressive skills, and second, evaluate the complexity of the expressive language used by learners. Twenty questions were formulated and a rating scale was employed for the responses, with the options *always, often, seldom, never*. Section Five was included based on discussions in the literature by Jordaan (1993:90); Preston (1992); and Crystal, Fletcher and Garman (1977).

- **Section Six: Pragmatic skills**

The *sixth section* requested teacher participants to record their observations regarding the pragmatic skills of ELoLT learners. This section was included in the questionnaire to allow teacher participants to record informal observations of problems that might be detected in the learners' functional communication. The section consisted of twenty-one statements and teacher participants had to respond by choosing *all, some,* or *none* on the rating scale. Section Six was included based on discussions in the literature by Crutchley, Botting and Conti-Ramsden (1997:271), and Mattes and Omark (1984:79).

- **Section Seven: Strategies**

Section Seven investigated the strategies employed by teacher participants to facilitate comprehension and participation by learners in their classrooms. A

list of twelve feasible techniques was supplied and teacher participants had to indicate whether these techniques were used *often, seldom, or never*. Any additional techniques used by the teacher participants could be described in the open question included in this section, thereby preventing bias resulting from limited possibilities. The aim was to collect valuable information on the management of language problems in the preschool classroom. Section Seven was included based on discussions in the literature by Calderon (1997:4) and Diedricks (1997:41-43).

- **Section Eight: Beliefs**

Section Eight was included to collect data on the teacher participants' beliefs on additional language acquisition. The section had ten questions and participants had to choose from the options *agree, disagree, or unsure.* Section Eight was included based on discussions in the literature by Barkhuizen (1993:82).

- **Section Nine: Need for training**

In the *ninth section* of the questionnaire the support need of teacher participants was assessed. This section further suggested topics for workshops and requested the teacher participants to indicate interest by choosing *yes, no, or unsure* as option. An open question inviting participants to make suggestions for workshop topics was also included. This allowed teacher participants to contribute to the workshop topics and limit any possible bias that could result from a restricted number of possible answers to closed-set questions. The information generated from this section may be of great value when planning training courses in future. Section Nine was included based on discussions in the literature by Fante (2000:38) and Nieman (1997:111).

- **Section Ten: Open question**

Section Ten was a final open question. In this section additional information not covered by the questionnaire was requested. Although coding of open questions may be difficult, this question was included to gain insight into the teacher participants' perception of major problems in teaching learners acquiring ELoLT. Section Ten was included based on discussions in the literature by Brits (1996:62); Fowler (1995:134); and Johnson (1992:114).

A covering letter (Appendix B) accompanied each questionnaire explaining the aim of the research, as well as the procedure for completion of the questionnaire. The teacher participants were assured of confidentiality. After the completion of the field-work, an additional letter (Appendix C) was sent to the teacher participants providing them with updated information on the research.

5.6.1.5 Data collection

The procedures for data collection in Phase One are set out below:

- The questionnaires were delivered to the principal of each preschool with a covering letter (Appendix B) explaining the purpose of the research and giving guidelines for the completion of the questionnaire. The principals were assured of confidentiality and thanked for their participation. The researcher did not make any personal contact with the teacher participants.

- Teacher participants had two weeks in which to complete the questionnaire. The researcher personally collected the completed questionnaires from the principals when the two weeks had elapsed.

- Any late completion of questionnaires was followed up to make sure that all willing teacher participants did, in fact, hand in their questionnaires.

5.6.1.6 Response distribution

The tabulated response distribution on the questionnaire provides a summary of teacher participants' responses, and yielded important information which was utilised in the interpretation of the results in Chapter Six. The response distribution on questionnaires completed by teacher participants is presented in Table 5.3.

The response distribution in Table 5.3 indicates the responses of teacher participants to Sections Three to Nine of the questionnaire, which were response choice questions, on an ordinal scale. The responses to Section One (demographic information), Section Two (six open questions), and Section Ten (one open question) which were narrative in nature, will be discussed in Chapter Six. The response distribution in Table 5.3 reveals that responses were distributed across the continuum of subjective scales. This adds to the information value of the questions, as Fowler (1995:133) stated that a cluster of responses in one or two categories may not provide useful survey information.

Table 5.3 further provides important information on the acceptability of response rate frequencies. The non-response rate of teacher participants was overall low. In Section Four (Part Two), where an extra response option (always) was added and choice options were *always, often, seldom, never,* non-responses were lower than in Section Three, where only three response options, *often, seldom, never,* were offered. This may indicate that teacher participants found the distinction between *always* and *often* valuable in their responses. Section Five, on the other hand, offered the same options (always, often, seldom, never) but showed the highest rate of non-responses, which may indicate that some teacher participants experienced difficulty in performing the response tasks in this particular section. The non-responses will be discussed further in Chapter Six as this information was important in the analyses of the results.

TABLE 5.3: RESPONSE DISTRIBUTION ON QUESTIONNAIRE (N=32)

SECTION ONE

Demographic information

SECTION TWO

Open questions

SECTION THREE

VARIABLE	OFTEN	SELDOM	NEVER	NO RESPONSE
65	27	4	1	0
66	19	7	3	3
67	17	11	3	1
68	24	5	2	1
69	21	8	1	2
70	21	7	2	2
71	16	13	1	2
72	19	8	1	4
73	18	11	1	2
74	22	6	2	2
75	20	8	2	2
76	18	7	5	2
77	18	9	3	2
78	22	7	1	2
79	20	9	0	3
80	13	13	3	3

SECTION FOUR (Part One)

VARIABLE	ALL	SOME	NONE	NO RESPONSE
81	3	23	1	5
82	11	16	1	4
83	0	20	6	6
84	2	18	7	5
85	0	16	12	4

SECTION FOUR (Part Two)

VARIABLE	ALWAYS	OFTEN	SELDOM	NEVER	NO RESPONSE
86	3	19	9	0	1
87	4	13	13	2	0
88	9	14	7	2	0
89	10	18	2	2	0
90	7	16	6	2	1
91	4	10	15	2	1
92	3	11	15	2	1
93	9	13	5	3	2
94	12	12	5	2	1
95	7	17	6	1	1
96	4	15	11	1	1
97	5	16	9	0	2
98	8	15	4	2	3
99	7	17	5	2	1
100	5	13	12	1	1

SECTION FIVE

VARIABLE	ALWAYS	OFTEN	SELDOM	NEVER	NO RESPONSE
103	1	8	13	3	7
104	1	3	16	7	5
105	1	9	11	5	6
106	1	9	10	7	5
107	0	13	13	1	5
108	0	3	15	9	5
109	4	3	15	4	6
110	1	9	12	5	5
111	2	12	10	3	5
112	0	5	15	7	5
113	2	9	13	3	5
114	2	10	12	3	5
115	1	11	8	6	6
116	0	4	10	13	5
117	0	11	12	3	6
118	0	4	15	8	5
119	1	8	7	10	6
120	2	7	11	7	5
121	0	1	11	13	7
122	0	2	10	14	6

SECTION SIX

VARIABLE	ALL	SOME	NONE	NO RESPONSE
123	9	20	2	1
124	2	24	5	1
125	8	22	1	1
126	2	26	4	0
127	0	25	7	0
128	0	26	6	0
129	4	25	2	1
130	0	26	5	1
131	0	20	11	1
132	2	29	0	1
133	10	22	0	0
134	1	24	6	1
135	8	22	1	1
136	1	21	9	1
137	10	21	1	0
138	5	21	6	0
139	0	18	12	2
140	0	14	16	2
141	0	18	14	0
142	1	20	9	2
143	6	22	3	1

SECTION SEVEN

VARIABLE	OFTEN	SELDOM	NEVER	NO RESPONSE
144	29	3	0	0
145	25	6	1	0
146	30	2	0	0
147	28	4	0	0
148	30	2	0	0
149	27	4	1	0
150	24	6	2	0
151	25	5	2	0
152	28	4	0	0
153	20	8	4	0
154	22	9	1	0
155	19	9	3	0

SECTION EIGHT

VARIABLE	AGREE	DISAGREE	UNSURE	NO RESPONSE
160	27	4	1	0
161	14	11	7	0
162	3	22	6	1
163	23	2	6	1
164	25	3	4	0
165	25	3	4	0
166	2	27	2	1
167	29	0	3	0
168	22	3	7	0
169	18	4	10	0

SECTION NINE (Part One)

VARIABLE	YES	NO	NO RESPONSE
172	25	5	2
173	28	2	2
174	20	10	2
175	25	5	2
176	26	4	2
177	28	2	2

SECTION TEN

Open question

SECTION NINE (Part Two)

VARIABLE	YES	NO	UNSURE	NO RESPONSE
178	19	4	5	4
179	24	3	2	3
180	14	7	8	3
181	10	3	14	5
182	14	2	11	5
183	18	1	9	4
184	24	1	2	5
185	18	5	4	5
186	25	2	2	3
187	25	1	3	3

5.6.1.7 Data recording

The thirty-two questionnaires were randomly numbered from one to thirty-two to ensure the anonymity of the teacher participants, and scanned for completeness.

As directed by a statistician of the Department of Statistics at the University of Pretoria, the questionnaires were coded to prepare the contents for descriptive analysis. Unanswered questions were not coded. The open question in *Section ten* was not coded because the narrative responses were so diverse, and valuable information could be lost through categorised coding. The narrative responses to the open question in *Section ten* will be discussed in Chapter Six.

The coded questionnaires were handed to a statistician of the Department of Statistics at the University of Pretoria for computerisation. The coded data were entered into a computer programme (SAS) to allow for statistical analysis of the data. The researcher ensured the correctness of the data by verifying the codes allocated on the questionnaire with the computerised data.

5.6.1.8 Data analysis

The nature of the data governs the statistical technique (Leedy & Ormrod, 2004:260). Since the nature of the research was exploratory, descriptive, and contextual, *descriptive statistics* (Leedy & Ormrod, 2004:257) were mostly utilised in Phase One to describe the data and to illustrate trends within the research context. Statistical computations such as *frequency distribution* were employed to provide an indication of the perceptions of the teacher participants, and to gain a better understanding of the meaning of the research (Janesick, 1998:48). The descriptive analyses of the results of the survey were reported in frequencies (the actual number of teacher participants responding in a certain way), percentages, and cross-tabulations. The responses to open questions were categorised into main ideas to identify categories, and described qualitatively. As categories of meaning emerged,

they were described and explained.(De Vos, 2002c:344). Table 5.4 summarises the data analysis of Phase One of the research.

TABLE 5.4: SUMMARY OF DATA ANALYSIS: PHASE ONE

DATA FROM PHASE ONE	STATISTICAL PROCEDURES
- Description of participating preschools - Characteristics of teacher participants - Languages of preschool learners - Perception of problems - Perception of own competencies - Training - Perception of own support needs - Opinions on L2 acquisition - Strategies to facilitate comprehension - General perceptions on learners - Perception of receptive skills - Perception of expressive skills - Perception of pragmatic skills	• Frequency tables were used to determine the composition of characteristics of the sample. • Descriptive statistics, namely frequency distribution, were used to determine the frequencies and percentages and to describe selected characteristics of the participants (Leedy & Ormrod, 2004:257).

5.6.2 Phase Two: Language and communication proficiency of multilingual preschool learners

Phase Two of the research was conducted to achieve the second sub-aim of the research study.

5.6.2.1 Research aim

The second sub-aim was to determine the language and communication proficiency in ELoLT of multilingual preschool learners in the Pretoria CBD and Sunnyside area (in order to determine the needs of these preschoolers in learning English by assessing their expressive and receptive language skills, as well as pragmatic skills, and by establishing patterns in language errors). The following objectives were formulated:

- To describe the language characteristics of multilingual preschool learners acquiring ELoLT in a given context relating to expressive and receptive language, as well as pragmatic abilities.

- To compare the preschool teachers' perceptions and opinions regarding the language needs and strengths in English with the language characteristics of multilingual preschool learners acquiring ELoLT.

5.6.2.2 Context

A preschool, situated in the Pretoria CBD, was selected as the context for Phase Two of the research. A geographical, socio-economical, and population description of the Pretoria CBD area was given in Section 5.5.1.2. This preschool was selected after quota sampling was done to select a preschool which is representative of the ratio of preschool learners as found in the Pretoria CBD and Sunnyside area. As described by Leedy and Ormrod (2004:206), quota sampling is a type of non-probability sampling where participants are selected in the same proportions as found in the general population. Information to assist in quota sampling was provided in the questionnaire (Section One, Variable 26 to 39), which was completed by teacher participants during Phase One of the research. The researcher was assisted in the procedure of quota sampling by a statistician of the Department of Statistics at the University of Pretoria.

5.6.2.3 Learner participants

Thirty preschool learners were selected as learner participants in Phase Two of the research.

- **Criteria for selection**

The following criteria were applied for the selection of learner participants.

> **Age group**

Ten preschool learners were selected as learner participants from each of the three age groups in the preschools, namely the Junior Group (three to four

years), Middle Group (four to five years), and Senior Group (five to six years), to cover the various stages of preschoolers' cognitive, emotional, social, and language development and to provide research information across the developmental spectrum in the preschool, as described by Nelson (1998:289) and Dunn (1993:8).

> ELoLT

The learner participants were required to have an African Language as L1 and to be in the process of acquiring ELoLT, in accordance with the second sub-aim of the study.

• Selection procedures

Permission for the research was obtained from the principal of the selected preschool in the Pretoria CBD. The principal provided official class lists of the school from which every third preschool learner was selected as a learner participant, as directed by a statistician of the Department of Statistics at the University of Pretoria. Ten preschool learners were selected from each age category. Informed consent was obtained from all the parents or caregivers of the selected learner participants who were initially approached. (The informed consent form is attached as Appendix D.)

• Description

The most important characteristics of the learner participants in Phase Two of the research are summarised in Table 5.5.

Table 5.5 indicates that more female than male learners were learner participants in both the Junior and Senior groups – 57% female learner participants and 43% male learner participants. As there is no research evidence to suggest gender differences in the acquisition of additional languages according to Jordaan (1993:67), the uneven distribution of learner participants in this regard did not influence the results.

TABLE 5.5: SUMMARISED DESCRIPTION OF PRESCHOOL LEARNERS: PHASE TWO (N=30)

PRESCHOOL GROUPING	GENDER	PARTICIPANTS	PERCENTAGE
Junior group - Three to four years	Female Male	6 4	60% 40%
Middle group - Four to five years	Female Male	5 5	50% 50%
Senior group - Five to six years	Female Male	6 4	60% 40%

5.6.2.4 Material and apparatus

The material and apparatus used in Phase Two of the research are described in the following section.

- **Test battery**

To realise the second main aim of the study, a test battery in checklist format was compiled as survey instrument to collect information on the language and communication proficiency in English of participants. According to Leedy & Ormrod (2004:185), a checklist is used to verify whether items on a list are *observed* or *not observed*. For this study, a test battery (checklist) was compiled to aid the researcher in determining the proficiency of learners' ELoLT, expressive and receptive language skills, as well as pragmatic skills.

As the assessment of multilingual preschool learners in a meaningful and appropriate manner is currently an area of concern and controversy in the education community worldwide, the following information is deemed necessary. Vaughn-Cooke (1983:29, 33) stated in 1983 already that a crisis existed in the domain of the assessment of learners whose L1 is not English. The general absence of tools for assessment was problematic for professionals. Standardised tests in English were and still are generally biased against learners acquiring ELoLT and cannot provide a complete and valid assessment (Roseberry-McKibbin & Brice, 2000:7; Cole, 1983:26). More than twenty years have passed since serious challenges first addressed the validity of inferences drawn from administering standardised assessment

instruments to learners acquiring ELoLT. Yet, alternatives in the form of culturally fair, non-biased items are still not available (Vaugh-Cooke, as cited by Nelson, 1998:29). However, to place a moratorium on all assessment of learners acquiring ELoLT is not the solution, as indications of learners' linguistic abilities are needed for programme development. Researchers have since intensified their efforts to develop new tests, as the need for alternative strategies for the assessment of these learners must be met as soon as possible (Vaughn-Cooke, 1983:31). While research data are eagerly awaited, and in the absence of appropriate assessment tools, the challenge lies in assessing ELoLT learners while reducing the effects of test bias (Wyatt, 1998:393; Roseberry-McKibbin & Eicholtz, 1994:156).

For this study, criterion-referenced measures were used. The responses of learner participants were therefore not compared with the performance of other learners, that is normative data were not employed (Laing & Kamhi, 2003:46; Wyatt, 1998:395; Vaughn-Cooke, 1983:31). Mattes and Omark (1984:93) are of the opinion that the use of test norms is not absolutely necessary in assessment, and a test can still serve its diagnostic function without them. The analyses of the performance of the learner on individual test items will still provide an indication of his or her ability. The study further used alternative scoring procedures (observed vs. not observed) to report on the behavioural responses of learner participants without calculating scores (Cole, 1983:26). To reduce the effects of test bias in the current research, the wording of some test items had to be modified as these words were inappropriate and did not reflect the dialect of the local community. According to Mattes and Omark (1984:92), such modification can improve the validity of the instrument. Another modification allowed in the research to minimise test bias, was the technique to test learner participants beyond the ceiling or recommended starting points of tests, as recommended by Wyatt (1998:397). As an assessment should include the evaluation of both language structure and competence in the functional use of language (Mattes & Omark, 1984:11), structured tests were combined with the analysis of an elicited language sample (August & Hakuta, 1998:19; Vaughn-Cooke, 1983:31). According to Nelson (1998:300), language samples afford ample opportunity

to observe communication abilities. In addition, elicited language sampling provided the opportunity to examine language-use patterns and code-switching behaviour in multilingual learners (Wyatt, 1998:395).

The assessment materials used in the test battery (checklist) were selected for the following reasons:

- The test battery (checklist) was based on assessment material employed by Jordaan (1993) in a study comparing language form, content, and use in Black South African preschool children during pre-intervention and post-intervention stages.

- Stockman (1996:363) recommends the assessment of the basic common core of language form, content, and use in multilingual preschoolers to identify language proficiency.

- The assessment materials included have been developed specifically for assessing young children, and are considered appropriate for the age groups.
- These assessment materials are readily available to speech-language therapists and teachers, and are representative of the types of measures employed for assessing language and communication skills.

- Preschoolers are familiar with the type of equipment required, namely simple line drawings. The learner participants are, therefore, not likely to be so interested in the equipment that it proves to be an obstacle in eliciting verbal communication.

- Although the assessment materials have not been developed in the South African context, the people, objects, and actions depicted are familiar to urban preschoolers.

- The assessment materials allowed the researcher to obtain samples of elicited conversation, connected discourse, specific pragmatic skills, and elicited samples of specific syntactic and morphological structures.

- Measures for observing both expressive and receptive skills were included.

- According to Jordaan (1993:75), the Test of Auditory Comprehension of Language *(TACL-R)* (Carrow, 1985) contains more culture-free items than any of the other tests.

- The assessment materials were specifically chosen to compare assessment results with data obtained from other measures (Mattes & Omark, 1984:69).

> **Measuring instruments**

The following measuring instruments were selected for Phase Two of the research. These measuring instruments were used for criterion referencing and normative data were not employed.

- *Test of Auditory Comprehension of Language (TACL-R*) (Carrow, 1985). This measuring instrument can be used to assess the auditory (receptive) comprehension of language of learners aged 3 years 0 months to 9 years 11 months. The reliability and validity are based on 1003 normal language learners, 60 normal adults, 234 learners with speech and language disorders, 16 severely hearing-impaired learners, 11 mentally retarded learners, and 7 adult aphasics in the United States of America (USA) (Carrow, 1985:1).

- *Kindergarten Language Screening Test (KLST-2)* (Gauthier & Madison, 1998). This measuring instrument can be used to assess expressive and receptive language, as well as elicited language (sequence story), of learners aged 4 years 0 months to 6 years 0 months.

Standardisation is based on the assessment of 579 learners between the specified ages. The sample selection procedure resulted in a normative sample that was representative of the USA nation as a whole with regard to geographic region, gender, and race (Gauthier & Madison, 1998:9).

- *Illinois Test of Psycholinguistic Abilities (ITPA): Subtest Grammatic Closure* (Kirk, McCarthy & Kirk, 1968). This subtest of the measuring instrument can be used to assess the morphological development of learners aged two to ten years. The normative group consisted of 1010 learners in the USA within the average ability group, divided into 50% males and 50% females, and 42 African American learners (Kirk, McCarthy & Kirk, 1968:51-65).

- *MWM Program for Developing Language Abilities* (Minskoff, Wiseman & Minskoff, 1972). This measuring instrument consists of large, colourful pictures depicting scenes familiar to learners, and can be used to elicit language samples. The *Birthday Party Picture* was selected from this programme and was considered to be appropriate as it is generally accepted that all learners are familiar with birthdays.

- *Personal experience narrative* (Tönsing, 1998). This measuring instrument consists of conversation maps and is utilised to elicit language, based on the assumption that in order to elicit a story, a story must be told (Tönsing, 1998:17). The conversational maps of *Doctor* and *Pets* were chosen as these concepts were considered to be familiar to learners.

- *Creaghead Checklist of Pragmatic Behaviors – Format 2* (Creaghead, 1984). This measuring instrument is a checklist that consists of strategies that may be utilised to assess pragmatic behaviour in young learners. More than 350 normal, language-impaired, hearing-impaired, and mentally retarded learners between the ages of three years and

five years in the USA have been tested to assess the reliability and validity (Creaghead, 1984:246).

> **Modifications**

Modifications were made to the assessment materials for the following reasons:

- To put the learner participants at ease and create the impression of experiencing success, the following three items were added at the start of *KLST-2* (Gauthier & Madison, 1998), item 5:
  - *show me your eyes*
  - *show me your nose*
  - *show me your ears*.

Wiig and Semel (as cited by Gauthier & Madison, 1998:14) placed the identification of the body parts *eyes, nose, ears* in L1 at 15 to 26 months of age. It is generally accepted that learners will also understand these words in an additional language fairly early, and therefore the learner participants were expected to be familiar with these words. These items were added as criteria to the test, and did not influence the data collection because normative data were not used in the research.

- Some items in the *TACL-R* (Carrow, 1985) had to be modified, because they did not reflect the dialect of the local community. The following test items were modified:

Section I: Word classes and relations

Item 23: *"alike"* changed to *"same".*

Section II: Grammatical morphemes

Item 5: "The boy is *beside* the car" changed to "The boy is *next to* the car".

Item 36: "The *deer* eats apples" changed to "The *buck* eats apples".
Item 37: "The *deer* is drinking" changed to "The *buck* is drinking".

Section III: Elaborate sentences

Item18: "After he cut her hair the *hair stylist* took a coffee break" changed to "After he cut her hair the *hairdresser* took a coffee break".
Item 24: "Beside the baseball glove, she bought a *record*" changed to "Beside the baseball glove, she bought a *CD*". The word *baseball* was not modified as the picture provided visual support to facilitate comprehension.
Item 31: "Having put her coat in the *closet*, she took off her shoes" changed to "Having put her coat in the *wardrobe*, she took off her shoes".

As discussed previously, such modifications reduced the effects of test bias created by inappropriate words (Mattes & Omark, 1984:92). These modifications therefore improved the validity of the measuring instrument.

The measuring instruments selected for the test battery (checklist) are presented in Table 5.6.

TABLE 5.6: COMPILED TEST BATTERY FOR EVALUATION OF PRESCHOOL LEARNERS

AIMS OF THE ASSESSMENT	MEASURING INSTRUMENTS	ASSESSMENT MATERIALS	ADDITIONAL REFERENCES
To assess auditory (receptive) comprehension of word classes and relations, grammatical morphemes, elaborated sentence construction	Test of Auditory Comprehension of Language (TACL-R) (Carrow, 1985)	Test of Auditory Comprehension of Language (TACL-R) (Carrow, 1985)	Nelson (1998:336) Jordaan (1993:74) Deal & Yan (1985:47) Mattes & Omark (1984:124)
To assess expressive and receptive language comprehension, knowledge of name, age, body parts, and number concept, ability to follow commands, repeat sentences, and produce spontaneous speech	Kindergarten Language Screening Test (KLST-2) (Gauthier & Madison, 1998)	Kindergarten Language Screening Test (KLST-2) (Gauthier & Madison, 1998)	Nelson (1998:333) Deal & Yan (1985:46)
To assess morphological development, specifically the following: prepositions, regular plurals, irregular plurals, and degrees of comparison	Illinois Test of Psycholinguistic Abilities (ITPA): Subtest Grammatic Closure (Kirk, McCarthy & Kirk, 1968)	Illinois Test of Psycholinguistic Abilities (ITPA): Subtest Grammatic Closure (Kirk, McCarthy & Kirk, 1968)	Nelson (1998:333) Crutchley, Botting & Conti-Ramsden (1997:269) Vaughn-Cooke (1983:30)
To assess expressive language abilities	Elicited Language Sample		
a) To elicit language by using visual stimuli with a picture considered appropriate for this age group - Birthday party	a) Picture description (MWM Program for Developing Language Abilities) (Minskoff, Wiseman & Minskoff, 1972)	b) The Birthday Party Picture from the MWM Program for Developing Language Abilities (Minskoff, Wiseman & Minskoff, 1972)	a) Jordaan (1993:94) Tönsing (1998:18) August & Hakuta (1998:42)
b) To elicit language from a set of three scene sequence cards considered appropriate for this age group to evaluate temporal order and cause-effect	b) Sequence Story (KLST-2) (Gauthier & Madison, 1998)	c) The three picture set sequence story from the KLST-2 (Gauthier & Madison, 1998)	b) Nelson (1998:333) Jordaan (1993:94) Tönsing (1998:19) Deal & Yan (1985:48)
c) To elicit language by using a conversational map to invite a personal experience narrative – Doctor or, alternatively, Pets	c) Personal experience narrative (Tönsing, 1998)	d) Doctor and Pets conversation map (Tönsing, 1998)	c) Jordaan (1993:93) August & Hakuta (1998:42)
To assess pragmatic behaviour	Creaghead Checklist of Pragmatic Behaviors – Format 2 (Creaghead, 1984)	Creaghead Checklist of Pragmatic Behaviors – Format 2 (Creaghead, 1984) - paper - red and blue crayons - pair of spectacles - pictures of person and dog - telephones - remote control car - cloth	Mattes & Omark (1984:80)

- **Audio tape recorder**

To facilitate the assessment of productive use of language, audio tape recordings were made of elicited language samples of the preschool learners. The following apparatus were used for the recordings:

- National RX – CS 700 2-way 4-speaker system with build-in microphone (audio tape recorder)
- TDK D60 audio tapes.

The data were analysed with the aid of a National RX – CS 700 2-way 4-speaker system with built-in microphone (audio tape recorder).

5.6.2.5 Data collection

In Phase Two of the research the procedures for data collection were as follows:

- The participants were evaluated individually by the researcher using the measuring instruments as set out in Table 5.6. The duration of each individual evaluation was approximately 45 minutes.

- The official record forms of the measuring instruments were used to record responses, as *observed* or *not observed.*

- A therapy room on the preschool premises was prepared for the evaluation. Two child-sized tables and two child-sized chairs were placed in the middle of the room. The audio tape recorder was placed on one table with the built-in microphone directly facing the participants. The placement of the participants and the researcher during the evaluation is depicted in Figure 5.4.

- The researcher fetched individual learner participants from the classrooms and explained the sequence of the evaluation.

- For the first three learner participants the sequence of activities started with the *Birthday Party Picture* of the MWM Program (Minskoff, Wiseman & Minskoff, 1972). As birthdays are an experience familiar to learners, the researcher expected to elicit a good language sample. The learner participants were, however, shy and withdrawn. The researcher then changed the sequence of activities to start with a response task where learner participants had to respond by indicating a picture (from a selection of three).

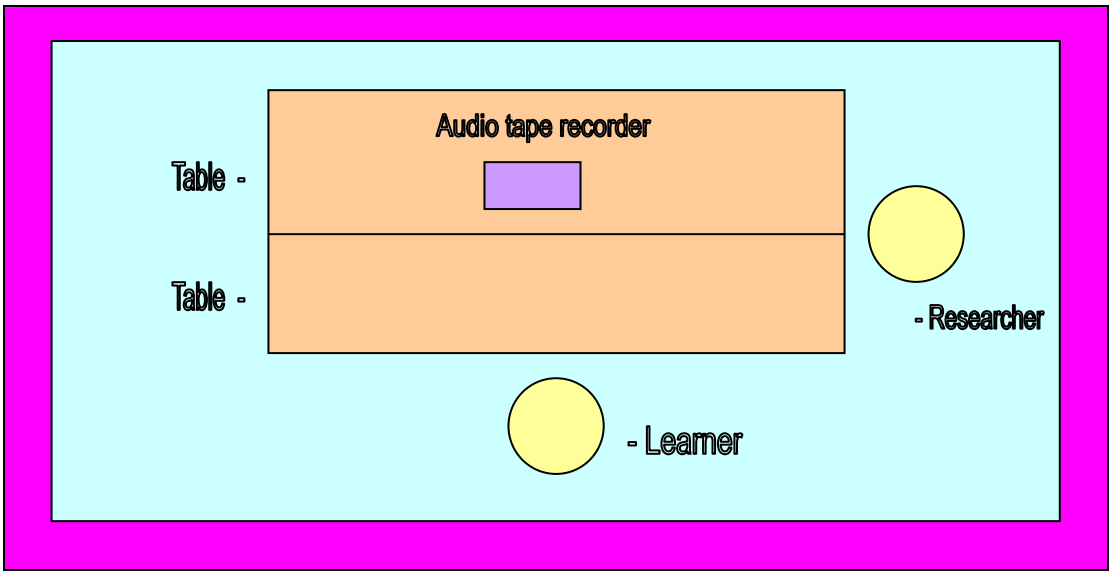

FIGURE 5.4: VISUAL PRESENTATION OF THERAPY ROOM DURING EVALUATION

- After establishing rapport with individual learner participants, the sequence of activities from the fourth learner participant onward was as follows:

  - *TACL-R* (Carrow; 1985)

    The researcher administered the *TACL-R* by providing the appropriate stimulus; the learner participants responded by pointing; the researcher recorded the response.

- *KLST-2,* including the sequence story (Gauthier & Madison, 1998)

  The researcher administered the *KLST-2* by providing the appropriate test items; the learner participants responded by pointing or answering; the researcher recorded the response. Learner participants were asked to tell a story from the three picture set sequence story. Responses were tape-recorded.

- *MWM Program* (Minskoff, Wiseman & Minskoff, 1972)

  The researcher presented the participants with the Birthday Party stimulus scene; learner participants were asked to describe the picture; responses were tape-recorded.

- *Personal experience narrative* (Tönsing, 1998)

  The researcher introduced conversational maps Doctor or, alternatively, Pets to elicit language from the learner participants. The procedure was kept constant and the researcher acted as a conversational partner; responses were tape-recorded.

- *ITPA* (Kirk, McCarthy & Kirk, 1968)

  The researcher administered the Subtest Grammatic Closure by providing the appropriate stimulus; the learner participants responded by pointing; the researcher recorded the responses.

- *Pragmatic behaviours* (Creaghead, 1984)

  The researcher administered the appropriate stimulus as directed in Format 2 of the checklist; the learner participants responded either by answering, pointing, or an action; the researcher recorded the responses.

- The researcher rewarded learner participants with a star and accompanied them back to their classrooms.

- The researcher furnished the parents or caregivers of each learner participant with a summary of their child's results.

- The researcher sent a letter of gratitude to the participating preschool and provided preliminary findings, to be followed up at the end of the study with more formal results.

5.6.2.6 Data recording

Data were obtained from thirty preschool learners. The audio-taped elicited language samples were transcribed verbatim, including meaningful sounds, false starts, incomplete sentences, fillers, and repetition of words, phrases and sentences. Unanswered questions, as well as non-verbal responses, were noted (Appendix F).

To facilitate the recording of data, an error analysis form (Appendix E) was compiled. An error analysis was done to examine the types of errors and consistency of errors in the learner participants' performances, as suggested by Mattes & Omark (1984:69). The error analysis form was based on the formal assessment record forms, as well as on the following categories of errors, as suggested by Nxumalo (1997:16-30):

- **Noun errors:** Use of noun-pronoun; idiosyncratic use of pronouns; regular and irregular plural and possessive inflection errors; gender confusions.

- **Preposition errors:** Incorrect use of prepositions; omission of prepositions.

- **Errors of article/determiner:** Omission of articles; overuse of articles; incorrect use of a/an.

- **Verb errors:** Use of compound tense with "did"; extension of the progressive aspect to stative verbs; extension of progressive to

habitual/repeated actions; omission and inconsistent marking of third person agreement; incorrect sequence of tenses in discourse and complex sentences; omission of copula; inconsistent agreement between subject and "be" verbs; overuse of regular past tenses; overuse/omission of auxiliary verb.

- **Complex sentence errors:** Overuse of "and" and "and then" as a conjunction in narratives.

- **Individual variations:** Innovations; indiscriminate use of dialectal terms.

The following categories of errors suggested by Nxumalo (1997:16-30) were not included as no evidence of these errors could be found in the elicited language sample:

- **Errors in question formation:** No verb-phrase inversion or only wh-fronting; direct question form extended to indirect.

- **Complex sentence errors:** Double conjunction marking; past tense in first sentence and present tense in subsequent sentences (postulated to be included in verb error category *incorrect sequence of tenses in discourse and complex sentences)*.

The researcher added categories to the error analysis form to accommodate language characteristics that emerged during the data recording. The new categories were approved by an expert in the field of language development in children. The following categories were added:

- **Noun errors:** Omission of pronoun/noun in subject position; omission of noun in predicate positions; use of generic terms (this one/that one/other/another/that thing); referring to inanimate object as he/she.

- **Preposition errors:** Overuse of preposition.

- **Verb errors:** Present instead of past tense; incorrect choice of verb/generic verb to describe action (e.g. did); omission of verb; omission of –ing/"going to".

- **Complex sentence errors:** Comparison without comparative "er" or comparative word; problems with sequencing utterances in personal experience narratives; omission of connectivity.

- **Individual variations:** Use "gonna" instead of "going to".

- **Interaction patterns:** This included no responses; non-verbal responses; answers restricted to yes/no; answers in single words; gestures; false starts; incomplete sentences; code-switching; inappropriate answers; many prompts necessary; meaningful sounds; repetition of words; repetition of phrases; repetition of sentences; "I don't know" answers; problems with word order.

The data on the error analysis form were coded as directed by a statistician of the Department of Statistics at the University of Pretoria. The data were then computerised by the same department and verified for correctness by the researcher.

5.6.2.7 Data analysis

The statistical analysis of the data provided a broader, quantitative view of the data. *Descriptive statistics* were mostly used in Phase Two to provide a description of the data and to illustrate trends within the research context. The statistical computation, *frequency distribution* was used to determine the frequencies and percentages and to describe trends, as recommended by Leedy and Ormrod (2004:257). Data triangulation was done to compare data collected from the questionnaires (completed by the teacher participants in Phase One) with data collected from the language and communication assessment of learner participants in Phase Two of the research. The objective of such comparison was to compare the preschool teachers'

perceptions regarding the language skills in English with the language assessment data of multilingual preschool learners acquiring ELoLT.

Nonparametric statistics were employed to compare data collected in Phase One with data collected in Phase Two. Paired differences were determined with the Wilcoxon matched-pair signed rank test, which is a non-parametric test, as described by Leedy and Ormrod (2004:274). The sets of data obtained from the respective teacher participants teaching to the Junior Group (two teacher participants), Middle Group (three teacher participants), and Senior Group (two teacher participants) from the preschool selected for Phase Two were averaged and paired to the assessment data of each learner participant in the different groups selected for Phase Two.

The two sets of data obtained from the questionnaires and the language and communication assessments respectively were prepared for comparison, as one of the research objectives was to compare the findings of the researcher with the perceptions of the teachers. Twenty-seven language skills from the two data sets could be compared. The following list was compiled for comparison and handed to a statistician of the Department of Statistics at the University of Pretoria.

(The data in the questionnaire were marked with a "V" to distinguish it from the data in the language and communication assessment, which were marked with a "K"):

- V124 and V125 compared to K9 (comment on action)
- V126 compared to K10 (describe an event)
- V128 compared to K19 (attend to speaker)
- V129 compared to K18 (volunteer to communicate)
- V131 compared to K24 (topic maintenance)
- V132 compared to K17 (answer question)
- V134 compared to K7 (request for information)
- V136 compared to K27 (request for clarification)
- V137 compared to K5 and K6 (request for action/object)
- V139 compared to K12 (hypothesise)

- V140 compared to K15 (giving reasons)
- V143 compared to K4 (greet)
- V66 compared to K253 (code-switch)
- V67 compared to K175 and K176 (follow 1 and 2 step commands)
- V68 compared to K77 (preposition – through)
- V78 compared to K250 (gestures)
- V86 compared to K29 to K37 (name common objects)
- V87 compared to K38 to K44 (use common verbs)
- V88 compared to K50 (comparison)
- V92 compared to K159 to K162 (name colours)
- V97 compared to K113 to K117 (interrogative)
- V103 compared to K261 (correct word order)
- V109 compared to K215 (gender confusion)
- V110 compared to K238 (correct determiners)
- V111 compared to K233 (correct prepositions)
- V118 compared to K218 to K230 (verb errors)
- V120 compared to K203 to K208 (degrees of comparison)

Table 5.7 summarises the data analysis of Phase Two of the research.

TABLE 5.7: SUMMARY OF DATA ANALYSIS

DATA FROM PHASE TWO	STATISTICAL PROCEDURES
- Receptive ELoLT abilities ● Vocabulary comprehension ● Grammatical morphemes ● Elaborated sentences - Expressive ELoLT abilities ● Noun errors ● Preposition errors ● Errors of article/determiner ● Verb errors ● Complex sentence errors ● Individual variations ● Communication observations - Pragmatic behaviour	• Frequency tables were used to determine composition of characteristics of the sample. • Descriptive statistics, namely frequency distribution, was used to determine the means, frequencies, and percentages, and to describe trends (Leedy & Ormrod, 2004:257).
Comparison of data from the questionnaire with data from the language and communication assessment.	Nonparametric statistics were used to compare data. Paired differences were determined with non-parametric Wilcoxon matched-pair signed rank test (Leedy & Ormrod, 2004:254).

5.6.3 Phase Three: The role of the speech-language therapist

Phase Three of the research was conducted to achieve the third sub-aim of the research.

5.6.3.1 Research aim

The aim of Phase Three was to explore the role of speech-language therapists in the acquisition of ELoLT by urban multilingual preschool learners. The following objective was formulated:

- To explore the role of speech-language therapists in the multilingual preschool learners' acquisition of ELoLT, based on the opinions and needs expressed by the teacher participants in Phase One, as well as language abilities displayed by learner participants in Phase Two.

5.6.3.2 Data collection

No new data were collected in Phase Three of the research. To explore the role of the speech-language therapist, the data collected during Phase One and Phase Two of the research were interpreted during Phase Three.

5.6.3.3 Data analysis

No statistical procedures were employed to analyse the data in Phase Three of the research. The conclusions of the previous phases were used as underpinning in the exploration of the role of speech-language therapists.

5.7 VALIDITY AND RELIABILITY

When applying quantitative research methods, the merit of the research is acknowledged through the evaluation of the validity and reliability of the work (Leedy & Ormrod, 2004:97; Poggenpoel, 2000:348).

5.7.1 Validity

The validity reflects the truthfulness of the data or the extent to which a measure actually measures the concept in question and whether the concept

is measured accurately (Delport, 2002:166). Validity has to be documented when assessing new survey measures or when applying established survey measures to new populations. It is an important measure of a survey instrument's accuracy (Litwin, 1995:34).

Different forms of validity are important in different situations (Leedy & Ormrod, 2004:92). Although absolute validity can never be achieved, the following validity measures pertain to the questionnaire and test battery (checklist) and were considered important for acceptable levels of validity in this study, as described by Delport (2002:166).

The *face validity* indicates to which extent an instrument represents a particular concept (Dane, 1990:257). Face validity relies on subjective judgement of experts who are in the position to decide whether an instrument measures what the researcher wants to measure (Leedy & Ormrod, 2004:92). In this study, the questionnaire was submitted for review to an advisory panel, and the test battery (checklist) to an expert in the field of language development in children, as suggested by Johnson (1992:123).

The content validity indicates to which extent an instrument is perceived to represent accurately the relevant areas that are central to the content domain (Leedy & Ormrod, 2004:92). The questionnaire and test battery (checklist) were developed based on sound language developmental theory, including the basic common core of language content, form, and use, as recommended by Stockman (1996:363). In addition, the test battery (checklist) was based on assessment material employed in a study by Jordaan (1993), which not only increased the content validity, but also allowed the researcher to compare the research findings of the two studies to determine consistency of findings. Prior to the research, both the questionnaire and test battery (checklist) were judged and found to be appropriate by an expert on language development in children, as suggested by Leedy and Ormrod (2004:93). The questionnaire was also pretested (see Section 5.6.1.4) with participants who were similar to the teacher participants in the main study. The use of a pretest increased the validity of the results as technical problems with wording

or lay-out that could effect the results obtained from the questionnaire, were identified and changes were made to the questionnaire prior to the research.

The *construct validity* involves determining the degree to which an instrument successfully measures a theoretical construct (Delport, 2002:167). This form of validity is often not calculated as a quantifiable statistic, but is a rather lengthy process over a number of years, and is an attempt to validate the theory behind the measure and how well the measure performs in a multitude of settings and populations (Delport, 2002:168; Litwin, 1995:43). In this study the researcher asked questions in the questionnaire to assess an underlying construct of the questionnaire – the needs and strengths of the teacher participants when teaching multilingual preschool learners.

The *external validity* of the data indicates to which extent the research outcomes can be extended to other groups (Poggenpoel, 2000:348; Nunan, 1993:62). This was not possible in the current study as the nature of the research design was contextual and generalisation beyond the research context could not be done.

5.7.2 Reliability

Reliability reflects the accuracy of a measure and the extent to which two independently derived sets of scores will yield the same results under comparable conditions (Delport, 2002:168). Although no measure is completely reliable, a high degree of reliability is necessary to ensure that the final results can be trusted (Litwin, 1995:7).

The *internal reliability* of the data indicates whether independent researchers will come to the same conclusions when analysing the primary data. The researcher transcribed and syntactically analysed the elicited language sample, as described by Crystal, Fletcher and Garman (1977). Upon the analysis of the language sample of this study by an independent rater, an agreement of 98.1% was established, which improved the interrater reliability of the study (see Section 6.3.1.2). The data analyses were repeated at six

months intervals to improve intrarater reliability, as described by Litwin, 1995:30). In addition, the scoring of the test battery (assessment data) was done without the norm bias associated with cross-cultural testing, which also improved the reliability of the testing.

The *external reliability* of the data indicates whether replication of the research will yield the same results (Leedy & Ormrod, 2004:93; Nunan, 1993:60). External reliability therefore refers to the extent to which independent administration of the same measures will consistently yield the same results, with comparable participants under comparable conditions (Schneider, 2004:147; Delport, 2002:168). In the research a detailed description of the research design and method was provided, as well as a detailed account of the data collection procedures and analyses, to allow replication of the research under similar conditions to multiple cases, or to replicate the design to cases that are sufficiently different to justify the generalisation of results and theories as described by Schneider (2004:1473).

5.8 CONCLUSION

The empirical study was conducted in the context of pressing agendas of multicultural education and curriculum transform in South Africa. Although multicultural education is currently being researched extensively (Viljoen & Molefe, 2001:121), the size of the research field presents researchers with a daunting challenge (Peirce & Ridge, 1997:170). In this study, attention was focused on a specific context in which the needs of preschool teachers, and learners acquiring ELoLT, were investigated to describe the context and to make recommendations regarding the role of the speech-language therapist. Language plays a pervasive role in learning and teaching at school (Prelock, 2000:214), and a recommendable curriculum should include measures to accelerate the development of ELoLT and prevent further failure. The research introduced dialogue between preschool teachers and speech-language therapists and could lead to a much needed increase in cross-disciplinary research projects.

5.9 SUMMARY

In this chapter a step towards solving the research problem was taken with the description of the research methodology of the empirical investigation. The research methodology was described in detail and included the research aims and objectives, the research design and method, ethical issues, participants, materials and apparatus, as well as research procedure. Finally, issues related to validity and reliability were addressed. This information forms the background to the presentation and discussion of the results in Chapter Six.