

Chapter 4

Methodology

- 4.1 Introduction
- 4.2 Aim and Objectives of the Study
- 4.3 Research Design
- 4.4 Sample
- 4.5 Research Materials
- 4.6 Procedures
- 4.7 Summary

4.1 Introduction

In this chapter a description of the methodology used in the research is presented.

4.2 Aim and Objectives of the Study

4.2.1 Aim

A need has been identified at the Centre for Augmentative and Alternative Communication (CAAC) for the development of a specialised, trans-disciplinary Master's Degree in Early Childhood Intervention. **The main aim of the current study is to determine the content of the Occupational Therapy Module for the M ECI.** An important focus in this process was to establish the level of skills of qualified occupational therapists and therefore what the specific training needs of occupational therapists might be.

4.2.2 Objectives

A number of objectives which would form an essential part in establishing a comprehensive training framework in both the theoretical and clinical domains, were identified. These were:

- To determine the existing theoretical knowledge base of occupational therapists working in clinical practice.
- To determine the existing level of skills of occupational therapists in the assessment procedures for early intervention.
- To determine the existing level of skills of occupational therapists in the treatment of children in early intervention.
- To integrate and prioritise the identified needs in order to establish a framework for the proposed curriculum in early intervention.

4.3 Research Design

A descriptive research design was used in this study. Payton⁶⁴ defines the purpose of descriptive research “to discover some of the essential characteristics of a particular population as it exists in nature (in situ)”. Descriptive research can be divided into subclasses:

- Qualitative research, which studies people, individually or collectively, in their sociocultural context.
- Nominal research, which is controlled observation, often used in case studies.
- Normative research, which defines average or typical characteristics of a given sample.
- Historical research, which focuses on past events rather than on the present.
- Developmental research, which describes a sequence of events over a long period of time.

The normative descriptive research design was appropriate for this study because the average and typical characteristics of the sample were required to draw conclusions on the training needs and skills of the respondents.

Payton further states that the two major methods for all the subclasses of descriptive research are the survey and the case study. He defines the survey as research “that exposes the sample to a predetermined set of questions, the answers to which can be quantified with descriptive statistics”.⁶⁴ A survey method of gathering scientific data for the study was employed because descriptive statistics on the required data was needed.

Fowler⁶⁵ gives a clear breakdown of the characteristics of the survey:

- The purpose of the survey is to produce statistics, that is, quantitative or numerical descriptions of some aspects of the study population.
- The main manner in which to collect information is by asking the subjects questions; their answers constitute the data to be analysed.
- Generally, information is collected about only a fraction of the population, that is, a sample rather than from every member of the population.

Survey instruments for gathering the data include questionnaires, interviews, rating scales and checklists.⁶⁴ In this study the questionnaire was selected to provide the required data on the training needs and skills of occupational therapists with regard to early intervention. The advantages of reaching a larger population situated in a widespread area in a specified time frame at a reasonable cost were considered to be the most practical for this study.⁶⁵ The anonymity of respondents when answering a questionnaire, in contrast to the interview, was also felt to be important in this study. Respondents might feel threatened by revealing their limitations in their knowledge and skills in personal contact with the researcher. One of the disadvantages of the questionnaire that is sent by mail, is the tendency to be non-response. Fowler⁶⁵ states that, without applying other follow-up procedures, the response rate on the mailed questionnaires is likely to be less than 50%. The researcher had to consider this and implement counter methods in order to obtain the optimal response rate.

4.4 Sample

4.4.1 Selection Procedures

In order to achieve a representative sample, the official list of qualified Occupational Therapists, registered at the Occupational Therapy Association of South Africa (OTASA), was used to extract the research sample.

4.4.1 Selection Criteria

From the national list, only the occupational therapists practising in the field of paediatrics in the Gauteng, Northern and North West Provinces were included in the sample.

According to Fowler⁶⁵, a sample should, as closely as possible, approximate the characteristics of the population. The three selected provinces were felt to reflect the characteristics that would be encountered in other parts of the country.

These characteristics were:

- Human diversity.
The number of therapists working in the field of paediatrics is large enough to give representation to a variety of characteristics such as race, gender, age group, years experience in the field, etc.
- Institutions of employment.
Hospitals, special schools, clinics, private practices, institutions for disabled children, children's homes and educational institutions are represented in these provinces.²⁹
- Educational institutions for occupational therapy.
The University of Pretoria and the University of the Witwatersrand are in Gauteng and the University of Medunsa is in North West Province. If it is hypothesised that a large portion of therapists in these areas would have been trained at an university close by, there is still a variation in possible educational institutions and curricula present.
- Ecological context.
Communities varying from affluent to very poor and urban to rural areas are represented in these provinces.

4.4.2 Selection Procedures

An area probability sampling was used to select the three provinces for the study. According to Fowler⁶⁵, this approach is used when a total land area is divided into exhaustive, mutually exclusive sub-areas with identifiable boundaries and a sample from these sub-areas is selected.

The term *subjects* will be used for the therapists who were included in the sampling process and the term *respondents* will be used for the therapists who responded to the questionnaire. The term *participants* will be used for the therapists who took part in the pilot study.

In order to select the final sample, a simple random sampling was used.⁶⁵ The following steps were implemented:

- An address list of the occupational therapists, registered at OTASA and practising in the field of paediatrics, was obtained from the Occupational Therapy office in Pretoria. Only those occupational therapists registered and working in Gauteng, Northern and North West Provinces were included in the working list.
- All 26 occupational therapists from the Northern and North West Provinces were included in the preliminary sample. In consultation with the statistician, it was decided that a more equal representation of the three provinces could be obtained if a preliminary selection for these two provinces was not made at this stage of sampling.
- From a total of 194 registered therapists in Gauteng, 97 were drawn from the list for inclusion in the preliminary sample. This was done by a systematic selection of even numbers, starting at no 2 and selecting even numbers on the list.
- The subjects on the preliminary list were then contacted telephonically and asked whether they were willing to complete the questionnaire. This was done in order to explain the importance of the study and to obtain a commitment for participation. This served as a counter measure against the problem of non-response to mailed questionnaires.⁶⁵ Anonymity was guaranteed during the conversation with the subjects.

The response to the telephonic contact was as follows:

Northern Province:

- Total in the preliminary sample was 16.
- 15 subjects agreed to participate in the project.
- The one subject indicated that she was no longer working with children and was thus not available.

North West Province:

- Total in the preliminary sample was 10.
- All 10 subjects agreed to participate in the project.

Gauteng Province:

- Total in the preliminary sample was 97.
- A total of 75 subjects was still needed for the final sample of 100 subjects.
- Of the subjects that were followed up, 9 could not participate. The reasons were as follows:
 - Two subjects had emigrated.
 - One subject had left employment and her current address was unknown.
 - Three subjects were erroneously included in the OTASA list and were not working in the field of paediatrics.
 - One subject works only with older children.
 - One subject was on holiday.
 - One subject had retired and felt that it was not appropriate to participate.
 - Out of the original 97 subjects from Gauteng Province, a total of 84 subjects was contacted, from which the remaining 75 subjects, needed to reach the total sample of 100, were obtained.

4.4.3 Description of the sample

The exposition of the final sample is displayed in Table 3:

Table 3. Exposition of sample.

Provinces	N
Gauteng	75
Northern Province	15
North West Province	10
Total subjects	100

4.5 Research Materials

A questionnaire had to be developed in order to ascertain the skills and training needs of occupational therapists in early childhood intervention.

4.5.1 Development of Questionnaire

Fowler⁶⁵ suggested several steps in the designing and evaluating of survey questions, which were followed in the development of the questionnaire. These steps are displayed in Table 4.

Table 4. Steps followed in the development of the questionnaire.

Preliminary design steps:	Literature references:	Results:
Focus group discussions	Discussions with focus groups about the relevant issues to be studied are recommended to ensure that questions address the issues at hand. "The primary purpose of these discussions is to compare the reality about which respondents will be answering questions with the abstract concepts embedded in the study objects". ⁶⁵	It was imperative that the current study followed the same rationale as that employed by the committee responsible for the development of the Master's degree in Early Intervention. To attain this objective a seminar programme, presented by the Centre for Augmentative and Alternative Communication (CAAC) during 2000, was attended. This enabled the researcher to design questions that would generate data, which could contribute to the development of the curriculum of the proposed degree. At the beginning of this phase, a

Preliminary design steps:	Literature references:	Results:
	were identified	layout of relevant issues was drafted for the research proposal (refer to Appendix A for layout).
Drafting questions	<p>A literature review is to be conducted to ensure that relevant theories and results of previous studies are taken into account in the drafting of preliminary questions.⁶⁵</p> <p>From the definitions of early childhood intervention reviewed in 2.2, the following main aspects were identified:</p> <ul style="list-style-type: none"> • Teamwork • Family-centred intervention • Ecological context <p>From the literature review on the occupational therapy process (refer to 3.2) and previous research studies (refer to 3.3) the main aspects in assessment and treatment skills</p>	<p>Preliminary questions were formulated and the significance of each question was evaluated, keeping in mind that the contribution of this study was specifically aimed at providing input into the specialised module for occupational therapists.</p> <p>A list of questions were compiled under the following headings:</p> <ul style="list-style-type: none"> • Biographical information <ul style="list-style-type: none"> • Years experience • Experience in age groups • Fields of practice • Theoretical framework for EI <ul style="list-style-type: none"> • Background knowledge • Family-centred intervention • Teamwork • Community involvement <p>A list of questions was compiled under the following headings:</p> <ul style="list-style-type: none"> • Assessment in early

Preliminary design steps:	Literature references:	Results:
<p>Evolution of preliminary questions. Cognitive laboratory interviews.</p>	<p>were identified.</p> <p>"Once questions are in draft form, but before subjecting them to formal field pre-testing, a more formal kind of testing, commonly called cognitive laboratory interviews, is a valuable next step".⁴⁰</p> <p>Interviews with co-workers are recommended to test the</p>	<p>intervention</p> <ul style="list-style-type: none"> • Screening and observation • Identification of disorders • Family-centred assessment • Functional assessment • Interpretation and documentation • Developmental tests and surveys • Treatment in early intervention <ul style="list-style-type: none"> • Approaches and techniques • Conceptual formulation • Performance components • Specific disorders • Principles and adaptations • Assistive technology • Family-centred treatment • Communication in counselling • Building resilience in the family • Handling of sensitive issues • Planning an individualised programme

Preliminary design steps:	Literature references:	Results:
Evaluation of preliminary questions: Cognitive laboratory interviews	<p>"Once questions are in draft form, but before subjecting them to formal field pre-testing, a more formal kind of testing, commonly called <i>cognitive laboratory interviews</i>, is a valuable next step".⁶⁵</p> <p>Interviews with co-workers are recommended to test the questions at this stage.</p>	<p>The preliminary questionnaire was presented to the Department of Statistics of the University of Pretoria for evaluation. The original eleven-page questionnaire was deemed to be too lengthy and comprehensive and the necessary changes had to be made.</p> <p>After collaboration with two experienced clinicians in the field of early childhood intervention, the questionnaire was reduced to seven pages with 163 different variables. Changes were also made to increase the clarity and make completion of the questionnaire easier..</p>
Design, format and layout of the questionnaire	<p>Fowler⁶⁵ emphasises that a self-administered questionnaire should be self-explanatory. Closed questions are recommended and the respondents should as far as possible only tick choices being made. The layout should be clear and uncluttered. He feels that it is sometimes, however, necessary to provide redundant</p>	<p>Professional assistance was obtained in the final exposition of the questionnaire to ensure accurate completion and coding. Definitions were added where it was deemed necessary and numbering for the respondent, the card and the variables was done. The rating scales were added and the cover letter was drafted.</p>

Preliminary design steps:	Literature references:	Results:
	information: "If people possibly can be confused about what they are suppose to do, they will be."	
Field pretest (pilot study)	<p>Once the survey instrument has been designed and was nearly ready to be used, a field pre-test would be done. Rating forms or interviews could be used for this. Aspects that should be rated are:</p> <ul style="list-style-type: none"> • Readability • Clarity and consistency • Accuracy of answers⁶⁵ 	<p>Final approval was obtained from the Department of Statistics for the preliminary questionnaire (refer to Appendix B for Preliminary Questionnaire).</p> <p>The field pre-test (called pilot study in this thesis) is described in 4.5.2.</p>

4.5.2 Pilot Study

4.5.2.1 Aim of the Pilot Study

A pilot study had to be conducted in order to test important factors regarding the questionnaire, namely:

- Whether the cover letter was clear and complete
- The exposition, clarity and completeness of the questionnaire
- The usefulness of the scales used in the questionnaire
- The content of the questionnaire
- The time taken to complete the questionnaire

4.5.2.2 Procedures of the Pilot Study

The procedure followed to implement the pilot study was as follows:

- A sample of convenience⁶⁴ of five occupational therapists working in the field of paediatrics was drawn. The following considerations were taken in the selection of the sample:
 - Representation of different institutions of employment, namely:
 - Private practice (participant A)
 - Academic institution (participant B)
 - Centre for Early Intervention (participant C)
 - Hospital outpatient department (participant D)
 - Specialised school (participant E)
 - Availability of respondents for personal contact in an interview
 - Expertise in the field of early childhood intervention
- Consent from all five participants for the pilot study was telephonically obtained. The requirements were explained to them.
- The preliminary questionnaire and a report-back form with instructions were sent to each of the participants (refer to Appendix C for Report-back Form).
- With collection of the report-back form, an interview was conducted with each of the participants in order to get additional feedback.
- Adaptations were made to the questionnaire in accordance with the feedback obtained from the pilot study (refer to Tables 5 – 11).

4.5.2.3 Results

The feedback from the 5 respondents on the pilot study and the subsequent adaptations to the questionnaire are displayed in Tables 5 – 11.

The final questionnaire was submitted to the Department of Statistics and approval was obtained

(refer to Appendix D for the Final Questionnaire).

Results of the Pilot Study

Table 5: Cover Letter

Participant A	Participant B	Participant C	Participant D	Participant E	Adaptations to the questionnaire
<p>Exposition:</p> <ul style="list-style-type: none"> • Use explicit headings in order to orientate the reader immediately to the purpose of the letter • Use different font- and letter-sizes to improve the readability • Change the sequence of the paragraphs to improve the flow of ideas <p>Content:</p> <ul style="list-style-type: none"> • It was not clear which students would qualify to attend the specialised module 	<p>Exposition:</p> <ul style="list-style-type: none"> • Use explicit headings in order to orientate the reader immediately to the purpose of the letter • Use different font- and letter-sizes to improve the readability <p>Content:</p> <ul style="list-style-type: none"> • In order to improve orientation and clarity, indicate the main sections which will be covered in the questionnaire 	<p>Exposition:</p> <ul style="list-style-type: none"> • No comment <p>Content:</p> <ul style="list-style-type: none"> • No comment 	<p>Exposition:</p> <ul style="list-style-type: none"> • No comment <p>Content:</p> <ul style="list-style-type: none"> • It was not clear which students would qualify to attend the specialised module 	<p>Exposition:</p> <ul style="list-style-type: none"> • No comment <p>Content:</p> <ul style="list-style-type: none"> • It was not clear which students would qualify to attend the specialised module • Unclear whether the questionnaire would only be distributed to occupational therapists 	<p>Exposition:</p> <ul style="list-style-type: none"> • Headings were introduced. The following were added before the letter started: <ul style="list-style-type: none"> • Questionnaire • Title of study • Research study for Master's degree • A different font was used • Important aspects were emphasised by using bold • Different letter sizes were used <p>Content:</p> <ul style="list-style-type: none"> • It was stated that the results of the questionnaire would be used for a specialised module for occupational therapists as part of the transdisciplinary team • The title of the study that was added, indicated that the research was to be conducted on occupational therapists • The main sections to be covered in the questionnaire were mentioned in the cover letter

Table 6: Exposition of the questionnaire

Colour coding :

 Preliminary questionnaire =  Final questionnaire = 

Participant A	Participant B	Participant C	Participant D	Participant E	Adaptation to the questionnaire
Spacing: <ul style="list-style-type: none"> • Spacing after the heading at 1 too large • Spacing of blocks to fill in years and months of experience should be smaller 	Spacing: <ul style="list-style-type: none"> • Spacing after the heading at 1 too large 	Spacing: <ul style="list-style-type: none"> • Spacing after the heading at 1 too large 	Spacing: <ul style="list-style-type: none"> • More options to fill in tests required at 4.4 	Spacing: <ul style="list-style-type: none"> • No comment 	Spacing: <ul style="list-style-type: none"> • Spacing changed according to the recommendations • Options under 4.4 increased from 5- to 7- options
Print: <ul style="list-style-type: none"> • Headings must be made more explicit 	Print: <ul style="list-style-type: none"> • No comments 	Print: <ul style="list-style-type: none"> • No comments 	Print: <ul style="list-style-type: none"> • No comments 	Print: <ul style="list-style-type: none"> • Headings must be made more explicit • Use different font, letter sizes and bold more often in order to improve readability 	Print: <ul style="list-style-type: none"> • Headings were blocked and enlarged • Font was changed and different letter sizes were used to highlight certain aspects
Content and sequence <ul style="list-style-type: none"> • Requests must be made more explicit • Repeat key word in request in sub-headings to assist attention 	Content and sequence <ul style="list-style-type: none"> • Change the sequence 1.1 “Total experience in the field of paediatrics” and 1.3 “Field of 	Content and sequence <ul style="list-style-type: none"> • No comments 	Content and sequence <ul style="list-style-type: none"> • No comments 	Content and sequence <ul style="list-style-type: none"> • No comments 	Content and sequence <ul style="list-style-type: none"> • Requests were shortened and more explicit formulations used • The key word in a request, e.g. “skills”, was used in all subsequent sub-headings

<ul style="list-style-type: none"> • Include definitions immediately after the appropriate question to assist in clarity • The sequence of the sections in 5, “Treatment in Early Intervention” should be changed to facilitate a better flow of content • Too many and complicated sections and sub-sections give rise to confusion 	<p>practice”</p>				<ul style="list-style-type: none"> • Definitions were shortened and displayed directly after the question • The sequencing in 5 was changed • Sequencing in 1 was not changed as it was felt that the total years of experience should precede specific experiences • Sections 1, “Biographical Information” and 2, “Community Involvement in Early Intervention” were combined into one section under the heading “Profile of Experience” <ul style="list-style-type: none"> • It was felt that the original heading concerning biographical information was not applicable for the information that followed • The original 5 sections could be reduced to only 4. Certain sub-sections were also reduced and 2, 2.1, and 2.2 became 1.5 in the final questionnaire
---	------------------	--	--	--	--

Table 7: Summary of number changes.

Summary of number changes to incorporate section 1 into section 2	
Preliminary questionnaire	Final questionnaire
1 Biographical information 1.1 Total experience in the Field of Paediatric 1.2 Experience in age groups 1.3 Field of practice 1.4 Experience in models of Treatment 2 Community involvement in Early Intervention 2.1 Experience in Human Diversity 2.2 Experience in Community Development	1 Profile of Experience 1.1 Total experience in Field of Paediatrics 1.2 Experience in Age Group 1.3 Field of Practice 1.4 Experience in Models of Treatment 1.5 Community Involvement in Early Intervention

Table 8: Scales employed in the questionnaire

Participant A	Participant B	Participant C	Participant D	Participant E	Adaptation to the questionnaire
<ul style="list-style-type: none"> The scale in 4.4, where the therapist has to fill in the various test employed in evaluation, is not applicable The scale in 3, "Theoretical framework for	<ul style="list-style-type: none"> No comment 	<ul style="list-style-type: none"> No comment 	<ul style="list-style-type: none"> No comment 	<ul style="list-style-type: none"> The scale in 4.4, where the therapist has to fill in the various test employed in evaluation is not applicable 	<ul style="list-style-type: none"> All the recommendations were implemented in the questionnaire. Ratings were omitted from no 4.4 and 3 was changed to a Yes/No response

<p>Early Intervention” should be changed to a Yes/No answer. Training required on these aspects need not be rated and a simple Yes/No answer should suffice and simplify this section</p>					
---	--	--	--	--	--

Table 9: Time taken to complete the questionnaire

Participant A	Participant B	Participant C	Participant D	Participant E	Adaptation to the questionnaire
<ul style="list-style-type: none"> • 3 takes too long to complete 	<ul style="list-style-type: none"> • No comment 	<ul style="list-style-type: none"> • 15 minutes 	<ul style="list-style-type: none"> • 30 minutes 	<ul style="list-style-type: none"> • 15 minutes 	<ul style="list-style-type: none"> • 3 was adapted as described under “Scales used in the questionnaire” • In the revision of the content, all the sections were scanned for possible repetition of items

Table 10: Content of the questionnaire

Participant A	Participant B	Participant C	Participant D	Participant E	Adaptation to the questionnaire
<p>2 Community Involvement in Early Intervention</p> <ul style="list-style-type: none"> • 2.2 Experience in Community Development: It was difficult to interpret the questions under this sub-section <p>3 Theoretical Framework for Early Intervention</p> <ul style="list-style-type: none"> • No comments 	<p>2 Community Involvement in Early Intervention</p> <ul style="list-style-type: none"> • It was not clear how these questions are related to the specialised module for Occupational Therapy <p>3 Theoretical Framework for Early Intervention</p> <ul style="list-style-type: none"> • 3.1 Specific theoretical 	<p>2 Community Involvement in Early Intervention</p> <ul style="list-style-type: none"> • Add: "Working with large groups of clients" <p>3 Theoretical Framework for Early Intervention</p> <ul style="list-style-type: none"> • 3.1 Theoretical content should 	<p>2 Community Involvement in Early Intervention</p> <ul style="list-style-type: none"> • 2.1 Experience in Human Diversity: "Working in disadvantaged environments" should be changed to: "Working with disadvantaged clients: • 2.2 Difficult questions to understand and respond to • 2.2 "Refer to resources in the community" should be added <p>3 Theoretical Framework for Early Intervention</p> <ul style="list-style-type: none"> • No comments 	<p>2 Community Involvement in Early Intervention</p> <ul style="list-style-type: none"> • No comment <p>3 Theoretical Framework for Early Intervention</p> <ul style="list-style-type: none"> • No comments 	<p>2 Community Involvement in Early Intervention</p> <ul style="list-style-type: none"> • This section was simplified and shortened • Most of the questions that were perceived as being difficult, would relate to issues that would be covered in core modules and was thus omitted • Section 2 was incorporated into section 1 and only relevant experience in community issues that would be familiar to Occupational Therapists was inquired into • The rating for these questions changed to a Yes/No response format • Recommendations of participants C and E for different wording and additions to be included were implemented <p>3 Theoretical Framework for Early Intervention</p> <ul style="list-style-type: none"> • The following recommendations were not implemented: <ul style="list-style-type: none"> • "Biomechanical" is

<p>4 Assessment in Early Intervention</p> <p>4.2 Skills in Functional Assessment Procedures: Change "Using tasks applicable to everyday events and situations" to "Using everyday tasks, events and situations for assessment"</p> <p>5 Treatment in Early Intervention</p> <p>5.1 Skills in the Application of Approaches and Techniques for Treatment:</p> <ul style="list-style-type: none"> Add "Baby Therapy" 	<p>content should include:</p> <ul style="list-style-type: none"> Biomechanical Neurological <p>4 Assessment in Early Intervention</p> <p>No comment</p> <p>5 Treatment in Early Intervention</p> <ul style="list-style-type: none"> No comments 	<p>include literature on black children</p> <p>4 Assessment in Early Intervention</p> <ul style="list-style-type: none"> No comments <p>5 Treatment in Early Intervention</p> <ul style="list-style-type: none"> 5.1 Skills in the Application of Approaches and Techniques for Treatment: Add Theraplay 	<p>4 Assessment in Early Intervention</p> <p>4.3 Use of Specific Developmental Tests and Surveys: "Norm based tests" should be added</p> <p>5 Treatment in Early Intervention</p>	<p>4 Assessment in Early Intervention</p> <ul style="list-style-type: none"> No comments <p>5 Treatment in Early Intervention</p> <ul style="list-style-type: none"> No comment 	<p>covered as an approach under 5.1</p> <ul style="list-style-type: none"> "Neurological" would form part of other theories and will not be included on its own <p>These theories are not culture specific and the application thereof for different cultures should be clinically applied during the course</p> <p>4 Assessment in Early Intervention</p> <ul style="list-style-type: none"> All these recommendations were implemented <p>5 Treatment in Early Intervention</p> <ul style="list-style-type: none"> Of the suggestions on possible additions the following were included: <ul style="list-style-type: none"> 5.1 "Baby therapy" 5.6 "Wheel chairs" as an example of equipment for ambulation <p>The following suggestions were not included:</p>
---	---	--	---	---	---

<ul style="list-style-type: none"> • 5.3 Skills in Treatment of Basic and Functional Abilities: <ul style="list-style-type: none"> • Seen as possible duplication of 5.1 • 5.6 Skills in Adaptation through Assistive Technology: <ul style="list-style-type: none"> • Give an example of Equipment for ambulation • 5.8 Skills in Management: 		<ul style="list-style-type: none"> • 5.3 Skills in Treatment of Basic and Functional Abilities: <ul style="list-style-type: none"> • Add "Emotional development" • 5.4. Skills in Treatment of Specific Disorders: <ul style="list-style-type: none"> • Add: "Temperament" 	<ul style="list-style-type: none"> • 5.3 Skills in Treatment of Basic and Functional Abilities: <ul style="list-style-type: none"> • Seen as a possible duplication of 5.4 • 5.4 Skills in Treatment of Specific Disorders: <ul style="list-style-type: none"> • "Learning disorder" is often diagnosed after the child goes to school 		<ul style="list-style-type: none"> • 5.1 Play therapy is included and Theraplay is a type of play therapy • 5.3 Psycho-social is included and "emotional development" would fall under that heading • 5.4 Behavioural and emotional disturbances are included and "temperament" would fall under that heading • 5.4 The comment on "Learning disorder" is academically correct, but it is a well known term for occupational therapists and the use of other terminology would probably be confusing • Possible duplications 5.1, 5.3 and 5.4 were not seen as duplications: <ul style="list-style-type: none"> • 5.1 asks for skills in treatment in of specific disorders. • 5.3 asks for skills in treatment of
---	--	--	---	--	---

					<p>basic and fundamental abilities</p> <ul style="list-style-type: none"> • 5.4 asks for skills in treatment of specific disorders <p>Although an overlapping in these areas exist, the emphasis of each one is different. It would also allow for different levels of skills because 5.3 is more basic symptomatic treatment whereas 5.4 entails a holistic treatment of the disorder. In 5.1 a more comprehensive knowledge of an approach is asked which often entails post graduate training. These sub-sections were not changed, but their order in the sub-section was changed to allow for a better flow of thought. 5.3 became 4.1. 5.1 became 4.2 5.4 became 4.3</p>
--	--	--	--	--	---

Table 11: Summary of number changes and headings.

Summary of *number changes* and *wording of headings* in section 5 of the preliminary questionnaire to section 4 of final questionnaire.

- 5. Treatment in Early Intervention (4)
- 5.1 Skills in the Applications of Approaches and Techniques for Treatment (4.2)
- 5.2 Skills in Planning for treatment (4.4)
- 5.3 Skills in Treatment of Basic and Functional Abilities (4.1)
- 5.4 Skills in Treatment of Specific Disorders (4.3)
- 5.5 Skills in Applications of Principles and Adaptations in Treatment (4.5)
- 5.6 Skills in Adaptation through Technology (4.6)
- 5.7 Skills in establishing Therapeutic Relationships (4.7)
- 5.8 Skills in management (4.8)
- 5.9 Building Resistance in the Family through facilitation of:
Skills in Building Resilience in the Family through facilitation of: (4.9)
- 5.10 Facilitating the handling of Sensitive Issues/Situations
Skills in Counselling of Sensitive Issues/Situations (4.10)

4.5 Procedures

4.5.1 Data Collection Procedures

The following steps were followed in order to collect the data for the research:

- The final questionnaire was mailed to each of the 100 subjects who had agreed to take part in the study.
- A four-week response time was allowed and the questionnaires could be returned either per mail in the self addressed franked envelopes, or faxed to the sender.
- The subjects could use the contact telephone number provided by the researcher to clarify any uncertainties they may have had regarding the completion of the questionnaire.

The response to the questionnaire was as follows:

- One of the respondents informed the researcher that she had been erroneously included in the OTASA list for paediatrics and only worked with adults. The blank questionnaire was returned.
- A final response rate of 87% was obtained. This positive response could be ascribed to the fact that the respondents had been contacted before the questionnaires were mailed. This allowed for personal contact with the respondents and a commitment was obtained from the selected sample. The high response could also be seen as interest by the respondents in the topic of early childhood intervention and a desire to participate in the development of an opportunity for further study in this field.

4.5.2 Data Recording Procedures

The following steps were implemented in the recording of the research data:

- The researcher coded all questionnaires with the appropriate numerical values for the yes/no, as well as the 1 to 4 point rating scales.
- The questionnaire contained only *closed* questions. There were some questions where respondents could add variables, should the aspects already mentioned be insufficient to reflect their experience. They were also requested to fill in the tests used for assessment (3.4). These additions were interpreted and coded by the researcher.

4.5.3 Data Analysis Procedures

The following steps were implemented in the analysis of the research data:

- The completed, coded questionnaires were handed in at the Research Support Section of the Department of Statistics of the University of Pretoria for computerisation. The SAS (Version 8) programme was used to do the statistical

analysis. The initial statistical analysis contained the following data for each of the 163 variables in the questionnaire:

- Frequency
 - Percentage
 - Cumulative frequency
 - Cumulative percentage
 - The frequency of missing responses on each of the variables was also provided
-
- The data spread sheets with computerized raw data and preliminary calculations were handed back to the researcher and checked for possible inaccuracies. All mistakes were marked and the data re-submitted to the Research Section.
 - The final results were then presented to the researcher. In order to reflect the data in a concise manner, means were calculated and will be used to convey the results of the research in Chapter 5.

4.6 Summary

In this chapter the research design, materials and procedures for the study were presented. A survey, in the form of a questionnaire, was chosen for its descriptive and quantitative nature in discovering the essential characteristics of the chosen study population.

The sample was described with regard to the selection criteria and procedures and a description of the final sample was given. Written questionnaires were mailed to the subjects in the sample in order to reach a more widespread population, which would represent a variety of factors with regard to human diversity, undergraduate training and types of services in different institutions. In order to ensure the maximum response to the completion of the questionnaire, the subjects in the sample were contacted telephonically in order to obtain a commitment to participate. This method proved to be successful and a positive response rate of 87% were obtained.

The research materials were discussed and the development of the questionnaire was described according to the steps outlined by Fowler.⁶⁵ The procedures for the pilot study was explained and the results and consequent adaptations to the questionnaire are displayed in Tables 5 – 11. The final questionnaire was formulated and is displayed in Appendix D.

5.1 Introduction

The data collection, data recording and data analysis procedures were given. The results of the study will be described in Chapter 5, together with a discussion of the significance thereof for the proposed curriculum. A critical evaluation of the questionnaire will also be conducted in order to provide recommendations for similar research in the future.

5.2 Summary

5.1 Introduction

The research results of the questionnaire will be presented together with a discussion on the major findings of the study. This will address the main aim of the study, which is to determine the existing knowledge base of the occupational therapists working in clinical practice. A framework for the proposed curriculum will be given in Chapter 6.

The results of the research will give consideration to the objectives of the study, which are:

- To determine the existing theoretical knowledge base of the occupational therapists working in clinical practice (5.3).
- To determine the existing levels of skills of occupational therapists in the assessment procedures for early intervention (5.4).
- To determine the existing levels of skills of occupational therapists in the treatment of children in early intervention (5.5).
- To integrate and prioritise the identified needs in order to establish a framework for the proposed curriculum in early intervention (6).

A profile of the experience of the respondents in the study was obtained in the first section of the questionnaire and these results will initially be presented (5.2). This data enables comparisons to be drawn between levels of experience and knowledge and skills.