

CHAPTER 5

RESULTS AND DISCUSSION

“Let no-one enter here who is ignorant of mathematics”

- Plato -

*“I have striven not to laugh at human actions, not to weep at them,
nor to hate them, but to understand them”*

- Benedict Spinoza (1632-1677) -

5.1 INTRODUCTION

The role of the regular classroom teacher in South Africa has changed immensely during the past years and will continue to do so if the successful implementation of *White Paper No 6* is to be attained. As the teacher may be the most influential person in determining the extent to which a child's potential is achieved, it is important that he/she should be prepared to meet and accept the new challenges.

The main aim of the current study was to determine the demands posed specifically to the teacher of the child in inclusive education in South Africa. Within the context of a descriptive research design, questionnaires and focus group discussions were utilised to obtain quantitative and qualitative data regarding the knowledge, attitudes and needs of the teachers, as well as the demands posed to these teachers in the unique South African context.

The goals of this chapter are twofold: firstly, to use statistical tools such as data organisation and analysis techniques to provide information about the data collected for each of the research aims. Secondly, and more importantly, to interpret and discover the meaning of the data so that conclusions can be drawn with regard to the demands posed to the teacher of the child with a hearing loss in South Africa.

Figure 5.1 provides an outline of the presentation of the results.

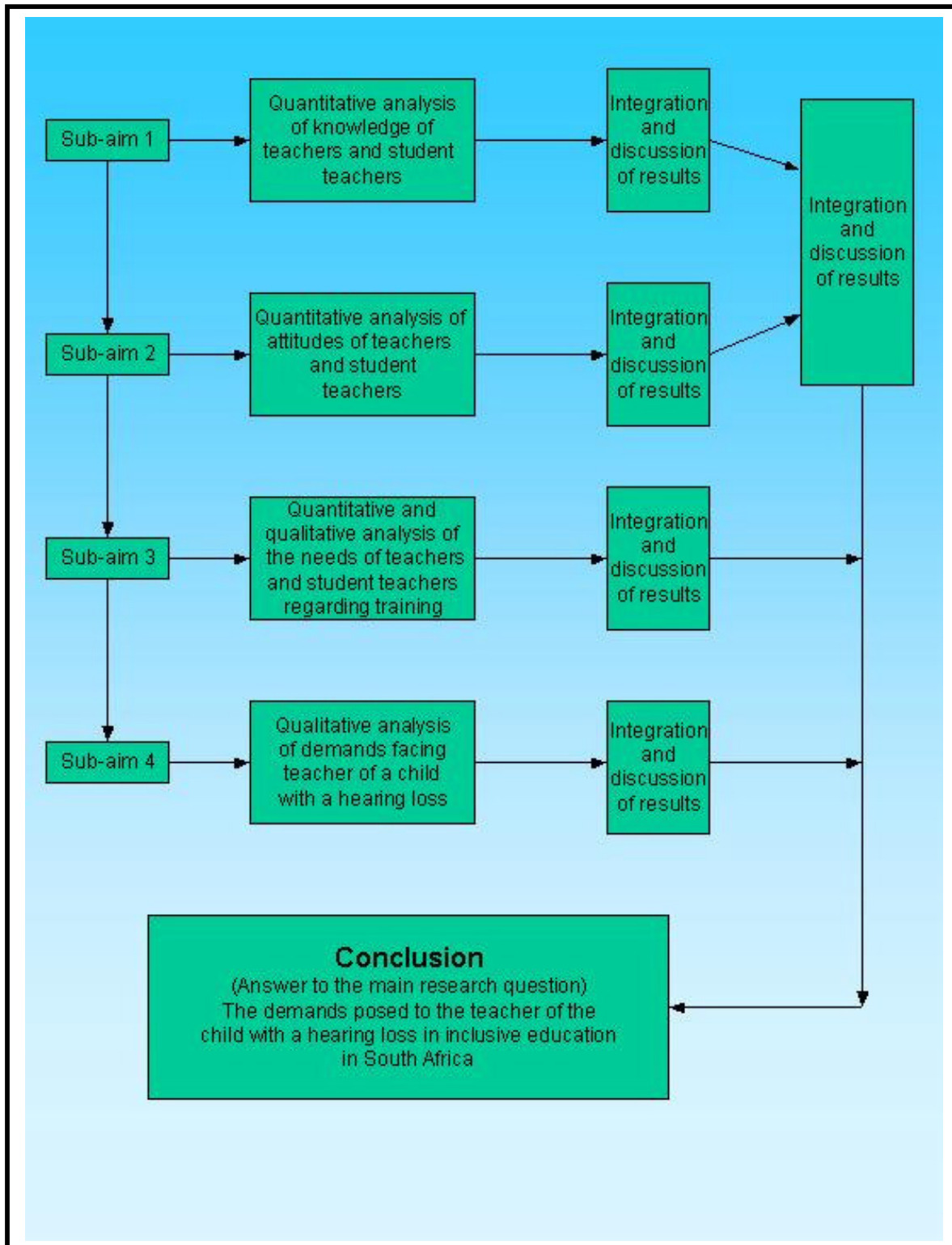


Figure 5.1 Outline of the analysis and interpretation of data

The results will be presented according to the sub-aims and will include the origin of the results, graphic representation of the results in the form of figures or tables, as well as a discussion and interpretation of the results.

5.2 RESULTS AND DISCUSSION OF SUB-AIM #1

THE KNOWLEDGE OF TEACHERS AND STUDENT TEACHERS WITH REGARD TO INCLUSIVE EDUCATION AND TEACHING THE CHILD WITH HEARING LOSS IN INCLUSIVE EDUCATION

The first sub-aim of the study was to quantitatively determine and describe the teachers' and student teachers' knowledge with regard to inclusive education in general and the teaching of the child with a hearing loss in inclusive education in particular. A general description of the characteristics of the 301 respondents with regard to age, gender, home language, highest educational qualifications and experience was presented in Paragraph 4.4.1.2 (see Chapter 4). Some of these characteristics will be used as variants in the statistical analysis of the results. The responses obtained from the questionnaire survey are presented in the following order:

Firstly, the results of the questionnaire from the three subgroups are discussed in terms of the three subsections of Section B of the questionnaire, namely:

- Knowledge: Inclusive education
- Knowledge: The child with a hearing loss
- Knowledge: Classroom accommodation/modifications for the child with a hearing loss

Secondly, the findings of the three subgroups will be compared.

Thirdly, the effect of different variables on the knowledge of the respondents will be

discussed. An interpretation and discussion of the general trends of this sub-aim will conclude this section.

5.2.1 Results of knowledge questionnaire survey

This questionnaire consisted of 31 questions focused on the teacher's knowledge/ supposed knowledge of inclusive education and the child with a hearing loss. Each subdivision of questions was preceded by a description of a specific scenario, after which several statements were formulated in such a way that the respondents could indicate whether they agreed or not, or alternatively whether the statement was true or not. The questionnaire included two types of response categories, namely 'yes (agree) / uncertain / no (disagree)' as well as 'true/ uncertain/false'. In the analysis of the responses these were evaluated as correct or incorrect answers. Decisions about which responses were considered as correct and which ones as incorrect answers, were based on relevant literature regarding inclusive education, the child with a hearing loss, as well as previous studies on teachers' knowledge of hearing loss and attitudes (Lass et al., 1985:211-222; Lass, Tecca & Woodford, 1987:86-95; Martin et al., 1988:83-95). The correct responses are indicated in Appendix D. It should be noted that those answers accepted as correct by the author will not necessarily be considered correct by other professionals, as some of the items in the questionnaire are subject to divergent interpretations. This fact should be taken into consideration, especially when interpreting the results of the respondents' answers.

5.2.1.1 Knowledge: Inclusive education

This exposition includes the responses of the respondents on questions 1 to 5 of Section B of the knowledge questionnaire. The objective of this section was to evaluate the respondents' knowledge about basic principles of inclusive education. All numbers in this section correspond with the numbered questions on the questionnaire that are presented in Appendix D. Figure 5.2 illustrates the results of the responses of the three subgroups of respondents.

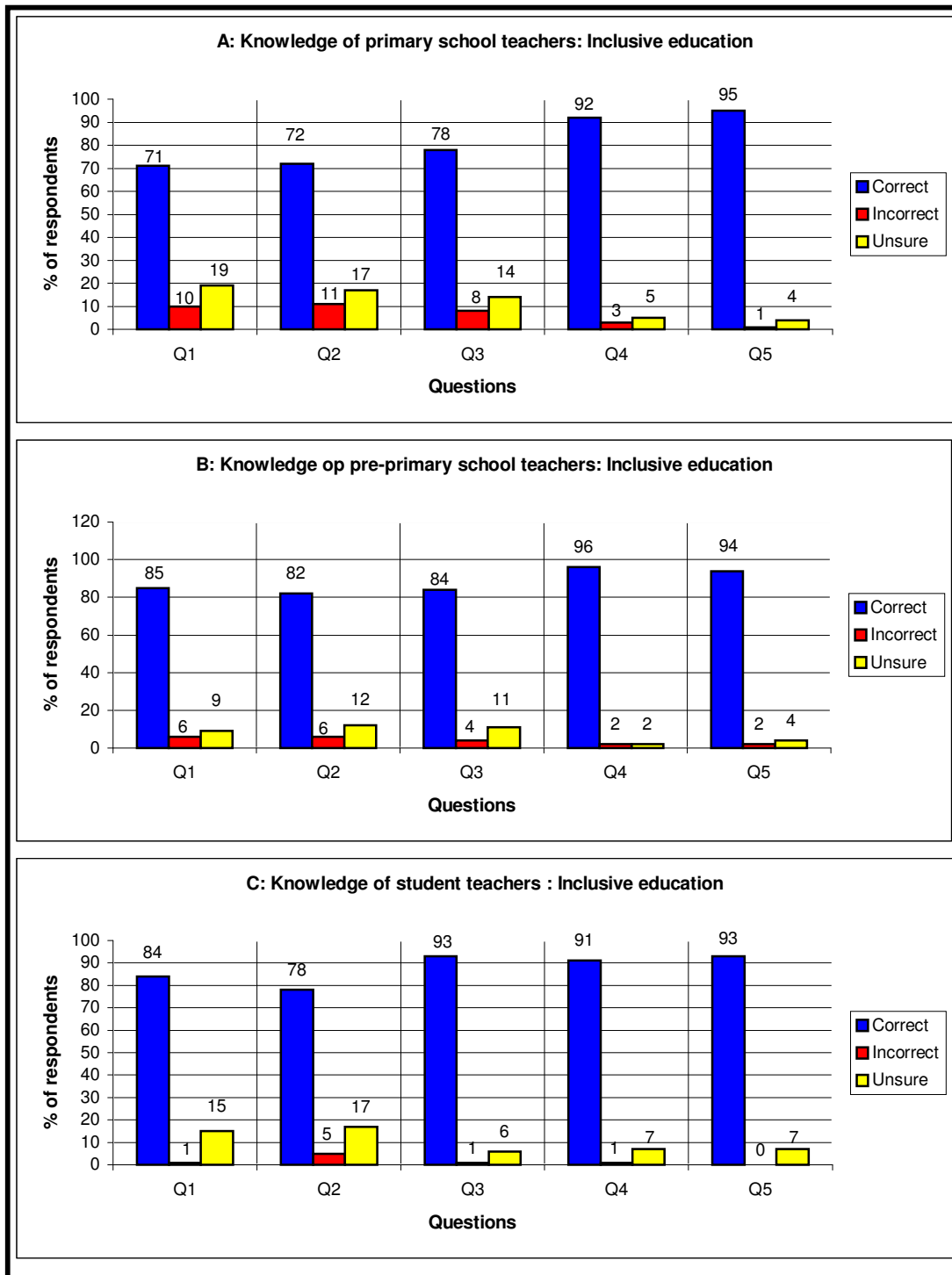


Figure 5.2: Knowledge of respondents: Inclusive education

It is clear from the results above that most of the teachers (primary and pre-primary school) and student teachers answered the particular questions correctly and thus indicated a good basic knowledge of the basic principles of inclusive education.

In order to compare the responses of the three subgroups regarding the number of questions that were answered correctly or incorrectly, the following table was compiled.

Table 5.1 A comparison of the responses of the three subgroups on their knowledge regarding inclusive education

% Respondents	Number of questions correct			Number of questions incorrect			Number of questions unsure		
70%+ of respondents	5	5	5	0	0	0	0	0	0
50%+ of respondents	0	0	0	0	0	0	0	0	0
30%+ of respondents	0	0	0	0	0	0	0	0	0
Less than 30% of the respondents	0	0	0	5	5	5	5	5	5
	PT	PPT	ST	PT	PPT	ST	PT	PPT	ST

PT = Primary school teachers; PPT=Pre-primary school teachers; ST=student teachers

As depicted in Table 5.1, more than 70% of all three subgroups answered the questions correctly, while less than 30% answered them incorrectly. If it is assumed that the respondents have sufficient knowledge about a specific aspect if the majority (more than 70%)¹ answered the questions correctly, it is clear that the results of all three subgroups are indicative of knowledge. There is no apparent significant difference in the responses of the three subgroups regarding the basic principles of inclusive education.

When focusing on individual questions it is clear that fewer respondents answered Question 2, in comparison with the other four questions, correctly. A total of 71% of primary school teachers, 82% of the pre-primary school teachers and 78% of the student teachers indicated correctly that inclusive education implies the adjustment of the teacher’s teaching in order to facilitate a creative environment. Question 5 was answered correctly by most of the respondents: 95% of the primary school teachers, 94% of the pre-primary school teachers and 93% of the student teachers acknowledged the role of the parent in the decision-making process regarding the child.

¹ In this case 70% is indicative of an arithmetical majority and not a statistical majority.

If the performance of the individual subgroups is viewed against the background of the specific questions, the following findings apply:

- 19% of the primary school teachers were unsure about whether inclusive education implies that a teacher must adjust his/her classroom in order to facilitate a stimulating learning environment (Q1). Another question that elicited a similar response was Question 2. Seventeen per cent (17%) of the teachers indicated that they were unsure whether they would have to adjust their teaching in order to facilitate a creative learning environment.
- It is interesting to note that in the case of the pre-primary school teachers, more than 80% of the teachers answered all five questions correctly. The aspect that they were most unsure (12%) about (like the primary school teachers), was whether they would have to adjust their teaching in order to facilitate a creative learning environment (Q2).
- The student teachers either responded correctly or indicated that they were unsure about the correct response.

Although these results are limited in scope and reveal some uncertainty among the respondents, the general high level of knowledge is very positive, as the role of the teachers in moving towards a new agenda regarding inclusive education in the 21st century is crucial (Forlin, 1998:87). According to Leyser et al. (1994:4) there is some data to support the view that increased knowledge about school integration is important for the formation of positive attitudes towards inclusion. **The process of transformation in the education system requires teachers to know and understand the underpinnings of the new policies in order to either reinforce or challenge the policy and practice in education.**

5.2.1.2 Knowledge: The child with a hearing loss

This exposition includes the responses of the respondents to questions 6 to 20 of Section B of the knowledge questionnaire. All numbers in this section correspond with the numbered questions on the questionnaire that are presented in Appendix D. Figure 5.3 illustrates the results of the responses of the three subgroups.

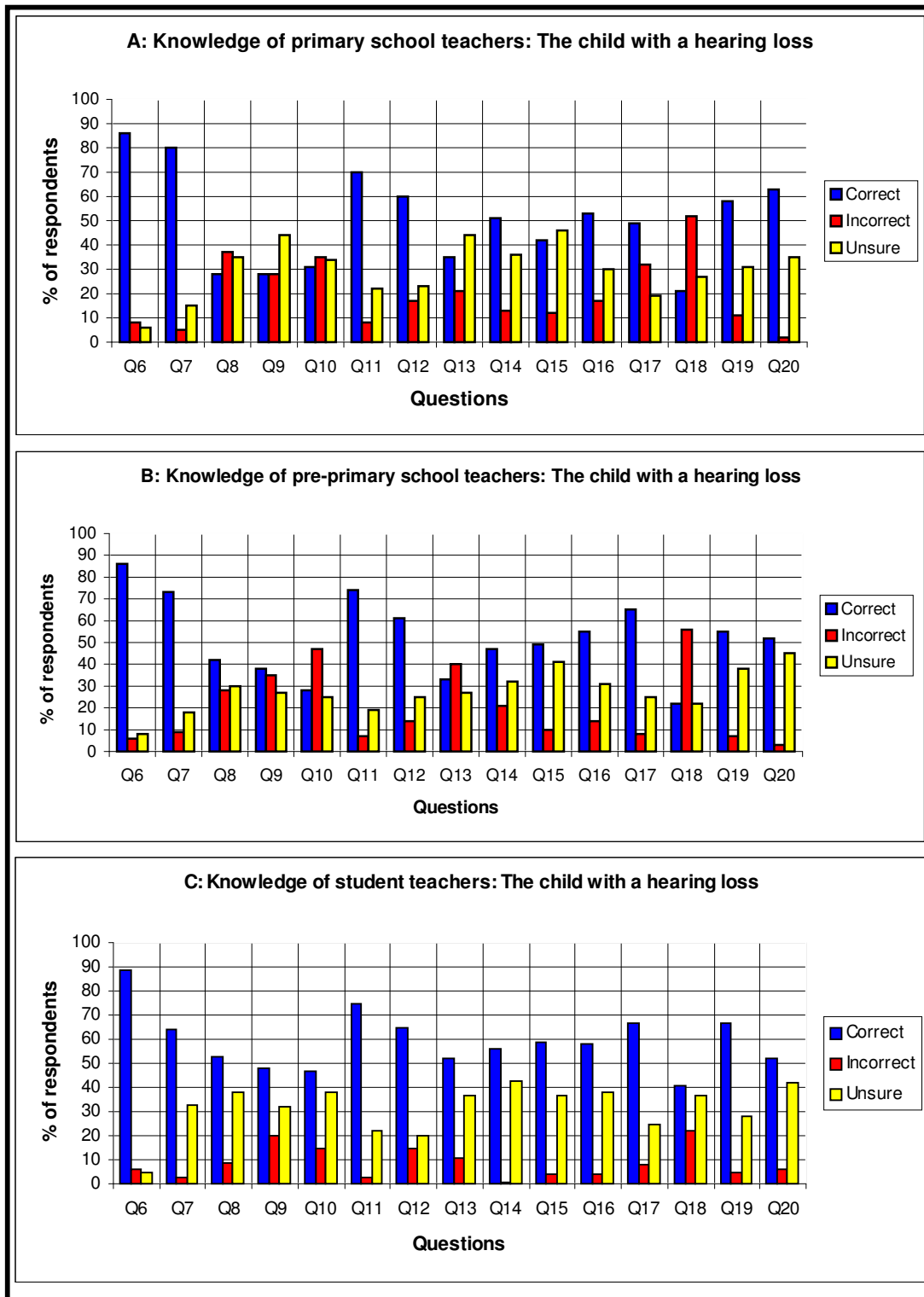


Figure 5.3 Knowledge of respondents: The child with a hearing loss

According to Figure 5.3 the responses yielded very interesting results. Although most questions appeared to be common knowledge, a wide variety of responses was received in this subsection. Some questions definitely appear to have been more difficult to answer as the respondents either selected the wrong answer or indicated that they were unsure about the correct response.

In order to compare the responses of the three subgroups in respect of the number of questions that were answered correctly, incorrectly or marked as unsure, the following table was compiled.

Table 5.2 A comparison of the responses of the three subgroups in respect of their knowledge regarding the child with a hearing loss

% Respondents	Number of questions correct			Number of questions incorrect			Number of questions unsure		
	PT	PPT	ST	PT	PPT	ST	PT	PPT	ST
70%+ of respondents	3	3	2	0	0	0	0	0	0
50%+ of respondents	8	8	12	1	1	0	0	0	0
30%+ of respondents	12	13	15	3	5	0	9	9	10
Less than 30% of the respondents	3	2	0	11	9	15	6	6	5
	PT	PPT	ST	PT	PPT	ST	PT	PPT	ST

PT = Primary school teachers; PPT=Pre-primary school teachers; ST= student teachers

It is evident from the preceding table that only three of the 15 questions were answered correctly by 70% and more of the primary and pre-primary school teachers and only two by 70% and more of the student teachers. However, more questions (12) were answered correctly by 50% and more of the student teachers, than by 50% and more of the primary and pre-primary school teachers. The latter groups answered only eight of the questions correctly, whereas 30% and more of the student teachers answered all of the questions (15) correctly. In terms of the responses of the primary and pre-primary school teachers, three and two of the questions respectively were answered correctly by 30% and less of the respondents.

With regard to the questions that were answered incorrectly, 30% and less of the student teachers answered all 15 questions incorrectly. The results of the primary and pre-primary school teachers indicate that more of them answered some questions incorrectly, as 11 and 9 of the questions respectively were answered incorrectly by

30% and less of the respondents. If the respondents' uncertainty regarding the correct answers is taken into account, 30% and more (but not more than 50%) of the primary and pre-primary school teachers indicated that they were unsure about the correct answer to nine of the 15 questions. 30% and more (but not more than 50%) of the student teachers indicated that they were unsure about the correct answer to 10 of the questions.

In the case of the individual questions it was once again assumed that, should the majority (more than 70%)² of the respondents answer a particular question correctly, it is indicative of knowledge in this regard. With specific reference to knowledge regarding the child with a hearing loss, the results indicate that the *primary and pre-primary school teachers* are adequately informed about the following:

- That there is a difference between a deaf and a child who is hard of hearing (Q6);
- That the intellectual abilities of the child with a hearing loss do not **always** differ from those of a normal hearing child (Q7);
- That a child with a hearing loss can give the appropriate answer when questions are asked (Q11).

The rest of the findings of this subsection of the survey indicate some deficiencies in the teachers' knowledge (answered incorrectly by more than 50% of the respondents) regarding the child with a hearing loss, especially their lack of understanding of the unique characteristics of the child with a hearing loss. For example:

- A child with a hearing loss does not **always** experience difficulty in adapting to his/her social environment (Q7).
- A child with a hearing loss does not **always** ask for instructions to be repeated (Q9).

² In this case 70% is indicative of an arithmetical majority and not a statistical majority.

- A child with a hearing loss is not **totally** dependent on visual cues (Q10).
- A child with a hearing loss **always** needs additional assistance from the teacher (Q18).

If the performance of the individual subgroups is viewed against the background of the specific questions, the following findings apply:

- 80% of the primary school teachers and 73% of the pre-primary school teachers indicated correctly that the intellectual abilities of a child with a hearing loss do not **always** differ from those of a child with normal hearing (Q7). Only 64% of the student teachers answered this question correctly, but 33% indicated that they were unsure about the correct answer.
- Another question that elicited a variety of responses was Question 8. Only 28% of the primary school teachers and 42% of the pre-primary school teachers answered this question correctly, indicating that a child with a hearing loss does not **always** experience difficulty in adapting to his/her social environment. In contrast, 37% of the primary school teachers and 28% of the pre-primary school teachers answered this question incorrectly. Altogether 53% of the student teachers gave the correct answer and 38% indicated that they were unsure about the correct response.
- With regard to Question 18, 41% of the student teachers indicated correctly that a child with a hearing loss does not always need additional assistance from the teacher. A total of 22% of the students answered this question incorrectly and 37% were unsure of the correct response. In contrast to this, the majority of the primary (52%) and pre-primary (56%) teachers answered this question incorrectly.
- Regarding the questions that caused the greatest amount of uncertainty, Question 15 was the one that primary school teachers were most unsure about. As much as 46% of them indicated that they did not know whether a

child with a hearing loss **always** has poor reading skills. What the pre-primary school teachers (45%) were most unsure about, was whether a child with a hearing loss **never** experiences problems with the spelling of words (Q20). The question that the student teachers (43%) were most unsure about was Question 14, regarding the attentiveness of a child with a hearing loss compared to a child with normal hearing.

The overall impression from the responses of the three subgroups can be summarised as follows:

Although the primary and pre-primary school teachers exhibited differences regarding some items on the questionnaire, these differences were slight and the teachers' overall performance on the questionnaire was similar. The responses of the majority of the student teachers, however, differed from those of the teachers as they either chose the correct answer or indicated their uncertainty regarding specific aspects. In fact, the student teachers appeared to have more knowledge about the child with a hearing loss.

The results as discussed above revealed that both teachers and student teachers seem to have some inherent established views with regard to the child with a hearing loss. It is also important to note that the overall performance of the teachers was not totally in accordance with results that have already been found in previous research. The teachers in this study answered a mean number of 7.6 of the 15 items correctly (50,6%). In a study done by Martin et al. (1988:83), the sample population of teachers gave the correct answer to a mean number of 9.77 of the 17 items (57,4%) regarding children with hearing loss, their auditory functioning and educational implications. However, the results of the student teachers in this study correspond to a larger extent with the results of the study mentioned, as they answered a mean number of 8.9 of the 15 items correctly (59,3%).

Lass et al. (1985:213) revealed that almost all of the teachers (93.9%) in their study knew that a child with a profound hearing loss is no less intelligent than normal-hearing persons. Only 80% of the primary school teachers, 73% of the pre-primary school

teachers and 64% of the student teachers in the current study indicated correctly that the intellectual abilities of the child with a hearing loss do not differ from those of a child with a hearing loss.

The results of this subsection give meaning to a statement made by Williams and Finnegan (2003:40) regarding teachers' perceptions of hearing loss. According to these authors, teachers might unwittingly entertain a number of misunderstandings about the consequences and characteristics of a hearing loss. The reason for this is that the teachers may never have met or interacted in a meaningful way with a person with a hearing loss.

5.2.1.3 Knowledge: Classroom accommodation/modifications for the child with a hearing loss

This exposition is based on the responses to Questions 21 to 31 in Section B of the knowledge questionnaire. All the numbers in this section correspond with the numbered questions in the questionnaire as presented in Appendix D. The responses of the respondents are summarised in Figure 5.4.

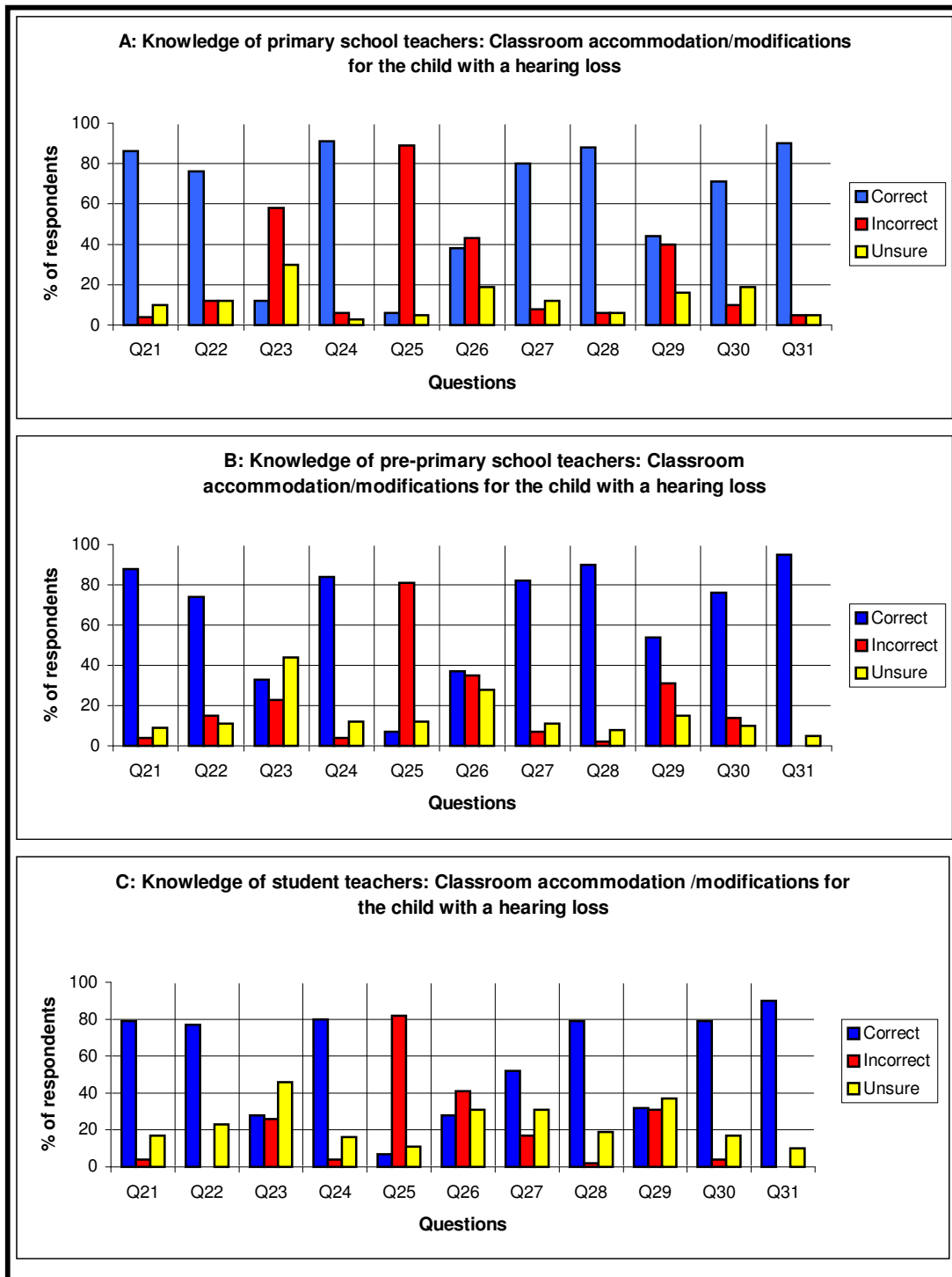


Figure 5.4 Knowledge of the respondents: Classroom accommodation/modifications for the child with a hearing loss

It is evident from the above figure (Fig 5.4) that the majority (more than 70%) of the respondents answered at least 6 to 7 of the 11 questions correctly.

In order to compare the correct, incorrect and unsure responses of the three subgroups, the following table was compiled.

Table 5.3 A comparison of the responses of the three subgroups on their knowledge regarding classroom accommodation/modifications for the child with a hearing loss

% Respondents	Number of questions correct			Number of questions incorrect			Number of questions unsure		
	PT	PPT	ST	PT	PPT	ST	PT	PPT	ST
70%+ of respondents	7	7	6	1	1	1	0	0	0
50%+ of respondents	7	8	7	2	1	1	0	0	0
30%+ of respondents	9	10	8	4	3	3	1	1	4
Less than 30% of the respondents	2	1	3	7	8	8	10	10	7
	PT	PPT	ST	PT	PPT	ST	PT	PPT	ST

PT = Primary school teachers; PPT=Pre-primary school teachers; ST=student teachers

From the above results (Table 5.3) it is clear that 70% and more of the primary and pre-primary school teachers answered seven of the 11 questions correctly, whereas 70% and more of the student teachers answered six of the questions correctly. It appears that the pre-primary school teachers did slightly better than the other two groups, since 30% and more of the respondents answered 10 of the questions correctly. This is in comparison to the nine questions answered correctly by 30% and more of the primary school teachers and eight by 30% and more of the student teachers.

With regard to the questions that were answered incorrectly, it was found that 30% and less of the pre-primary school and student teachers answered eight questions incorrectly. The results of the primary school teachers indicate a slight difference as 30% and less of them answered seven of the questions incorrectly. Concerning the 'unsure' option, 30% and more (but not more than 50%) of the primary and pre-primary school teachers indicated that they were not sure about the correct answer to one of the questions. The same number (30% and more, but not more than 50%) of the student teachers indicated that they were unsure about the correct answer to four of the questions.

As stated earlier, it can be assumed to be indicative of knowledge if the majority (more than 70%)³ of the respondents answered a particular question correctly. With specific reference to the classroom accommodation/modifications necessary to support the child with a hearing loss in the classroom, the results indicate that the primary and pre-primary school teachers were knowledgeable about the following principles:

- Asking the child to repeat questions to ensure that he/she understood the teacher (Q21)
- Writing down all instructions on the blackboard or overhead projector transparencies (Q22)
- Moving the child to the front row of the class (Q24).

The majority of primary and pre-primary school teachers also responded correctly to the questions about the necessary classroom modifications should a child be seated near the door or window and not pay attention. The questions referred to principles such as the following:

- Checking the child's hearing aid to ensure it is in working order (Q27)
- Moving the child away from the door and windows, but not out of the front row (Q28)
- Trying not to move around in the classroom while giving instructions (Q30)
- Making use of additional visual aids during the presentation of the lesson (Q31).

The majority of student teachers also gave correct answers to these questions, except for Question 27 where only 52% of them indicated correctly that a child's hearing aid

³ In this case 70% is indicative of an arithmetical majority and not a statistical majority.

must be checked if the child is not paying attention.

Question 25 (not talking **very** slowly when giving instructions so that the child can lip read) was answered incorrectly by most of the respondents (more than 70%), thus indicating their lack of knowledge in this regard.

When the performance of the individual subgroups is viewed against the background of the specific questions, the following deductions can be made:

- It is clear that certain questions elicited similar responses from all three subgroups of respondents. As already indicated, the majority (more than 70%) of the respondents answered questions 21, 22, 24, 28, 30 and 31 correctly. Question 25, which states that teachers must talk **very** slowly when giving instructions so that the child can lip-read, was answered incorrectly by the majority of the respondents.
- 58% of the primary school teachers indicated incorrectly that a child must be transferred to a school for the hearing impaired if he/she does not show any academic progress (Q23). Only 23% and 26% of the pre-primary school teachers and student teachers respectively also answered this question incorrectly. The majority of pre-primary school teachers (44%) and student teachers (46%) indicated that they were unsure about the correct answer.
- With regard to Question 26, only 38% of the primary school teachers, 37% of the pre-primary school teachers and 28% of the student teachers indicated correctly that teachers must not talk very loudly when giving instructions in class.
- Question 27 elicited quite interesting results, as only 52% of the student teachers indicated correctly that a child's hearing aid must be checked if he/she does not pay attention. However, 31% of them indicated that they were unsure about the correct response. Altogether 80% of the primary and 82% of the pre-primary school teachers answered this question correctly.

- Another question that brought forth similar results was Question 29. Only 32% of the student teachers indicated correctly that distractive visual material should be removed if the child with a hearing loss is not paying attention. 44% of the primary school teachers and 54% of the pre-primary school teachers answered this question correctly.

The above results indicate definite trends regarding the respondents' knowledge of classroom accommodation/modifications for the child with a hearing loss. The overall impression from the responses of the three subgroups can be summarised as follows:

The respondents appear to have more knowledge about this subsection of the questionnaire than about the subsection regarding the child with a hearing loss. Although there were some differences between the knowledge of the primary and pre-primary school teachers regarding some items in the questionnaire, these differences were slight and the teachers' overall performance on the questionnaire was similar. However, the responses of the majority of student teachers differ from those of the teachers, as fewer of them responded correctly and more of them indicated their uncertainty regarding specific aspects.

Inclusion of the child with a hearing loss assumes that the teacher will be able to accommodate the educational needs of the child by implementing specific classroom modifications (Brackett, 1997:356, Luckner & Denzin, 1998:1). According to Williams and Finnegan (2003:45), people's perceptions are based on their knowledge, which ultimately determines their actions. Thus the basis of teachers' instructional plans and accommodation for the child with a hearing loss is determined by their perceptions, based on their knowledge of hearing loss.

Limited research has been conducted in this regard and it is a pity that these results cannot be compared to those of similar studies. However, one item (Q26) can be compared to the study of Lass et al. (1985:213), who indicated that more than a third of classroom teachers (34,7%) erroneously believed that a teacher must speak very loudly to children with a hearing loss. The results recorded by the pre-primary school teachers in this study agree closely with these results, as 35% of them indicated the

same type of response. The item was also answered incorrectly by 43% of the primary school teachers and 41% of the student teachers.

Concerning the respondents in this study it should be noted that they were likely to have had very limited experience of implemented inclusive programmes. Their judgement in terms of classroom accommodation and modifications was therefore likely to reveal either their uncertainty or lack of knowledge about certain aspects.

5.2.2 Comparison of the subgroups of respondents

An analysis of variance (Welch's ANOVA) was used to determine whether the knowledge of the subgroups of respondents differed statistically significantly ($p \leq 0,05$). The results of the comparison between the attitudes of the respondents are illustrated in Table 5.4.

Table 5.4 Comparison of knowledge: student teachers, pre-primary school teachers and primary school teachers

Subsection of questionnaire	Student teachers (N=81)	Pre-primary school teachers (N=134)	Primary school teachers (N=86)	P-value
Knowledge: Inclusive education	Mean: 4,3827	Mean: 4,2612	Mean: 4,0814	0,2409
	Standard deviation: 1,0905	Standard deviation: 1,3373	Standard deviation: 1,2099	
Knowledge: The child with a hearing loss	Mean: 8,9259 ^A	Mean: 7,5746 ^B	Mean: 7,5581 ^B	0,0296*
	Standard deviation: 3,9711	Standard deviation: 3,8533	Standard deviation: 3,4423	
Knowledge: Classroom accommodation/modifications for the child with a hearing loss	Mean: 7,0617	Mean: 7,5970	Mean: 7,6628	0,1339
	Standard deviation: 2,2212	Standard deviation: 2,3043	Standard deviation: 1,8124	

* Significant at the 5% level

There was a significant statistical difference ($p \leq 0,05$) between the student teachers on the one hand and the pre-primary and primary school teachers on the other hand with regard to their knowledge of the child with a hearing loss. According to the mean

scores it seems that the student teachers were better informed about the child with a hearing loss than the teachers.

5.2.3 Relationship between respondents' knowledge and different variables

T-tests were carried out to determine whether the respondents' knowledge was significantly related to different variables, namely (a) their willingness to include a child with a hearing loss and (b) personal experience of hearing loss. An additional analysis of variance was used to determine if the teachers' knowledge was significantly related to their years of teaching experience.

5.2.3.1 Willingness to include a child with a hearing loss

An analysis of the teachers' responses to Question 12 showed that 94 of the teachers indicated that they were willing to include a child with a hearing loss in their classrooms. However, 121 teachers were not willing to include such a child, while five refrained from answering this question. Table 5.5 illustrates the relationship between the teachers' willingness to include a child with a hearing loss and their knowledge.

Table 5.5 Relationship between the teachers' willingness to include a child with a hearing loss and their knowledge

Subsection of questionnaire	Yes – willing to include a child with a hearing loss (N= 94)	No – not willing to include a child with a hearing loss (N = 121)	P-value
Knowledge: Inclusive education	Mean: 4,500	Mean: 3,9669	0,0012*
	Standard deviation: 0,9246	Standard deviation: 1,4430	
Knowledge: The child with a hearing loss	Mean: 8,3936	Mean: 7,0578	0,0076*
	Standard deviation: 3,5657	Standard deviation: 3,6567	
Knowledge: Classroom accommodation/modifications for the child with a hearing loss	Mean: 8,0452	Mean: 7,3223	0,0090*
	Standard deviation: 1,6125	Standard deviation: 2,3847	

* Significant at the 5% level

The above results reveal a significant statistical difference ($p \leq 0,05$) between the knowledge of those teachers who are willing to include a child with a hearing loss and those not willing to include such a child. The mean scores of every subsection of the questionnaire also indicate that those who are willing to include a child with a hearing loss have more knowledge regarding all three subsections of the questionnaire.

According to an analysis of the student teachers' responses on Question 12, a total of 37 of them were willing to include a child with a hearing loss in their classrooms. Another 26 student teachers were not willing to include a child with a hearing loss in their classroom, while 18 of them did not respond to this question. Table 5.6 illustrates the relationship between the student teachers' willingness to include a child with a hearing loss and their knowledge.

Table 5.6 Relationship between student teachers' willingness to include a child with a hearing loss and their knowledge

Subsection of questionnaire	Yes – willing to include a child with a hearing loss (n=37)	No – not willing to include a child with a hearing loss (n=26)	P-value
Knowledge: Inclusive education	Mean: 4,6757	Mean: 3,9615	0,0134*
	Standard deviation: 0,6689	Standard deviation: 1,2800	
Knowledge: The child with a hearing loss	Mean: 9,1351	Mean: 7,7308	0,1629
	Standard deviation: 4,3151	Standard deviation: 3,5503	
Knowledge: Classroom accommodation/modifications for the child with a hearing loss	Mean: 7,2162	Mean: 6,8461	0,5359
	Standard deviation: 2,2869	Standard deviation: 2,3442	

* Significant at the 5% level

The results in Table 5.6 above point to a significant statistical difference ($p \leq 0,05$) between the two groups (willing/not willing) of student teachers regarding their knowledge of inclusive education. Those who are willing to include a learner with a hearing loss appear to be better informed about inclusive education.

5.2.3.2 Personal experience of hearing loss

As indicated in Chapter 4 (Figure 4.5), 119 of the teachers indicated that they had no personal experience of hearing loss. Seven of the teachers had a hearing loss themselves, while 67 claimed to know a relative or friend with a hearing loss and 47 stated that they had already taught a child with a hearing loss. Table 5.7 illustrates the relationship between the teachers' experience of hearing loss and their knowledge.

Table 5.7 Relationship between teachers' personal experience of hearing loss and their knowledge

Subsection of questionnaire	No personal experience of hearing loss (n=119)	Personal experience of hearing loss (n=121)	P-value
Knowledge: Inclusive education	Mean: 4,1440	Mean: 4,2524	0,5343
	Standard deviation: 1,2762	Standard deviation: 1,3040	
Knowledge: The child with a hearing loss	Mean: 7,2627	Mean: 7,9903	0,1450
	Standard deviation: 3,8217	Standard deviation: 3,5686	
Knowledge: Classroom accommodation/modifications for the child with a hearing loss	Mean: 7,5508	Mean: 7,7184	0,5610
	Standard deviation: 2,0322	Standard deviation: 2,2203	

* Significant at the 5% level

The above results demonstrated no significant statistical difference ($p \leq 0,05$) between the knowledge of those teachers who had some personal experience of hearing loss and those with no such experience.

With regard to the student teachers, Figure 4.9 (Chapter 4) showed that three of the students had a hearing loss themselves, 23 claimed to know a relative or friend with a hearing loss and four stated that they had already taught a child with hearing loss during their practical training. Altogether 35 indicated that they have had no experience of hearing loss. The relationship between the student teachers' personal experience of hearing loss and their knowledge is represented in Table 5.8.

Table 5.8 Relationship between student teachers' personal experience of hearing loss and their knowledge

Subsection of questionnaire	No personal experience of hearing loss (n=35)	Personal experience of hearing loss (n=30)	P-value
Knowledge: Inclusive education	Mean: 4,4118	Mean: 4,3793	0,8987
	Standard deviation: 1,1837	Standard deviation: 0,8200	
Knowledge: The child with a hearing loss	Mean: 8,2941	Mean: 8,6896	0,7007
	Standard deviation: 4,2106	Standard deviation: 3,9106	
Knowledge: Classroom accommodation/modifications for the child with a hearing loss	Mean: 6,6176	Mean: 7,5172	0,1272
	Standard deviation: 2,3096	Standard deviation: 2,2932	

* Significant at the 5% level

These results indicate no significant statistical difference ($p \leq 0,05$) between the knowledge of those student teachers who have personal experience of hearing loss and those with no experience of hearing loss.

The results of all three subgroups of respondents are in accordance with the results obtained by Martin et al. (in Ross, 1991:406), who found in their study that teachers' personal experience of hearing loss seems not to be related to their state of knowledge.

5.2.3.3 Teaching experience

As indicated in Chapter 4 (Fig. 4.4), the majority (98) of the teachers had 11 to 20 years of teaching experience. Another 78 teachers had between one and 10 years of teaching experience and 44 teachers had in excess of 21 years of experience. Table 5.9 illustrates the relationship between the teachers' teaching experience and their knowledge.

Table 5.9 Relationship between teachers' teaching experience and their knowledge

Subsection of questionnaire	Teaching experience 1-10 years (n=78)	Teaching experience 11-20 years (n=98)	Teaching experience +21 years (n=44)	P-value
Knowledge: Inclusive education	Mean: 4,500 ^A	Mean: 4,1889 ^{AB}	Mean: 3,7727 ^B	0,0097*
	Standard deviation: 0,9500	Standard deviation: 1,3893	Standard deviation: 1,4605	
Knowledge: The child with a hearing loss	Mean: 8,1410	Mean: 7,5556	Mean: 7,2727	0,4075
	Standard deviation: 3,8468	Standard deviation: 3,7239	Standard deviation: 3,4866	
Knowledge: Classroom accommodation/modifications for the child with a hearing loss	Mean: 7,8590	Mean: 7,7045	Mean: 7,3889	0,3580
	Standard deviation: 1,8426	Standard deviation: 2,3829	Standard deviation: 1,9834	

* Significant at the 5% level

According to Table 5.9 a significant statistical difference ($p \leq 0,05$) was found between the knowledge of the teachers with one to 10 years of teaching experience and those with more than 20 years of experience of inclusive education. According to the mean scores the teachers with less experience (1-10 years) have more knowledge about inclusive education than the teachers with more than 20 years of teaching experience.

5.2.4 Summary of results: sub-aim #1

The findings of sub-aim 1 can be summarised as follows:

- Teachers as well as student teachers have a relatively good basic knowledge regarding the basic principles of inclusive education.
- Although both groups of respondents lack knowledge regarding the child with a hearing loss, the student teachers are better informed in this regard than the teachers.

- The respondents know more about classroom accommodation modifications for the child with a hearing loss than about the child with a hearing loss.
- There is a significant relationship between, on the one hand, the teachers' willingness to include a child with a hearing loss and, on the other hand, their knowledge of inclusive education, of the child with a hearing loss and of the necessary classroom accommodation/modifications for such a child.
- The student teachers' willingness to include a child with a hearing loss is significantly related to their knowledge of inclusive education only.
- The teachers' and student teachers' personal experience of hearing loss is not related to their knowledge regarding the three sub-sections of the questionnaire.
- In terms of the teachers' teaching experience, those with less experience (1-10 years) demonstrated more knowledge about inclusive education than those with more than 20 years of teaching experience.

5.3 RESULTS AND DISCUSSION OF SUB-AIM #2

<p>THE ATTITUDES OF TEACHERS AND STUDENT TEACHERS TOWARDS INCLUSIVE EDUCATION AND TEACHING THE CHILD WITH A HEARING LOSS IN INCLUSIVE EDUCATION</p>
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The second sub-aim of the study was to quantitatively determine and describe the teachers' and student teachers' attitudes towards inclusive education and teaching the child with a hearing loss in inclusive education. The responses obtained from the questionnaire survey are presented in the following order:

Firstly, the results of the three subgroups are discussed in terms of the three subsections of Section B of the questionnaire, namely:

- Attitude: Inclusion of the child with a hearing loss
- Attitude: Personal attitude towards a child with a hearing loss
- Attitude: Classroom accommodation/modifications for the child with a hearing loss

Secondly, the findings of the three subgroups will be compared.

Thirdly, the effect of different variables on the attitudes of the respondents will be discussed. An interpretation and discussion of the general trends of this sub-aim will conclude this section.

5.3.1 Results of attitude questionnaire survey

This questionnaire consisted of 30 questions, which focused on the teachers' and student teachers' attitudes towards inclusive education and teaching the child with a hearing loss in inclusive education. Several statements in this regard were formulated in such a way that the respondents could merely indicate whether they agreed or not. The questionnaire included a single type of response category, namely 'agree (yes) / uncertain /disagree (no)'. Some questions (1, 3, 4, 7, 9, 11-18 and 23-29) had to be coded inversely due to the formulation of the question content. The responses accepted as indicative of positive attitudes are indicated in Appendix E.

5.3.1.1 Attitude: Inclusion of the child with a hearing loss

This exposition includes the responses to Questions 1 to 14, 19 to 21 and 25 of Section B of the attitude questionnaire. The objective of this section was to determine the respondents' attitudes towards the educational inclusion of the child with a hearing loss. All numbers in this section correspond with the numbered questions on the

questionnaire that are presented in Appendix E. Figure 5.5 illustrates the results of the responses of the three subgroups of respondents.

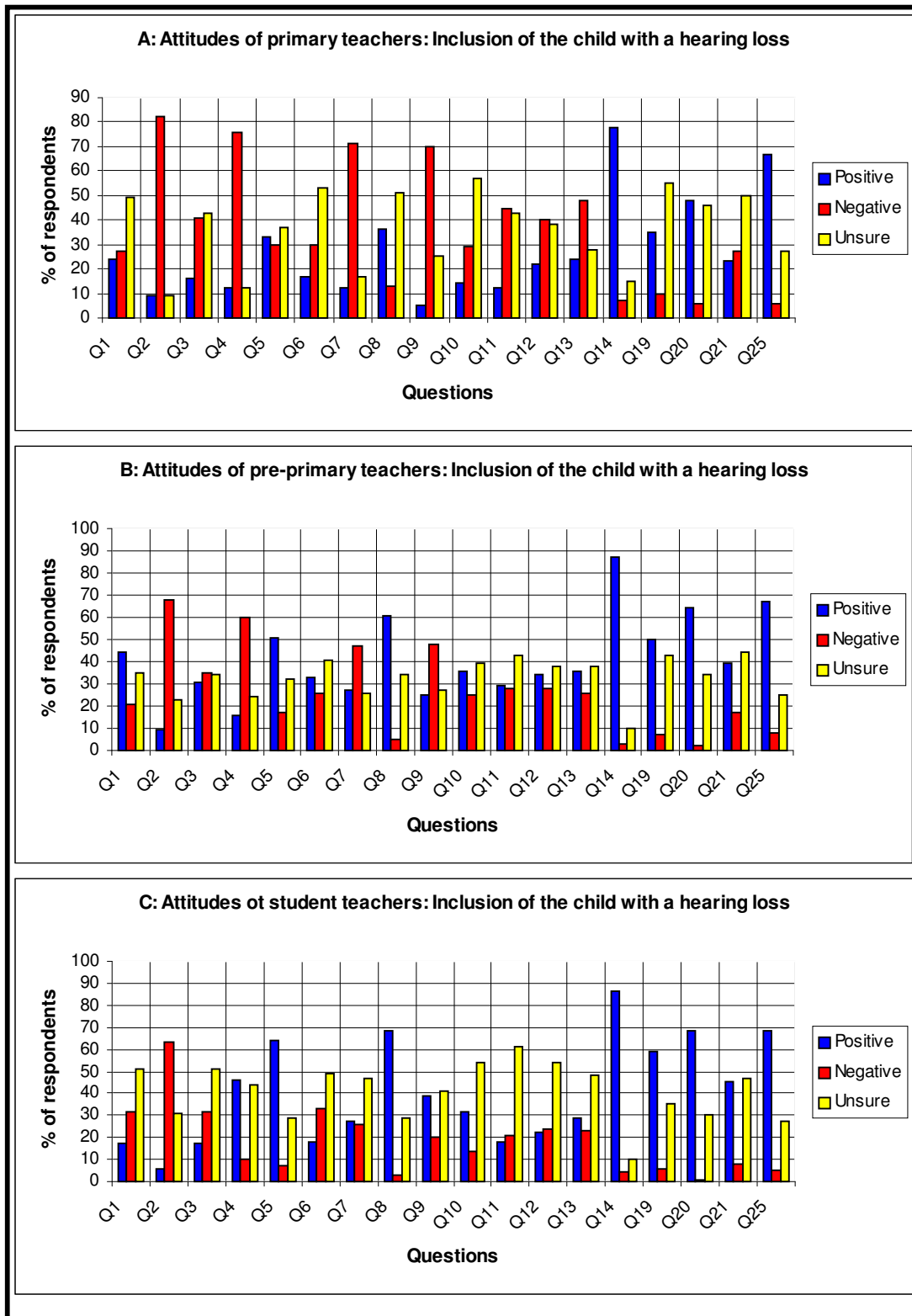


Figure 5.5 Attitude of respondents: Inclusion of the child with a hearing loss

According to Figure 5.5 a fair amount of variety exists in the responses of the different subgroups in this subsection. Some questions elicited a negative response, while others demonstrated a more positive attitude. In some cases the majority of respondents indicated that they were unsure about the appropriate answer.

In order to compare the responses of the three subgroups regarding the number of responses indicating a positive or negative attitude, the following table was compiled.

Table 5.10 A comparison of the responses of the three subgroups regarding their attitude towards the inclusion of the child with a hearing loss

% Respondents	Number of questions positive			Number of questions negative			Number of questions unsure		
	PT	PPT	ST	PT	PPT	ST	PT	PPT	ST
70%+ of respondents	1	1	1	4	0	0	0	0	0
50%+ of respondents	2	6	6	4	2	1	5	0	5
30%+ of respondents	6	13	10	10	5	4	11	11	14
Less than 30% of the respondents	12	5	8	8	13	14	7	7	4
	PT	PPT	ST	PT	PPT	ST	PT	PPT	ST

PT = Primary school teachers; PPT=Pre-primary school teachers; ST=student teachers

It is evident from the preceding table that the primary school teachers felt less positive towards certain statements, as only two of the questions were answered positively by 50% and more of them. Less than 30% felt positive towards 12 of the statements regarding the inclusion of a child with a hearing loss. In contrast, the responses of the pre-primary school teachers and student teachers reveal a different trend, as 50% and more of these respondents responded positively to six of the statements. Less than 30% of the pre-primary school teachers and student teachers had a positive attitude towards five and eight of the questions respectively.

With regard to negative attitudes, the primary school teachers as a group seemed to be more negative, since 30% and more of them gave negative answers to 10 of the questions. On the other hand, 30% and more of the pre-primary school teachers and student teachers gave negative answers to only five and four of the questions respectively.

With regard to uncertainty about a response, 50% and more of the primary school

teachers and student teachers were unsure about the appropriate answer to five of the questions. Altogether 30% and more (but not more than 50%) of the pre-primary school teachers were unsure about their answers with regard to 11 of the questions.

Concerning the individual questions, it was again assumed that should the majority (more than 70%)⁴ of the respondents answer positively to the question concerned, it would indicate a positive attitude in this regard. With specific reference to the educational inclusion of the child with a hearing loss, the results indicate that there was only one aspect that the majority (more than 70%) of all the respondents felt **positive** about, namely the fact that regular contact with a child with a hearing loss is not potentially harmful for hearing children (Q14).

Question 25 also elicited a **positive** response (but not more than 70%) from the respondents, as 67% of the primary and pre-primary school teachers, as well as 68% of the student teachers indicated that the behaviour of a child with a hearing loss is not likely to set a bad example for the rest of the class. There was no other matter that 50% and more of the primary school teachers felt positive about. Further statements that more than 50% (but not more than 70%) of the pre-primary school teachers and student teachers felt **positive** about included the following:

- 51% of the pre-primary school teachers and 64% of the student teachers indicated that children with hearing loss should, where possible, be given every opportunity to function in a regular class (Q5).
- 61% of the pre-primary school teachers and 68% of the student teachers indicated that inclusion is likely to foster greater understanding and acceptance of differences between learners (Q8).
- 50% of the pre-primary school teachers and 59% of the student teachers indicated that interaction is likely to enable the child with a hearing loss to develop a better self-image (Q19).
- 64% of the pre-primary school teachers and 68% of the student teachers

⁴ In this case 70% is indicative of an arithmetical majority and not a statistical majority.

indicated that children in a regular classroom are likely to develop a greater degree of acceptance of others with specific needs through contact with children with hearing loss (Q20).

The aspects that elicited responses indicative of a **negative** attitude from the majority (more than 70%) of primary school teachers include the following:

- 82% of the teachers were negative about the statement that a child with hearing loss can receive a better quality of education at a regular school than at a school for the deaf or hard of hearing (Q2).

The fact that the majority (more than 70%) of primary school teachers agreed with the following statements indicate their **negative** attitudes towards the inclusion of the child with a hearing loss:

- Separate education for children with hearing loss has been effective and should not be changed (Q4).
- The inclusion of children with hearing loss in regular schools is not very practical (Q7).
- Schools for the deaf and hard of hearing are the most appropriate places for educating all children with hearing loss (Q9).

There were no statements that elicited **negative** responses from 70% and more of the pre-primary school teachers and student teachers. However, 68% and 63% of them respectively responded negatively to the statement that a child with hearing loss could receive a better quality of education at a regular school than at a school for the deaf or hard of hearing (Q2).

Except for the above-mentioned results indicating definite positive and negative attitudes, some of the results reflect the respondents' **uncertainty** in respect of several aspects. The specific statements about which more than 50% of the primary school

teachers (but not more than 70%) felt unsure, include the following:

- The regular classroom can be a least restrictive environment for a child with a hearing loss (Q6).
- Inclusion is likely to foster greater understanding and acceptance of differences between learners (Q8).
- Children with hearing loss who are included will have a greater ability to function in a hearing world than those who attend schools for the deaf or hard of hearing (Q10).
- Interaction is likely to enable the child with a hearing loss to develop a better self-image (Q19).
- The challenge of being in a regular classroom is likely to promote the academic growth of the child with a hearing loss (Q21).

With regard to the results of the pre-primary school teachers, there were no statements that 50% and more of the respondents felt unsure about.

The student teachers (50% and more, but not more than 70%), however, indicated that they were **unsure** about the following:

- The inclusion of children with hearing loss in regular classes would lead to a lowering of present standards in schools (Q1).
- Most children with hearing loss would not cope in a regular school (Q3).
- Children with hearing loss who are included in mainstream education would be better able to function in a hearing world than those who attend schools for the deaf or hard of hearing (Q10).
- Inclusion is likely to have a negative effect on the emotional development of

the child with a hearing loss (Q11).

- Children with hearing loss are likely to be isolated from their hearing peers (Q12).

The overall impression from the responses of the three subgroups can be summarised as follows:

It appears that the primary school teachers had more negative attitudes towards the educational inclusion of the child with a hearing loss than did the pre-primary school and student teachers. The student teachers tend to be either more positive towards the educational inclusion of the child with a hearing loss than both groups of teachers, or to be unsure about the appropriate answer.

When evaluating these responses against similar studies it becomes clear that the teachers in this study were more negative about the educational inclusion of children with hearing loss than were their counterparts in other countries. According to Martin et al. (1988:86) the general attitude of the sample population in his study were positive towards the mainstreaming of hard-of-hearing children. Sixty per cent of teachers in a research study conducted by Chorost (1988:9) indicated that they believed that the placement of the child with a hearing loss in inclusive education was appropriate. In the current study 76% of the primary school teachers and 60% of the pre-primary school teachers indicated that separate education for children with hearing loss has been effective and should not be changed. Their negative attitudes, especially those of the primary school teachers, were further confirmed by the fact 70% of them indicated that schools for the deaf and hard of hearing are the most appropriate places for educating all children with hearing loss.

The more positive attitudes of the student teachers in the current study are in accordance with those reported by Avramidis et al. (2000b:288), namely that student teachers appear to be more positive towards the overall concept of inclusion. As they have not yet entered the professional arena and been exposed to the demands of a teaching career, it is not surprising that they appear to be more positive about the

notion of inclusion.

5.3.1.2 Personal attitude towards a child with a hearing loss

This exposition includes the responses of the respondents to Questions 15 to 18 of Section B of the attitude questionnaire. The objective of this section was to determine the respondents' personal attitudes towards the child with a hearing loss. All numbers in this section correspond with the numbered questions on the questionnaire that are presented in Appendix E. Figure 5.6 illustrates the responses of the three subgroups of respondents.

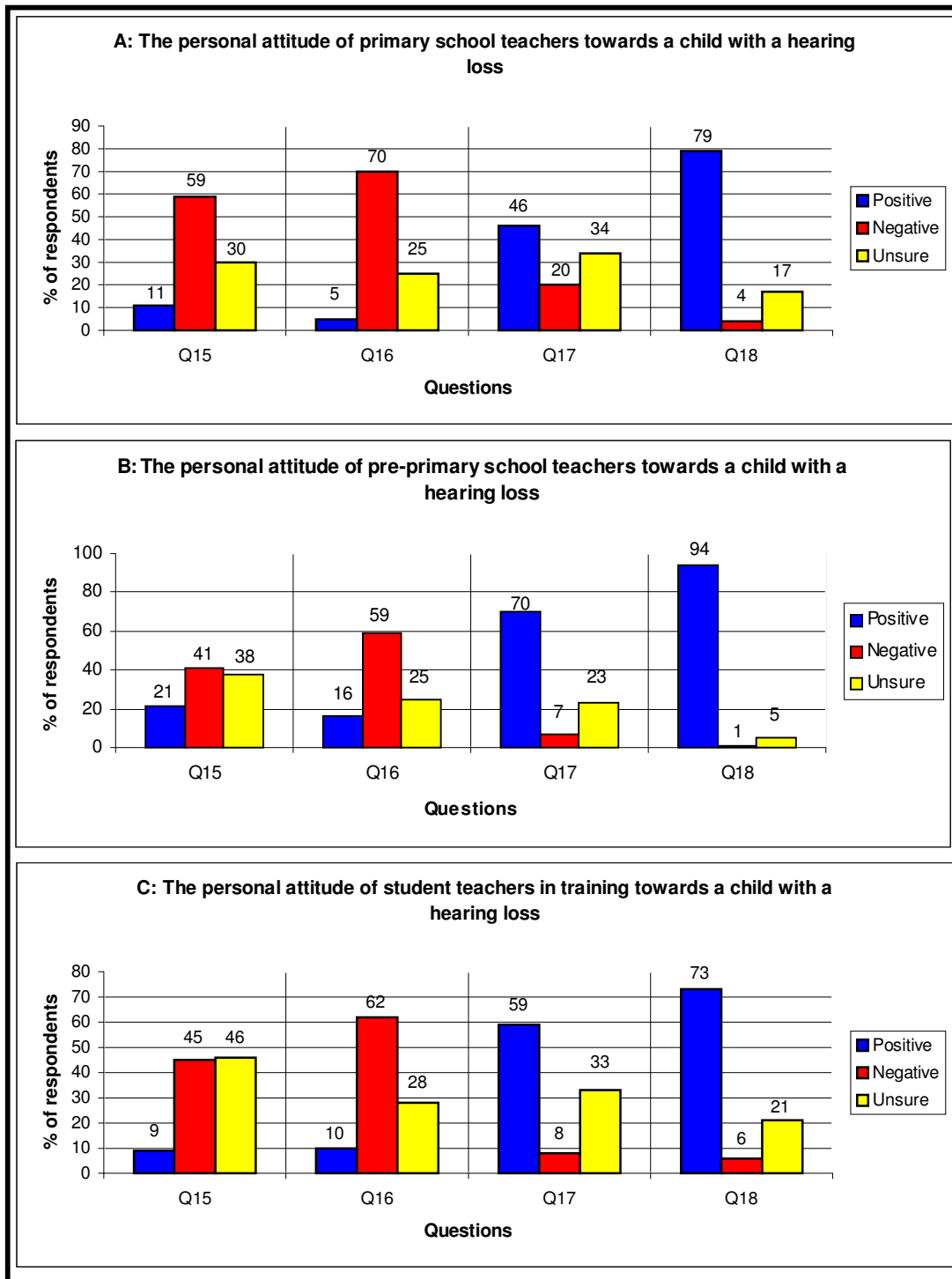


Figure 5.6 Personal attitude of respondents: The child with a hearing loss

These results indicate that there were specific issues that the respondents felt negative about, as well as issues that elicited a more positive response. In order to compare the preceding responses of the three subgroups, the following table (Table 5.11) was compiled.

Table 5.11 A comparison of the responses of the three subgroups regarding their personal attitude towards the child with a hearing loss

% Respondents	Number of questions positive			Number of questions negative			Number of questions unsure		
	PT	PPT	ST	PT	PPT	ST	PT	PPT	ST
70%+ of respondents	1	2	1	1	0	0	0	0	0
50%+ of respondents	1	2	2	2	1	1	0	0	0
30%+ of respondents	2	2	2	2	2	2	2	1	2
Less than 30% of the respondents	2	2	2	2	2	2	2	3	2
	PT	PPT	ST	PT	PPT	ST	PT	PPT	ST

PT = Primary school teachers; PPT=Pre-primary school teachers; ST=student teachers

It is clear from Table 5.11 that 70% and more of the primary school teachers and student teachers were positive about one question regarding their personal attitude towards a child with a hearing loss. The same percentage, 70% and more, of the pre-primary school teachers were positive about two of the statements. Only 30% and more of *all* the respondents also felt positive about two statements.

With regard to negative responses, the primary school teachers felt more negative than the other respondents, as 50% and more of them (primary school teachers) responded negatively towards two of the four statements. Fifty per cent and more of the other two subgroups of respondents responded negatively to only one statement. If the respondents' uncertainty is taken into account, 30% and less of the pre-primary school teachers indicated that they were unsure about what to respond to three of the questions. The primary school teachers and teachers in training were also unsure about their responses, as 30% and more (but not more than 50%) indicated they were unsure about how to respond to two of the statements regarding their personal attitude towards a child with a hearing loss.

With regard to the individual questions, a positive answer by the majority (more than

70%)⁵ of respondents to the question concerned was again assumed to imply a positive attitude. With specific reference to the respondents' personal attitude towards a child with a hearing loss, the results indicate that there is only one aspect about which the majority (more than 70%) of primary school and student teachers felt positive: they do not tend to ignore a child with a hearing loss (Q18). Seventy per cent and more of the pre-primary school teachers also responded positively to this statement and to the statement regarding their own feelings in the presence of a child with a hearing loss (Q17).

The negative attitudes of the respondents become clear in their responses to Question 16, as 50% and more of all the respondents indicated that they felt uneducated and uninformed about children with a hearing loss. Another matter that elicited a negative response was Question 15. This was because more than 50% of the primary school teachers and more than 30% (but not more than 50%) of their pre-primary school colleagues and student teachers indicated that they felt frustrated, since they didn't know how to help the child with a hearing loss.

Similar findings were reported by Avramidis et al. (2000b:289) who indicated that respondents who perceive themselves as competent enough to cater for a child with specific educational needs, appear to hold more positive attitudes towards inclusive practices.

5.3.1.3 Attitude: Classroom accommodation/modifications for the child with a hearing loss

This exposition involves the responses of the respondents to Questions 22 to 24 and 26 to 30 of Section B of the attitude questionnaire. The objective of this section was to determine the respondents' attitudes towards the necessary classroom modifications in order to accommodate and include the child with a hearing loss. All numbers in this section correspond with the numbered questions on the questionnaire that are presented in Appendix E. Figure 5.7 illustrates the results of the responses of the three subgroups of respondents.

⁵ In this case 70% is indicative of an arithmetical majority and not a statistical majority.

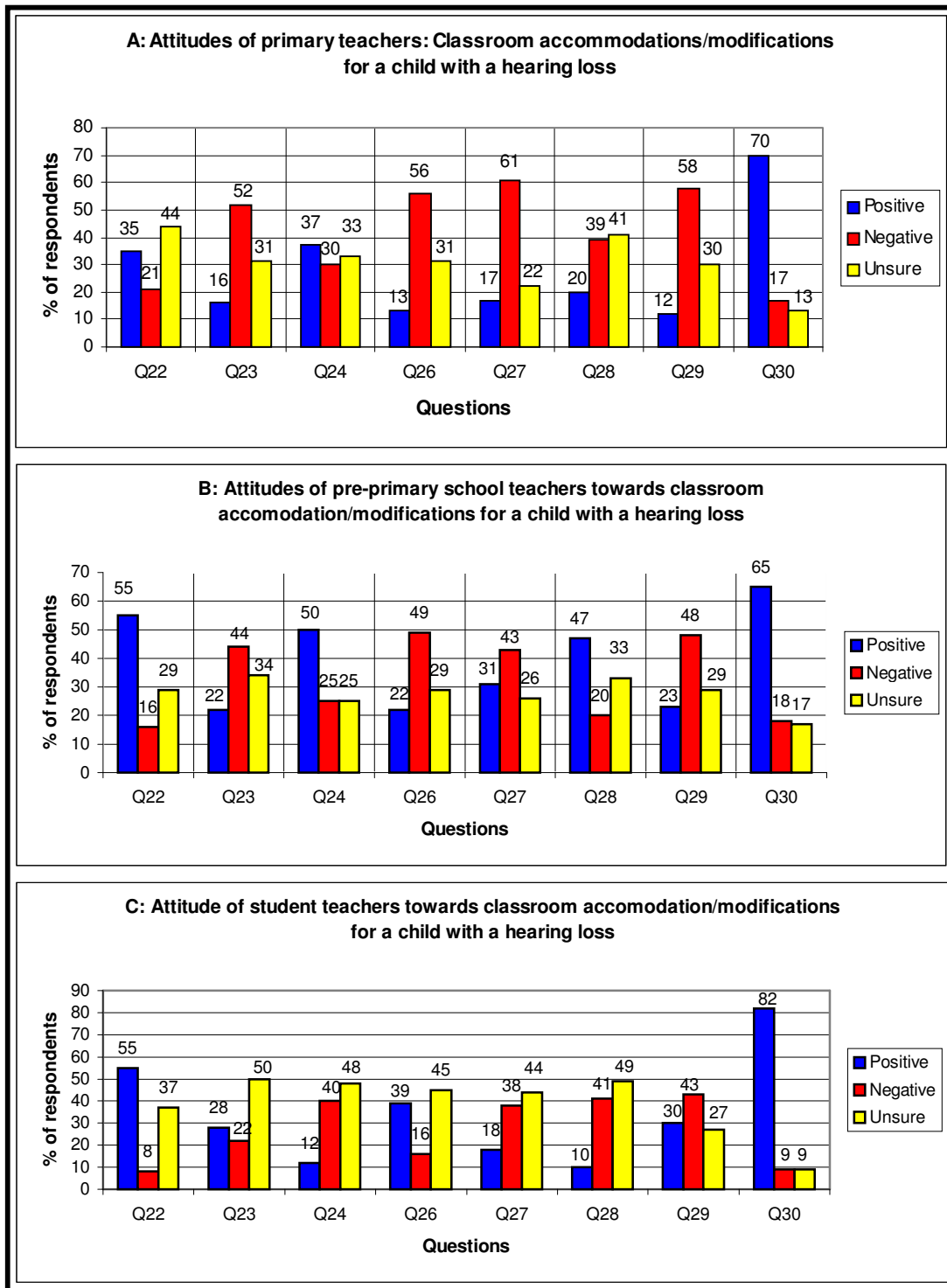


Figure 5.7 Personal attitude of respondents: classroom accommodation/modifications for the child with a hearing loss

The results presented in Figure 5.7 indicate a variety of responses with regard to the respondents' attitudes towards the necessary classroom accommodation/ modifications for the child with a hearing loss. It is clear that the variety of responses applies not only to the different questions, but also to the performance of the different subgroups of respondents.

In order to compare the responses of the three subgroups regarding the number of responses indicating a positive or negative attitude, the following table (Table 5.12) was compiled.

Table 5.12 A comparison of the responses of the three subgroups regarding their attitude towards classroom accommodation/modifications for the child with a hearing loss

% Respondents	Number of questions positive			Number of questions negative			Number of questions unsure		
	PT	PPT	ST	PT	PPT	ST	PT	PPT	ST
70%+ of respondents	1	0	1	0	0	0	0	0	0
50%+ of respondents	1	3	2	4	0	0	0	0	1
30%+ of respondents	3	5	4	6	4	4	6	2	6
Less than 30% of the respondents	5	3	4	2	4	4	2	6	2
	PT	PPT	ST	PT	PPT	ST	PT	PPT	ST

PT = Primary school teachers; PPT=Pre-primary school teachers; ST=student teachers

The results depicted in Table 5.12 indicate that the primary school teachers appear to be least positive about the statements regarding classroom accommodation/ modifications for the child with a hearing loss. Only one statement elicited a positive response from 50% and more of them. Less than 30% of these teachers felt positive about five of the eight statements. Four of the statements actually elicited a negative response from 50% and more (not more than 70%) of the primary school teachers.

In contrast, the pre-primary school and student teachers were more positive about statements regarding classroom accommodation/modifications for the child with a hearing loss. Altogether 50% and more of them responded positively to three and two of the statements respectively. Furthermore, not one of the statements elicited a negative response from more than 50% of the pre-primary school teachers and student teachers.

In view of the fact that Figure 5.7 and Table 5.12 indicate definite differences between responses of the different subgroups, the performance of each subgroup will be discussed against the background of certain questions. When focusing on the individual questions, it can be assumed that if the majority (more than 70%)⁶ of the respondents answered positively to the question concerned, it is indicative of a positive attitude in this regard.

With regard to the primary school teachers, the only statement that elicited a **positive** response from more than 70% (and more than 50%), was the one regarding their willingness to allow a professional person in their class in order to support the inclusion of the child with a hearing loss (Q30). Aspects that revealed negative attitudes from the majority (50% and more) of these teachers include the following:

- 52% indicated that children with hearing loss require individual attention that would be to the detriment of the other learners (Q23).
- 56% indicated that dealing with the behaviour of a child with a hearing loss requires more patience than dealing with the behaviour of a hearing child (Q26).
- 61% indicated that regular school teachers should not be expected to teach children with hearing loss (Q27).
- 58% indicated that regular teachers do not have basic techniques to teach any children, including children with hearing loss (Q 29).

According to Table 5.12 there were at least six statements that indicated the **uncertainty** of more than 30% (but not more than 50%) of the primary school teachers. These included aspects such as the following:

⁶ In this case 70% is indicative of an arithmetical majority and not a statistical majority.

- The adjustments made by the teachers to accommodate children with hearing loss are likely to benefit most hearing learners in class (Q22).
- Having a child with a hearing loss in the class would require too much effort (Q28).

On the contrary, the responses of the pre-primary school teachers are indicative of more **positive** attitudes regarding this subsection of the questionnaire. Fifty per cent and more (but not more than 70%) of the pre-primary school teachers responded positively to at least three statements:

- 65% indicated that they would be willing to allow a professional person in their class in order to support the inclusion of the child with a hearing loss (Q30).
- 55% indicated that the adjustments made by the teachers to accommodate children with hearing loss are likely to benefit most hearing learners in class (Q22).
- 50% disagreed with the statement (Q24) that it would be more difficult to maintain order in a regular classroom than in one that contains a child with a hearing loss (thus indicating their positive attitude in this regard).

There were no statements that indicated a **negative** attitude from more than 50% of the pre-primary school teachers. It is interesting to note that all the aspects that indicated a **negative** attitude from 50% and more of the primary school teachers, indicated a **negative** attitude from only 30% and more (but not more than 50%) of the pre-primary school teachers. These included the following:

- 44% indicated that children with hearing loss require additional individual attention that would be to the detriment of other learners (Q23).
- 49% indicated that dealing with the behaviour of a child with a hearing loss

requires more patience than dealing with the behaviour of a hearing child (Q26).

- 43% indicated that regular school teachers should not be expected to teach children with hearing loss (Q27).
- 48% indicated that regular teachers do not have basic techniques to teach any children, including children with hearing loss (Q 29).

There were only two statements (Q23 and Q28) that elicited an unsure response from 30% and more (not more than 50%) of the pre-primary school teachers.

According to Table 5.12 the overall performance of the student teachers appear to be similar to that of the pre-primary school teachers. However, on closer inspection it is clear that different statements elicited different responses from the student teachers and from the pre-primary school teachers. The only statement that elicited a **positive** response from more than 70% of both groups was the statement regarding their willingness to allow a professional person in their class in order to support the inclusion of the child with a hearing loss (Q30). Another question that elicited a **positive** response from more than 50% of the student teachers was Question 22 in which it was stated that the adjustments made by the teachers to accommodate children with hearing loss are likely to benefit most hearing learners in class.

None of the statements elicited a **negative** response from more than 50% of the student teachers. However, although 30% and more (but not more than 50%) of them felt **negative** about certain statements, their **uncertainty** about the statements tended to overshadow their negative attitudes. For example:

- 40% indicated that it would be more difficult to maintain order in a regular classroom that contains a child with a hearing loss. Altogether 48% were unsure about their opinion regarding this aspect.
- Although 38% were of the opinion that regular teachers should not be

expected to teach children with hearing loss, 44% indicated that they were unsure about this statement.

- 41% indicated that having a child with a hearing loss in the classroom would require too much effort, but 49% were unsure about their opinion in this regard.

5.3.2 Comparison of the subgroups of respondents

An analysis of variance (Welch's ANOVA) was conducted to determine whether there were significant statistical differences ($p \leq 0,05$) in the attitudes of the three subgroups of respondents. The results of the comparison between the attitudes of the respondents are illustrated in Table 5.13.

Table 5.13 Comparison of attitudes: student teachers, pre-primary school teachers and primary school teachers

Subsection of questionnaire	Student teachers (n=82)	Pre-primary school teachers (n=134)	Primary school teachers (n=86)	P-value
Attitude: Inclusion of the child with a hearing loss	Mean: 7,0122 ^A	Mean: 7,2761 ^A	Mean: 4,8488 ^B	<0,0001*
	Standard deviation: 3,6531	Standard deviation: 4,7166	Standard deviation: 3,8303	
Personal attitude towards a child with a hearing loss	Mean: 1,5000 ^B	Mean: 1,9850 ^A	Mean: 1,40704 ^B	<0,0001*
	Standard deviation: 1,1249	Standard deviation: 1,0332	Standard deviation: 0,9378	
Attitude: Classroom accommodation/modifications for the child with a hearing loss	Mean: 3,2073 ^A	Mean: 3,35821 ^A	Mean: 2,6628 ^B	0,0108*
	Standard deviation: 1,7620	Standard deviation: 1,8164	Standard deviation: 1,6133	

* Significant at the 5% level

These results indicate a significant statistical difference ($p \leq 0,05$) between the attitudes of student teachers and pre-primary school teachers in comparison to the attitudes of the primary school teachers regarding the first subsection of the questionnaire (Attitude: Inclusion of the child with a hearing loss). According to the

mean scores of every subgroup it is clear that the student teachers and pre-primary school teachers are more positive towards educational inclusion of the child with a hearing loss in comparison to the primary school teachers.

The comparison of the three subgroups' personal attitudes towards the child with a hearing loss also yields very interesting results. A significant statistical difference ($p \leq 0,05$) was obtained between the attitudes of the student teachers and primary school teachers on the one hand and the pre-primary school teachers on the other hand. It is clear that the pre-primary school teachers have more positive personal attitudes towards the child with a hearing loss.

The results further indicate a significant statistical difference ($p \leq 0,05$) between the attitudes of student teachers and pre-primary school teachers in comparison to the attitudes of primary school teachers regarding the last subsection of the questionnaire (Attitude: Classroom accommodation/modifications for the child with a hearing loss). Based on the mean scores of every subgroup it is clear that the student teachers and pre-primary school teachers are more positive than their primary school colleagues about classroom accommodation/modifications necessary for the child with a hearing loss.

According to Avramidis et al. (2000b:278-279), similar findings were obtained in studies regarding attitudes towards integration (not inclusion). The most enthusiastic groups were pre-school teachers and student teachers. The most cautious group were the classroom teachers.

5.3.3 Relationship between the attitudes of the respondents and different variables

T-tests were carried out to determine whether the respondents' attitudes were significantly related to different variables, namely their willingness to include a child with a hearing loss and personal experience of hearing loss. An analysis of variants were used to determine if the teachers' knowledge was significantly related to their years of teaching experience.

5.3.3.1 Willingness to include a child with a hearing loss

An analysis of the teachers' responses to Question 12 shows that 94 of the teachers were willing to include a child with a hearing loss in their classrooms. Altogether 121 teachers were not willing to include a child with a hearing loss in their classroom, while 5 teachers did not answer this question. Table 5.14 illustrates the relationship between the teachers' willingness to include a child with a hearing loss and their attitude.

Table 5.14 Relationship between the teachers' willingness to include a child with a hearing loss and their attitude

Subsection of questionnaire	Yes – willing to include a child with a hearing loss (n=94)	No – not willing to include a child with a hearing loss (n=121)	P-value
Attitude: Inclusion of the child with a hearing loss	Mean: 9,5319	Mean: 3,9008	<0,0001*
	Standard deviation: 4,1053	Standard deviation: 3,1395	
Personal attitude towards a child with a hearing loss	Mean: 2,1596	Mean: 1,4793	<0,0001*
	Standard deviation: 0,8957	Standard deviation: 1,0255	
Attitude: Classroom accommodation/modifications for the child with a hearing loss	Mean: 4,1702	Mean: 2,3058	<0,0001*
	Standard deviation: 1,6889	Standard deviation: 0,1230	

* Significant at the 5% level

These results indicate a significant statistical difference ($p \leq 0,05$) between the attitudes of those teachers who are willing to include a child with a hearing loss and those not willing to include such a child. Based on the mean scores of every subsection of the questionnaire, those who are willing to include a child with a hearing loss display more positive attitudes in respect of all three subsections of the questionnaire.

As indicated before, 37 of the student teachers were willing to include a child with a hearing loss in their classrooms, while 26 student teachers were not willing to do so. A further 18 student teachers did not respond to this question. Table 5.15 below illustrates the relationship between the student teachers' willingness to include a child with a hearing loss and their attitudes.

Table 5.15 Relationship between student teachers' willingness to include a child with a hearing loss and their attitudes

Subsection of questionnaire	Yes – willing to include a child with a hearing loss (n=37)	No – not willing to include a child with a hearing loss (n=26)	P-value
Attitude: Inclusion of the child with a hearing loss	Mean: 8,8421	Mean: 4,8750	0,0001*
	Standard deviation: 3,3573	Standard deviation: 2,8024	
Personal attitude towards a child with a hearing loss	Mean: 1,7105	Mean: 1,1250	0,0443*
	Standard deviation: 1,0373	Standard deviation: 1,1156	
Attitude: Classroom accommodation/modifications for the child with a hearing loss	Mean: 3,9210	Mean: 2,2917	0,0002*
	Standard deviation: 1,7764	Standard deviation: 1,4590	

* Significant at the 5% level

The results in Table 5.15 show that a significant statistical difference was obtained between the two groups of student teachers regarding their attitudes. Those who were willing to include a learner with a hearing loss, also had a more positive attitude in respect of all three subsections of the questionnaire.

5.3.3.2 Personal experience of hearing loss

As indicated in Chapter 4 (Figure 4.5), 119 of the teachers indicated that they had no personal experience of hearing loss. Seven of them had a hearing loss themselves, while 67 claimed to know a relative or friend with a hearing loss. Altogether 47 stated that they had already taught a child with a hearing loss. Table 5.16 illustrates the relationship between the teachers' experience of hearing loss and their attitudes.

Table 5.16 Relationship between teachers' personal experience of hearing loss and their attitudes

Subsection of questionnaire	No personal experience of hearing loss (n=119)	Personal experience of hearing loss (n=101)	P-value
Attitude: Inclusion of the child with a hearing loss	Mean: 5,8305	Mean: 6,9320	0,0715
	Standard deviation: 4,5334	Standard deviation: 4,4902	
Personal attitude towards a child with a hearing loss	Mean: 1,5254	Mean: 2,0194	0,0004*
	Standard deviation: 0,9846	Standard deviation: 1,0288	
Attitude: Classroom accommodation/modifications for the child with a hearing loss	Mean: 2,9661	Mean: 3,2330	0,2633
	Standard deviation: 1,7143	Standard deviation: 1,8215	

* Significant at the 5% level

The results in Table 5.16 indicate that in terms of respondents' attitudes towards inclusion of the child with a hearing loss and attitudes towards classroom accommodation/modifications, no significant statistical difference ($p \leq 0,05$) was obtained between these two groups. However, with regard to personal attitudes towards a child with a hearing loss, it was found that the teachers with a personal experience of hearing loss had more positive attitudes. A significant statistical difference ($p \leq 0,05$) was found between the two groups.

With regard to the student teachers, Figure 4.9 (Chapter 4) indicates that three of the students had a hearing loss themselves, 23 claimed to know a relative or friend with a hearing loss and four stated that they had already taught a child with hearing loss during their practical training. A total of 35 indicated that they have had no experience of hearing loss. The relationship between the student teachers' personal experience of hearing loss and their attitudes is presented in Table 5.17.

Table 5.17 Relationship between student teachers' personal experience of hearing loss and their attitudes

Subsection of questionnaire	No personal experience of hearing loss (n=119)	Personal experience of hearing loss (n=101)	P-value
Attitude: Inclusion of the child with a hearing loss	Mean: 6,7714	Mean: 7,9286	0,2199
	Standard deviation: 3,5070	Standard deviation: 3,8096	
Personal attitude towards a child with a hearing loss	Mean: 1,200	Mean: 1,7857	0,0379*
	Standard deviation: 1,0233	Standard deviation: 1,1339	
Attitude: Classroom accommodation/modifications for the child with a hearing loss	Mean: 2,9143	Mean: 3,7143	0,0904
	Standard deviation: 1,6516	Standard deviation: 1,9599	

* Significant at the 5% level

According to these results no significant statistical difference ($p \leq 0,05$) was obtained between the two groups with regard to their attitudes towards inclusion of the child with a hearing loss and attitudes towards classroom accommodation/modifications. However, with regard to personal attitudes towards a child with a hearing loss, it is clear that the student teachers with personal experience of hearing loss, had more positive attitudes – a significant statistical difference ($p \leq 0,05$) was obtained between the two groups.

From these results (Table 5.16 and Table 5.17) it is clear that a relationship exists between the respondents' personal attitude towards the child with a hearing loss and their experience of hearing loss. These results are in accordance with research findings as teachers' experiences with people with specific needs have been reported to influence their attitudes (Opdal et al., 2001:145). According to Leyser et al. (1994:6) positive contacts and interactions with people who have specific needs promote teachers' support for inclusion.

5.3.3.3 Teaching experience

As indicated in Chapter 4 (Fig. 4.4), the majority (98) of the teachers had 11 to 20 years of teaching experience. Altogether 78 teachers had 1 to 10 years of teaching

experience, while 44 teachers had in excess of 20 years of experience. Table 5.18 illustrates the relationship between the teachers' teaching experience and their attitudes.

Figure 5.18 Relationship between teachers teaching experience and their attitudes

Subsection of questionnaire	Teaching experience: 1-10 years (n=78)	Teaching experience: 11-20 years (n=98)	Teaching experience: +21 years (n=44)	P-value
Attitude: Inclusion of the child with a hearing loss	Mean: 7,9103 ^A	Mean: 5,9556 ^B	Mean: 4,3182 ^C	<0,0001*
	Standard deviation: 4,6464	Standard deviation: 4,5193	Standard deviation: 3,4826	
Personal attitude towards a child with a hearing loss	Mean: 1,9615 ^A	Mean: 1,6889 ^{AB}	Mean: 1,3864 ^B	0,0058*
	Standard deviation: 1,0249	Standard deviation: 1,0347	Standard deviation: 0,8684	
Attitude: Classroom accommodation/modifications for the child with a hearing loss	Mean: 3,3462	Mean: 3,1000	Mean: 2,6364	0,0897
	Standard deviation: 1,8713	Standard deviation: 1,7991	Standard deviation: 1,6007	

* Significant at the 5% level

According to the results depicted in Table 5.18 significant statistical differences ($p \leq 0,05$) were obtained between all three subgroups regarding their attitudes towards inclusion of the child with a hearing loss. It appears as though the increase of years of teaching experience is marked by a decrease in positive attitudes. Thus, the teachers with only 1 to 10 years of teaching experience tended to be more positive than those with more than 10 years of teaching experience, while those with 11 to 20 years of teaching experience were more positive than those who had in excess of 20 years of experience.

With regard to the teachers' personal attitudes towards children with hearing loss, significant statistical differences ($p \leq 0,05$) were obtained between the attitudes of the teachers with 1 to 10 years of teaching experience and those with more than 20 years of experience. Based on the mean scores, the teachers with less experience had a more positive personal attitude towards the child with a hearing loss than the teachers with more than 20 years of teaching experience.

According to Avramidis et al. (2000b: 288) these findings are supported by a number of studies (of teacher attitudes towards integration – not inclusion) indicating that younger teachers and those with fewer years of experience were found to be more supportive of integration. Another study by Marshall et al. (2002:208) confirms these results by revealing that younger teachers were significantly more positive than their older colleagues. These attitudes might be partly explained by the fact that the younger teachers and those with less experience might have been brought up to experience an educational culture of cuts and lack of resources (Marshall et al., 2002:208).

5.3.4 Summary of results: sub-aim #2

The findings of sub-aim 2 can be summarised as follows:

- The teachers and student teachers all appeared to have negative attitudes about the inclusion of the child with a hearing loss. However, the results indicate that the primary school teachers were more negative towards the educational inclusion of the child with a hearing loss than the pre-primary school and student teachers.
- Regarding their personal attitudes towards a child with hearing loss, the respondents indicated that they feel inadequately educated, uninformed and frustrated by not knowing how to help the child with a hearing loss. They were positive in the sense that they do not tend to ignore a child with a hearing loss. However, the overall results indicate that in their personal attitude the pre-primary school teachers were more positive towards the child with a hearing loss than the primary school teachers and the student teachers.
- The primary school teachers were found to feel negative about the classroom accommodation/modifications for the child with a hearing loss. In contrast, the pre-primary school teachers and student teachers had more positive attitudes in this regard.

- The teachers' and student teachers' willingness to include a child with a hearing loss was found to be significantly related to their attitudes towards the inclusion of such a child, their personal attitudes towards the child with a hearing loss and the classroom accommodation/modifications necessary for this population.
- The teachers' and students teachers' personal experience of hearing loss was also significantly related to their personal attitudes towards a child with a hearing loss.
- In terms of the teachers' teaching experience, the increase of years of teaching experience was marked with a decrease in positive attitudes. The teachers with less experience (1-10 years) were more positive toward the educational inclusion of the child with a hearing loss than the teachers with 10 to 20 years of teaching experience. The latter group, in turn, were more positive than the teachers with more than 20 years of teaching experience. Teachers with less experience therefore had a more positive personal attitude toward the child with a hearing loss than the teachers with more than 20 years of teaching experience.

5.3.5 Integration of results: sub-aims #1 and #2

The literature confirms “knowledge” as a critical factor in determining teachers' ‘attitudes’ towards learners with specific educational needs (Wamae & Kang'ethe-Kamau, 2004:34). “The more informed a teachers feels about a handicapping condition, the more inclined she is to feel comfortable with the child having the condition and the more accepting will be her attitude towards the child... There is no fear like the fear for the unknown” (Wenday, 1986 in Wamae & Kang'ethe-Kamau, 2004:34)

The Pearson correlation coefficient (r) was used to determine the degree of relationship between the teachers' knowledge and attitudes regarding all the subsections of the questionnaires.

The results of this procedure are presented in Table 5.19.

Table 5.19 The relationship between the teachers' knowledge and attitudes

Subsection of questionnaires	Knowledge: Inclusive education	Knowledge: The child with a hearing loss	Knowledge: Classroom accommodation/modifications for the child with a hearing loss
Attitude: Inclusion of the child with a hearing loss	r: 0,30135	r: 0,39864	r: 0,20060
	P-value: <0,0001*	P-value: <0,0001*	P-value: 0,0027*
Personal attitude towards a child with a hearing loss	r: 0,11451	r: 0,14151	r: 0,05599
	P-value: 0,0895	P-value: 0,0355	P-value: 0,4075
Attitude: Classroom accommodation/modifications for the child with a hearing loss	r: 0,33408	r: 0,39344	r: 0,14628
	P-value: <0,0001*	P-value: <0,0001*	P-value: 0,0297*

* Significant at the 5% level

It is clear from the results in Table 5.19 that r (Pearson correlation coefficient) is not very high and thus not indicative of a perfect relationship (+1.0 or -1.0) between the knowledge and attitudes of the teachers. This result is probably due to the teachers' overall negative attitudes towards most of the statements in the attitude questionnaire. However, the p-value is significant ($p \leq 0,05$) and indicates a trend of positive relationships between the following aspects:

- The teachers' knowledge regarding inclusive education and their attitude towards the inclusion of the child with a hearing loss and classroom accommodation/modifications for the child with a hearing loss.
- The teachers' knowledge regarding the child with a hearing loss and their attitude towards the inclusion of the child with a hearing loss and classroom accommodation/modifications for such a child.
- The teachers' knowledge regarding the classroom accommodation/modifications for the child with a hearing loss and their attitude towards the inclusion of and classroom accommodation/modifications for such a child.

It is clear that no definite relationship exists between the teachers' knowledge in respect of all three subsections of the knowledge questionnaire and their personal attitudes towards the child with a hearing loss.

“... If attitudes are seen as developing out of the interaction between knowledge, skills and experience, then it is importance that newly qualified teachers possess appropriate levels of experience, knowledge and skills in order to support pupils' learning in a diversity model“ (Avramidis et al., 2000b: 289).

5.4 RESULTS AND DISCUSSION OF SUB-AIM #3

<p>THE NEEDS OF THE TEACHER WHO HAS TO TEACH A CHILD WITH A HEARING LOSS IN INCLUSIVE EDUCATION, WITH REGARD TO PERSONAL TRAINING, FURTHER TRAINING AND IN-SERVICE TRAINING</p>
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The third sub-aim of the study was to determine the teachers' and student teachers' needs with regard to further training pertaining to the educational inclusion of the child with a hearing loss. Two closed questions and one open question were used to obtain all possible information about the respondents' opinions and needs in respect of further training. The responses obtained will be presented in the following order:

Firstly, the results of Question 31 of the attitude questionnaire about the respondents' willingness for further training will be discussed.

Secondly, the respondents' choice of further training will be discussed.

Thirdly, the respondents' specific training needs in terms of coping with a child with a hearing loss will be discussed. An interpretation and discussion of the general trends of this sub-aim will conclude this section.

5.4.1 Respondents' willingness for further training

A question (Q 31) regarding the respondents' willingness for further training was included in the attitude questionnaire. Figure 5.8 illustrates the results of the responses to this question of the three subgroups of respondents.

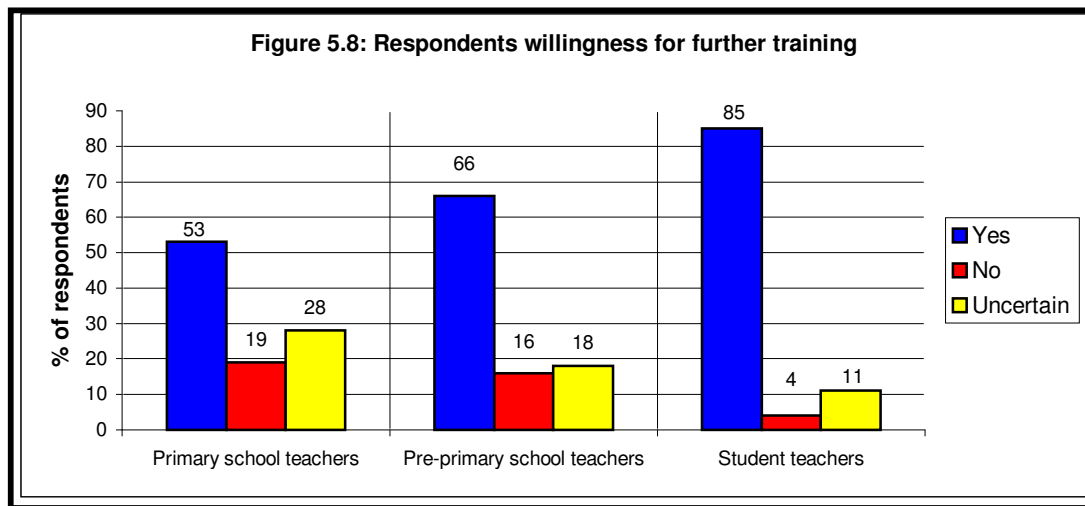


Figure 5.8 Attitude of respondents: Willingness for further training

The results in Figure 5.8 clearly indicate that 85% of the *student teachers* are willing to receive further training in order to be able to accommodate a child with a hearing loss in their classrooms. Only 66% of the *pre-primary school teachers* indicated a willingness for further training. However, the *primary school teachers* appear to be the most negative about this aspect, as only 53% of them indicated that they were willing to undergo further training, 19% indicated that they were not willing and 28% indicated that they were unsure how to react to this statement.

Although the student teachers had no difficulty in dealing with the concept of further training, the responses of the teachers are slightly disconcerting as the development of an inclusive system has vast implications for practicing teachers. The new, more direct role of the regular education teachers demands an increased understanding of learners with specific educational needs, types of appropriate curricular and instructional modifications etc.. As the teacher may be the most influential person in determining the extent to which a child's potential is achieved (Martin et al., 1988:84), teachers must be

prepared to accept the challenge, even if they need to be prepared (trained). “Teachers have a right and a responsibility to be prepared for the task at hand” (D’Isa Turner, 2001:2)

5.4.2 Respondents’ choice of further training

This exposition includes the responses to Question 1 of Section C of the attitude questionnaire. The objective of this question was to determine the respondents’ preferred choice of training. They were given four options of further training and were expected to arrange these options in order of their preference. Figure 5.9 below illustrates the results of the responses of the pre-primary and primary school teachers.

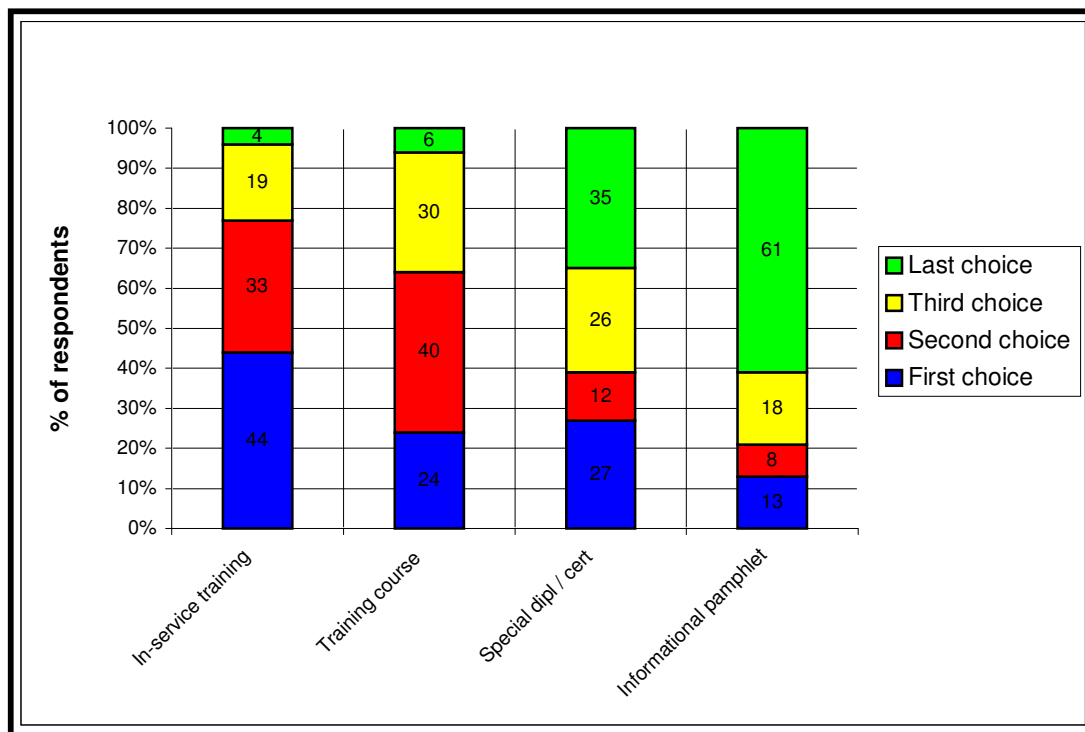


Figure 5.9: Teachers' choice of training

It appears as though 44% of the teachers prefer in-service training by a qualified audiologist as their first choice. Their second and third choices appear to be a training course over a period of two days as 40% and 30% of the teachers respectively selected this option. Altogether 61% of the teachers selected informal in-service training by means of an information pamphlet as their last choice. It is interesting to note that the option regarding a special diploma or certificate was not selected as a

preferred choice of training by any of the respondent groups.

Figure 5.10 illustrates the results of the responses of student teachers regarding their preferred choices of further training.

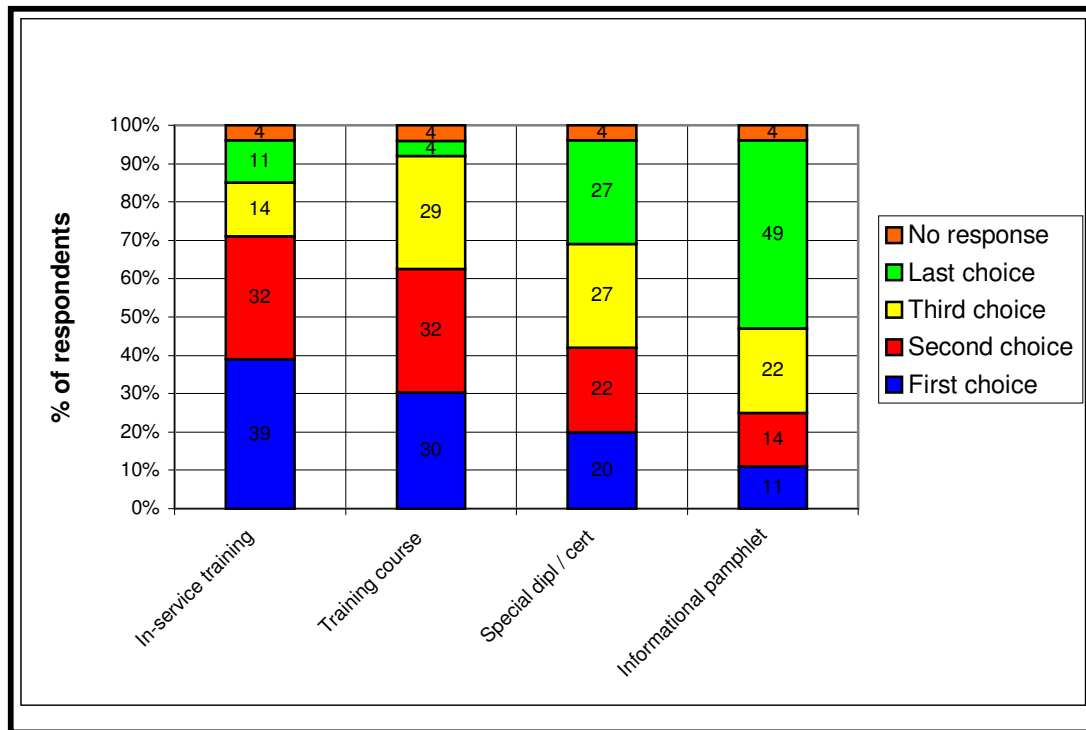


Figure 5:10 Student teachers' choice of training

According to Figure 5.10 above, 39% of the student teachers selected personal in-service training by a qualified audiologist as their first choice of training. Their second and third choices of training, like the teachers, involved a training course over a period of two days. Almost half of the student teachers (49%) indicated that informal in-service training through the use of an information pamphlet would be their last choice of training. As in the case of the teachers, a special diploma or certificate was not preferred as a definite option of training.

To ensure that teachers are well prepared for the successful implementation of the philosophy of inclusive education in South Africa, sufficient opportunities must be provided for professional development. Teachers and student teachers will have to gain knowledge, insight and new understandings of teaching and learning, and also to

acquire new skills (McLeskey & Waldron, 2002:7; Engelbrecht et al, 2001:84).

In-service training, the respondents' first choice of further training, should be considered an important part of educational planning with regard to any included child with a hearing loss (Ross et al., 1991:321). The reason for this is that the diversity of potential and skills among children with hearing loss means that no single professional can meet the needs of all children with hearing loss. As the inclusive setting abounds with new and challenging situations, the best way to support and train the teacher is through in-service training and support (Ross, 1991:408). Research has shown that teachers are more comfortable having a child with a hearing loss in class if in-service training was provided (Martin et al., 1988:94).

Another aspect that supports the notion of in-service training is the fact that pre-service or undergraduate training cannot provide all the information needed for the successful management of a child with a hearing loss (Ross et al, 1991:321). The ever-changing world of technology, new information and techniques compel even the best-trained professional to update his/her knowledge and skills on an ongoing basis. On the other hand, the results of the current study show that the student teachers are not adequately prepared to manage children with hearing loss effectively. As hearing loss is considered to be a low incidence disability, it is doubtful that any training institutions will modify their undergraduate curriculum in the near future to provide more information on educating the child with a hearing loss (Ross, 1991:408).

5.4.3 Respondents' specific training needs

Section C of the attitude questionnaire included an open question (Q2) regarding the respondents' specific training needs with regard to the child with a hearing loss in the inclusive setting. A qualitatively analysis was made of the responses and this is presented in Table 5.20. (Please note that some respondents indicated more than one training need.)

Table 5.20 The respondents' specific training needs regarding the child with a hearing loss

Specific training needs (content)	PT (n=86)	PPT (n=134)	ST (n=81)
Including the child with a hearing loss Teaching methods/strategies, communication in the classroom, group work, assessment of the child with a hearing loss, discipline, preferential seating, classroom resources, parental involvement	70	77	81
Child with a hearing loss Identification of hearing loss, needs, characteristics and limitations of the child with hearing loss, social-emotional development, speech and language development, learning strategies used by the child with a hearing loss	10	46	40
Communication methods Sign language, non-verbal communication, auditory-oral approach, deaf culture	10	28	14
Hearing aids The "what" and the "how" of hearing aids	2	3	3
No response	37 (43%)	55 (46%)	40(49%)

PT = Primary school teachers; PPT=Pre-primary school teachers; ST=student teachers

Although not all the respondents completed this question, the results (Table 5.20) indicate a definite need for more knowledge, especially with regard to the educational inclusion of the child with a hearing loss. Aspects that were specifically mentioned were teaching methods and strategies, communication in the classroom, group work, and assessment of the child with a hearing loss, discipline, preferential seating, the use of classroom resources and parental involvement.

It is interesting to note that the pre-primary school teachers and student teachers indicated a definite need for knowledge about the child with a hearing loss. However, only ten similar responses were obtained from the primary school teachers in this regard. A total of 28 of the pre-primary school teachers indicated that they needed more information about communication methods and the so-called deaf culture.

A fact that causes some concern is the respondents' need for knowledge about hearing aids. Only two responses indicating a need for information about such aids, were obtained from the primary school teachers, and three each from the pre-primary school and student teachers. This might be due to the fact that all of the respondents lack the necessary knowledge regarding the child with a hearing loss (refer to sub-aim 1)

According to Ross (1991:408), the content of any further training should eventually be framed in terms of the needs of the child with a hearing loss.

5.5 RESULTS AND DISCUSSION OF SUB-AIM #4

TO PROVIDE A *QUALITATIVE* DESCRIPTION OF THE DEMANDS (INCLUDING KNOWLEDGE AND ATTITUDE) FACING THE TEACHER OF A CHILD WITH HEARING LOSS IN INCLUSIVE EDUCATION

The fourth sub-aim of the study was to provide a qualitative description of the demands (including knowledge and attitude) that face the teacher of a child with hearing loss in inclusive education. The data for this discussion was obtained from the three focus group discussions. The four key questions of the discussion guide served as four themes and were also divided into sub-categories that relate to and support the specific theme. It is important to note that the subcategories that emerged were not predetermined, but generated and reviewed systematically during the course of the focus group discussions.

Each theme is set down according to the following format:

The direct quotations from the transcripts that represent the theme are given and analysed critically. Direct quotations from the different groups are colour-coded in order to differentiate between the responses of the three groups of participants, namely: Blue = speech therapists/audiologists, Green = parents, Red = teachers. An interpretation and summary of the general trends of this sub-aim will conclude this section. It is important to note that there will inevitably be some overlap between certain themes.

5.5.1 Theme 1: the needs of the child within the inclusive classroom

In each focus group discussion the participants cited a number of factors that they regard as the needs of the child with a hearing loss within the inclusive classroom. These are now discussed separately below:

5.5.1.1 The environment

It was interesting to note that it was only the speech therapists/audiologists that were concerned about the acoustical environment of the inclusive setting. Statements such as the following indicated this:

“The environment plays an unbelievably large role. The environment creates or destroys the education situation. If there are ceiling fans or a hard surface and open windows with children yelling outside. And those chairs and tables made of steel that go ‘ie’ ‘ie’ on the floors. That child can be the most well adapted cochlear child that there is, but he will not hear.”

“Schools must be built away from noise. And especially the classrooms where such a child is educated must be chosen in such a way that they are away from the street. Maybe acoustic tiles, carpets on the floors, even the choice of a non-metal dustbin.”

The environment of the child with a hearing loss in an inclusive setting is crucial. According to Brackett (1997:356) this is one of the ‘make or break’ factors of the inclusive setting. Having large numbers of learners in a classroom that is not acoustically treated provides a lot of background noise which, together with the typical classroom instructional distances, causes a negative listening environment for the child with a hearing loss.

5.5.1.2 Hearing aids and FM systems

Once again, it was mainly the speech therapists/audiologists who indicated the use of hearing aids and FM systems as a specific need for the child with a hearing loss in the inclusive setting:

“Each child with a hearing loss in an ordinary school ought to have a cochlear implant or hearing aids and a FM-system. In that manner you can eliminate the large difference in signal-to-noise ratio”

“I feel, for example, that all classes should have FM-systems – even normal children can benefit from this and this will also spare the teacher’s voice [especially in the classroom]. That she don’t need to shout.”

“The FM system is important, to wear it and to use it...”

Not only was the need expressed for the use of hearing aids and FM systems, but the proper daily maintenance of these aids was also indicated as a specific need.

“The hearing aid should work every day. And you must ensure that his hearing aid works. And also send spare batteries along.”

5.5.1.3 Realistic expectations

A very important aspect that was mentioned was that the teachers had to have realistic expectations regarding the child with a hearing loss, especially not to expect too little of the child.

“What I discovered is that the teachers expect less from this child with a hearing loss. She will therefore not make the same demands of him as of other children. And I think that one must tell her, but she must have realistic demands for this child.”

5.5.1.4 A team approach

The importance (need) for a team approach in the process of including the child with a hearing loss was supported by most of the participants. Statements such as the following indicated this:

“I am very serious about team approach. The team members must see each other – the team that at that stage, who is involved, usually mom, dad, me [audiologist] and then the teachers.”

Not only was the need expressed for the use of a team approach, but also valuable aspects were mentioned in terms of the functioning of the team, such as meeting regularly to discuss the progress of the child.

“We sit and talk about that what bothers us. And we try to do it about once per term”

“The teacher ought to monitor the child, together with the parents and the speech therapist, to immediately detect when the child doesn’t keep up anymore. Because many times it is discovered too late. That one can take preventative steps as soon as one discover that the child doesn’t keep up”

“As soon as the child (especially the older child) begins to show scholastic deviations it is essential that the whole team must know. That the teacher and the remedial teacher then start with remedial therapy. And that he also maybe must start with speech therapy again and then definitely must go to see a psychologist or educational psychologist again. You know, as soon as real scholastic problems are generated it is important that everyone must know”

The importance of a team leader was also mentioned:

“There must be a strong team leader. There must be somebody who takes leadership regarding this child’s case. I think, of course, a motivated parent is

the most important team member”

The parents and teachers specifically mentioned the importance of a supportive teacher-parent relationship, characterised by two-way communication. This recognises one of the most basic team structures, namely collaboration.

“There must be a very good parent-teacher relationship; in the sense of, if you stumble across a problem, you must be able to contact the teacher and say: “This is my problem.” There must be a good, open communication”

“The teacher must communicate with the parent as well. It must be two-way communication. It is very important that the teacher also has your telephone number, in order to phone you if there is something that you (the parent) can do to help the teacher”

One major concern of the teachers in terms of the team approach was that they were afraid to be judged by the team members, as they were really trying their best in a system that is currently not yet in place to fully support inclusive education. This is once again indicative of their lack of self-confidence about their own effort and stresses the need of team activities pertaining to teacher training.

“But if you have a hearing impaired child and those parents work along with you... they try to help you and don't attack you, it makes it a lot easier for that teacher. When you have such a child and the parents constantly attack you... you who in the meantime in your ignorance try to do your best and those parents constantly attack you, it becomes even more unbearable. The child's support network (team) must not necessarily be offensive toward the teacher because the teacher really tries her best”

The speech therapists/audiologists also mentioned the importance of a supportive relationship between the teachers and the therapist. Very significant statements supported the idea that it is not the role of the speech therapist/audiologist to judge the teachers, but that they should work together as a team, supporting one another in supporting the child.

“I, for my part, also indicated that I really need them. I need them. I don’t know what happens there [in the classroom] and they must please tell me, you know. I want to know more. That I [SLT] am not in control, in this situation. I [SLT] am only here and I also need more knowledge, and I need something from them. I need their [teachers] information. And you know, we said to each other: What can you tell me? We said: With what do I struggle and how can you help me? And I must tell you; I really think it worked very well”

5.5.1.5 Social and emotional aspects

The social and emotional needs of the child with a hearing loss in the inclusive setting was a clear matter of concern among the participants:

“I just want to say, that which is incredibly important to me, is the social and emotional needs of this child. It is different, different than the needs of another child in the mainstream education. And the teacher must know it”

“Yes, socialising. He has a need to socialise. It has much to do with acceptance”

“It is very important that the child is treated normally, just like the others.”

“I think that for me it was important that she knows: she is like a normal other child, even though she has this hearing problem.”

The participants not only recognised the social and emotional needs of the child with a hearing loss, but also indicated the importance of the role of the teachers to handle this sensitive aspect in the classroom.

“The teacher must be empowered to explain to the other children in the class (because they are rather curious) in such a way that it is acceptable. And to

explain to them in such a way that it doesn't turn this child into a small monster in the class – that it is acceptable for the other children.”

She must inform them (the other children) in what aspects this child is different and how one should adapt and that this child is just like them

“It is not necessarily bad and disrupting to have such a child in the class because it also teaches the 30 children that he/she isn't different than us. She is just like us. They don't experience her as different.”

As all the participants expressed their concern about the emotional/social needs of the child with a hearing loss, nearly all of them suggested a solution (also to be considered as a specific need of the child and teacher in the inclusive classroom), namely the 'buddy system'.

“It is perhaps always a good idea that the child receive a special friend who makes sure that he knows that we must go to the hall or we must go there now, etc”

“It is important that there is (because the collaboration is so important), with the coaching of the teacher's side, that there is a friend who gives some attention – The “Buddy” system.

“The “buddy system.” Someone who is with him and who just supports him if he doesn't properly understand what the instruction is.”

In order to summarise the above results and relate the specific issues to the sub-aim, the following table (Table 5.21) was developed.

Table 5.21 Theme 1: Demands facing the teacher of the child with a hearing loss

Theme 1: Main discussion points indicating the demands facing the teachers	Corroborative comments in literature
Teachers need to establish environments conducive to teaching a child with a hearing loss in an inclusive setting.	Luckner & Denzin, 1998:3; Easterbrooks & Radaszewski-Byrne, 1995:25; Berry 1992:31
Teachers must be able to use FM systems and monitor auditory equipment.	Luckner & Denzin, 1998:3; Berry 1992:31
Teachers must have realistic expectations of the included child.	Sands, et al., 2000:24; Voltz et al., 2001:6
Teachers must be able to work in a team.	Easterbrooks & Radaszewski-Byrne, 1995:26; Sass-Lehrer, 1986:11; Engelbrecht et al., 2001:84; Hudson & Glomb, 1997:443; Lloyd, 2000:144
Teachers must be able to handle the social and emotional needs of the child with a hearing loss.	Luckner & Denzin, 1998:4; Cambra, 2002:38; Grissom & Cochran, 1986:269

5.5.2 Theme 2: Changes needed to accommodate the child with a hearing loss in the inclusive classroom

Most changes mentioned by the participants were the inverse of some of the barriers to learning for the child with a hearing loss in the unique South African context, namely the teacher (knowledge and attitudes will be discussed under theme 3), classroom accommodation and modifications and assessment procedures.

The following exposition includes the typical comments by the focus group participants about the changes needed to accommodate the child with a hearing loss in the inclusive educational setting.

5.5.2.1 The teacher

The participants clearly indicated that not *all* teachers would be good candidates for inclusive education. Statements like the following supported the fact that these teachers would have to be selected – they would have to have an interest in and the appropriate personality to cope with the child with a hearing loss.

“You must select your staff members (that is what I think at this stage). I think

you must get your staff member in the school who is interested, en who can make a success of it.”

“If you are a dramatic person, then that is wonderful for that hearing impaired person... and a lively personality.’

5.5.2.2 Classroom accommodation and modifications

It was clear that the participants had many concerns about the changes that would need to be made in the teaching strategies used in the classroom of the child with a hearing loss. Some of the suggestions included the following:

- **Pre-teaching and post-teaching**

This was mentioned as a strategy to be implemented before the class moves on to a new topic and after a specific topic has been completed. The teacher, parents and child with a hearing loss must pre-view and post-view the material so that the child achieves mastery of the content material.

“If one can maybe only propose certain principles to the teacher, such as pre-teaching and then make this practical. That the teacher knows which reading books she will do next and that she sends them home along with the child the week beforehand. If the child is familiar with the book [beforehand], then she [the child] will also feel better. Understand more and receive more from the lesson. The principle of pre-teaching is therefore important.”

“...and also afterwards, maybe a ‘Post-teaching’ will do, then you’ll know that the child has received the maximum input.”

- **Adjusting to the child’s learning method**

An important aspect mentioned by the speech therapists/ audiologists was that the teachers have to adjust to the child’s learning method, thereby supporting the child to

improve his/her level of performance.

“That one specifically looks at how this child learns – the manner in which he learns and then adjust his schoolwork accordingly.”

- **Extra reading support**

“Additional training in reading – reading is incredibly important – especially if the child has a problem with reading, because most learning takes place through reading.”

- **Effective classroom communication**

As the communication needs of the child with a hearing loss stem directly from the hearing loss, various suggestions were made regarding classroom communication management. It was suggested that the teachers focus on the formulation of questions, check for comprehension on question content, paraphrase the question into a simpler form (if necessary), and repeat answers to questions.

“A child with a hearing loss normally has a problem with questions – question structure. The teacher has to specifically focus on asking questions and answering questions, the comprehension of questions.”

Further aspects that were suggested to optimise the child’s perception of spoken language included strategies such as gaining the child’s attention, speaking clearly, using repetition, checking for understanding.

“She must be aware of how she talks; otherwise the child will miss the information. That she is trained to use techniques, such as for example: Talk clearly, repeat, check, look at the child. You know, and that she ensures that the child understands.”

It was also mentioned that the teachers require strategies for handling communication

breakdown.

“She notices that when ... switches off. And when he switches off, he totally switches off. Then she loses him for the rest of the class and all that she does is, she merely goes and picks him up, she hooks him on again and continues with the rest of the class.”

Various suggestions were made regarding the modifications necessary to ensure that the child has auditory and visual access to communication with the teacher. This included suggestions like adapting the environment to enhance speech perception, such as ensuring that the teacher's face is well illuminated, and structuring the classroom to allow the child with a hearing loss visual access to the teacher and other learners.

“One knows that the light should not shine on their eyes, it should fall on your face. You must constantly be aware of their needs and that your classroom is structured accordingly... and can make adjustments wherever they are needed.”

Further, preferential seating was suggested to keep the distance between the teacher and the child to a minimum, resulting in optimal speech perception.

“One must constantly be aware of the light and then also that the child sits close to you because you look at the [child's] face... is there comprehension?”

“The teachers must realise what are the limitations of the child and therefore pay attention to the positioning in the classroom.”

- **Visual support**

The use of the child's visual modality was stressed by comments regarding the teacher's responsibility to use patterns of presentation such as visual demonstrations and writing key words on the board.

“I always feel that the teacher can make much more use of visual hints, e.g. writing the homework on the blackboard.”

“One works a lot more visually... use lovely apparatus and...”

5.5.2.3 Assessment

The changes needed in the assessment of the child with a hearing loss appeared to be a major concern of all the participants involved, especially the parents. As all the tests are presented primarily through reading, any problem the child has in understanding the written word has the potential to impact negatively on his/her results.

A specific aspect that was mentioned was the complexity of language in written format.

“Although he has a limited vocabulary, he understands the work and can do much better in his exams if the questions were asked differently or if there were two or three synonyms from which he could chose one. He might be able to recognise one of the three, but one of the other two words is used and as a result he does not understand.”

The parents stated clearly that the child must have the opportunity to ask for clarification if he/she does not understand the written questions. It was stressed that the purpose of the test is to assess a child’s knowledge of academic content, and not his/her grasp of a particular question format.

“When we help her to learn, she knows the answer. The moment she writes the test, she writes something totally stupid or she leaves it open. Then you notice that the question is asked in a different manner. And we went to the principal and I asked that she would be allowed to ask if she does not understand the question.”

One parent expressed a wish to be able to review the vocabulary of the test with the teacher, some time prior to the scheduled administration of the test.

“I wish I would be able to take that question paper beforehand and indicate for the teacher with a pencil – this word my child will not know. Maybe the answer, but this question she will not understand.”

Some specific suggestions were made regarding adjustments that would be necessary when assessing children with hearing loss, such as keeping the child’s abilities in mind when constructing the test, and allowing extra time to complete the test.

“The teachers must adapt the exams for the child. They must know how to ask the questions – to not ask ambiguous questions.”

“One must also maybe give the child a bit more time or maybe read it slowly...”

Another suggestion was the possibility of oral exams. However, one therapist indicated specifically that although it was a feasible idea, the authorities would not allow it.

“They will most likely do much better in an oral exam than in a written exam.”

“But the department does not propose oral exams. The department is very strict about oral exams. It is really in exceptional cases that they use oral exams. This is very bad, because I feel that learners could do much better.”

5.5.2.4 Language of instruction

Based on the fact that children with a hearing loss are not always able to develop the same competent and intuitive grasp of the language as their hearing peers, it was suggested that the child must receive his/her education in his/her mother tongue (home language).

‘It seems to me that we as therapists should maybe tell the parents – ok, I do understand that it is their choice – but they should maybe rather stick to mother tongue education. Because it is such a huge problem for these children to learn one language. Let alone a second language.’

“But there is also a need for the child to (in our opinion), to only have to learn one compulsory language at school.”

“The mother tongue is important. It is much easier for a disabled child to be taught in his mother tongue or first language. Think this should be national law.”

One of the controversies regarding inclusive education for the child with a hearing loss also emerged in the discussions, namely the use of Sign Language as the language of instruction. Although the participants acknowledged the fact that some parents prefer their children to use Sign Language, it was clear that the teachers were a bit hesitant about this, indicating that they were not willing to go for further training in this regard.

“For some people sign language is a sensitive issue. They want their children to do this... This is part of their deaf culture...”

“They want their children to speak sign language. Now you can imagine if you tell the teacher that she must learn sign language... I’m not prepared to do that.”

“I am sorry but I am not prepared to also do that. I have enough work and do everything to the best of my possibilities. I am not prepared to also do that.”

“To tell me to learn sign language is the same as telling me to learn French. I am not prepared to learn sign language for one child in 10 years.”

In order to summarise the above results and to relate the specific issues with the sub-aim, the following table (Table 5.22) was developed.

Table 5.22 Theme 2: Demands facing the teacher of the child with a hearing loss

Theme 2: Main discussion points indicating the demands facing the teachers	Corroboration in literature
Teachers need to make the necessary classroom accommodation and modifications in order to facilitate an inclusive learning environment for the child with a hearing loss.	Luckner & Denzin, 1998:3-6; Sass-lehrer, 1986:233; Easterbrooks & Radaszewski-Byrne, 1995:25; Sass-Lehrer, 1986:11; Berry 1992:32-33.
Teachers need to make the necessary adaptations with regard to the assessment of the child with a hearing loss.	Luckner & Denzin, 1998:3-6; Easterbrooks & Radaszewski-Byrne, 1995:24
The teacher will have to adapt to a multicultural multilingual context.	Lomofsky & Lazarus, 2001:312

5.5.3 Theme 3: demands posed to the knowledge, attitudes and skills of the teachers

In each focus group discussion, the participants cited a number of aspects regarding the teachers' knowledge, attitudes and skills that they regard as important. These are now discussed separately below:

5.5.3.1 Knowledge

The knowledge of the teacher was regarded as a very important element in the whole process of inclusion.

"I think for the first time the teacher's knowledge is very important."

However, it was also a matter of concern as some participants were of the opinion that teachers in the regular classroom do not have sufficient knowledge to teach children with hearing loss and therefore need additional information, training and support.

"I often talk with the teachers on the phone. And it seems to me that their largest problem is a lack of knowledge. And they want practical guidelines for handling these children."

A lot of empathy was also expressed towards the teacher for not having sufficient knowledge about the child with a hearing loss.

“It can be extremely stressful for a teacher, to have a deaf child, hearing impaired child in her class, because she does not know how to handle the child.”

“She must be informed about the hearing impaired child. So that the child is not a threat for her.”

The following aspects regarding the expected knowledge of the teacher were mentioned:

- **Knowledge of different disabilities**

“They must be aware of various disabilities. Not only of the child with hearing loss.”

“They must be aware that children with hearing loss often also can have additional problems. Additional disabilities, such as visual problems, auditory processing problems...”

- **Knowledge of the hearing loss**

“They must have knowledge of the different levels of hearing loss.”

“She must know what is the pathology of the ear, why the child is half-deaf.”

- **Knowledge of the characteristics and needs of the child with a hearing loss**

“Knowledge of the influence of hearing loss on the development of speech and language; and the effects on reading and learning.”

“There are certain things that the teacher must know that stand out for me. The child has articulation problems; he has language problems; he has comprehension problems; he does not understand what she says.”

“Knowledge of the concrete thinking of a deaf child. They have difficulty associating with things that they cannot see, that they cannot comprehend.”

“The teachers must know that the children have a problem with learning language. They must understand this. They must know the children struggle with sentence construction, she struggles with vocabulary, she struggles with comprehension exercises and she struggles a little with mathematics.”

“She must know he will maybe become tired quicker than a other child, and why this is the case. And if he starts whimpering, why is that? And if one does not know about his social needs – e.g. he will not easily be part of a group, and the reasons for that.”

- **Knowledge of language development**

“Knowledge of language development. I would like for her to more or less know how expressive language development unfolds. That she can see, oops but this child is not totally up to standard with regard to development.”

- **Knowledge of auditory processing**

“Knowledge of auditory processing. Many teachers do not really know what this is. They must be able to differentiate between the various existing divisions of auditory processing. I would like to see that they obtain knowledge about that, so that this will help me with my diagnosis as SLT.”

- **Knowledge of hearing aids**

“The hearing aids; how to check them.”

“...and then with regard to hearing aids, I feel that this is something that they should always have knowledge of – they must not only be aware of the hearing aid, but also how it works.”

“What does she really hear? Can she really hear with this thing [hearing aid]? And if it stops working, what will I do?”

“She must know why there is the cochlear implant. She must at least have a little bit of knowledge about the battery that is flat.”

“She must at least understand a little about the apparatus, so that she will know if it is flat, or if it has a loose wire.”

“How does a hearing aid work? How does a FM system work?”

- **Knowledge of classroom strategies**

“Knowledge of adjustment in the classroom is important. They must know what behavioural features to take note of when they see that the child is not coping; know where to position the child in the classroom and how to structure the environment.”

“She must realise, but this child has now not understood what I said. He does not have this word. Maybe I have to put in another word and maybe he does not have this vocabulary. She must have knowledge of this, that one can do something like that.”

“And the greatest need is practical things. What do I do in this case? Or, look, there where she is sitting on the mat, is that where she should sit? I don't know where she should sit. Does she have to see my lips, or doesn't she really have to?”

“What is the type of thing that you must take notice of when you

communicate with the child. Basic things in terms of curriculum adjustments, adaptation of my skills.”

Apart from all the above aspects regarding the teacher’s knowledge, it was clear that such knowledge had to be based and focused on the specific needs of the child with a hearing loss.

“If one is aware of the child and what his so-called specific needs are, you can begin to make plans to meet those needs. I think there are often needs that are skipped or that one is not aware of and that then possibly cause the fact that there is not good communication between you and the child. I think that for me this is about knowing exactly who is the child that is sitting there, what are his specific needs and then I think that all teachers are problem solvers.”

5.5.3.2 Skills

While the respondents expressed the need for the teachers to have specific knowledge, other statements indicated that the teachers need to have some specific skills to cope with the child in the inclusive classroom. It is important to note that these aspects are closely linked to the content that have already been discussed under themes 1 and 2 and therefore will not be repeated in detail in this discussion.

Most of the statements regarding skills required were related to effective communication and classroom management:

- **Effective communication**

It was suggested that the teachers should possess effective communication skills, including the following:

- **Speaking clearly, repeating information and checking for understanding**

“She must be trained to use techniques, such as for example: Talk clearly,

repeat, check, look at the child. You know, and that she ensures that the child has understood the instructions.”

If there is a communication problem and the child does not understand. Then she must know that she should not repeat the same phrase, but that she should rather chose different wording or something. All the basic skills of communication and how you can specifically communicate with someone with a hearing loss. Which adjustments you should make.”

“Don’t lose him, while you are presenting some lesson; don’t lose the child, because then he will later not be interested anymore.”

➤ **Using concise statements or simplified vocabulary**

“She must be aware of things such as the question format which is a problem for the children and in between word, such as: /in/, /is/, /the/. She must specifically build this into the class, and focus on this.”

• **Managing the situation in the classroom**

A number of skills to be used by the teacher in the classroom were suggested. Some statements focused on the teachers’ responsibility to adapt their teaching style.

“It is important that the teacher will know that she can slightly adjust her lessons, to help the child. And in this the teacher should work closely together with the SLT.”

“You are fairly aware of the fact that you must give class differently. You must make your preparation in such a way that it fits in with that.”

“I assume you will have to make adjustments, e.g. don’t turn around and write on the blackboard simultaneously anymore.”

Since the education system is currently using Outcomes-Based Education (OBE),

various aspects were proposed in order to facilitate the child's participation in group work.

“When they do group activities it is difficult for the child to be part of a group. She must be able to constantly bring the child back to the group. And what group to select for this child, where he will be able to fit in the best. Where he will possibly also be able to be a leader. Because that is how it works with Outcomes Based Education. We must all be able to take the lead. But if a child is in a very strong group, he won't be able to do that.”

5.5.3.3 Attitudes

All the participants unanimously agreed that the teacher should have a positive attitude towards the child with a hearing loss and accept the child with his/her unique needs.

“The teachers must have a positive attitude towards the child. One negative thing can damage that entire relationship.”

“I would say that the teacher must be prepared to accept this child.”

In order to summarise the above results and to relate the specific issues with the sub-aim, the following table (Table 5.23) was developed.

Table 5.23 Theme 3: Demands facing the teacher of the child with a hearing loss

Theme 3: Main discussion points indicating the demands facing the teachers	Corroboration in literature
<p>Teachers need to have knowledge regarding the following:</p> <ul style="list-style-type: none"> • Different disabilities • Hearing loss • The characteristics and needs of the child with a hearing loss • Language development • Auditory processing • Hearing aids • Classroom strategies 	<p>Easterbrooks & Radaszewski-Byrne, 1995:24</p> <p>Easterbrooks & Radaszewski-Byrne, 1995:24</p> <p>Easterbrooks & Radaszewski-Byrne, 1995:24; Grant, 1883:91; Grissom & Cochran, 1986:269; Wamae & Kang'ethe-Kamue, 2004:34</p> <p>Easterbrooks & Radaszewski-Byrne, 1995:24; Grant, 1883:91</p> <p>Grant, 1883:94</p> <p>Berry, 1992:31; Grissom & Cochran, 1986:269</p> <p>Easterbrooks & Radaszewski-Byrne, 1995:25; Grant, 1883:94</p>
<p>Teachers need to have skills regarding the following:</p> <ul style="list-style-type: none"> • Effective classroom communication • Classroom management 	<p>Siegel, 2000:65; Berry, 1992:29-36</p> <p>McLeskey & Waldron, 2002:4; Easterbrooks & Radaszewski-Byrne, 1995:25; Sass-Lehrer, 1986:11</p>
<p>Teachers need to have a positive attitude towards the child with a hearing loss.</p>	<p>Swart et al., 2002:177; Carrington, 1999:260</p>

5.5.4 Theme 4: additional aspects than may affect the responsibilities of the teacher of the child with a hearing loss

In the context of all the changes that are presently taking place within the education system in South Africa, the participants in all three focus group discussions were concerned about other aspects may influence the responsibilities of the teacher of the child with a hearing loss. The following discussion includes the aspects that were mentioned.

5.5.4.1 Teacher/child ratio

The current teacher/child ration was seen as the most difficult obstacle towards including children with specific educational needs, as it has a direct influence on the teacher's ability to cope with all the learners in the class.

“The teachers don't cope at all with the numbers that they currently have in their class. They sometimes have up to 40 learners in their class.”

“Classes must be smaller, because this is an aspect that can play a role.”

“I can't constantly support the child while there are 30 others that must be supported because they also need support. I can't constantly help to overcome his problems, while there are 30 others who are entitled to my attention. And while you can't help him, when you are helping the other 30, he is disrupted.”

5.5.4.2 Current education system

Various aspects of the current education system were indicated as possible challenges that could influence the role of the teacher.

- **System not conducive to including children with specific educational needs**

“I don't know how we are going to get there, but the system is at this stage is just like that, that it is not at all conducive for children with disabilities.”

“In think this is towards which one works, but it is definitively not at all in place yet. Not for any disability. In think it is even more difficult for a hearing impaired person.”

- **Too much pressure on the teachers**

The teachers specifically indicated that they could not cope with everything that was already expected from them in the regular schools.

“...the pressure that is already on teachers. The fact that they have to work with large groups, that they must work with children whose mother tongue is far removed from the teaching language and then the constant changes that take place in education itself... the curriculum 2005 etc... I think teachers in any case have too much... and as I see it this is merely becoming more. The general feeling is that this makes it even more difficult to work with a child with special needs.”

“When I arrived at a normal school... the pace at which everything happens bowled me over. It really happens just like that at a school.”

“...and the parents expect that you must be a good netball teacher and they expect that you must be a good tennis teacher and they expect that you must be a good class teacher and they expect from you that you must coach a good concert, is it not so? Remember that your concert cannot be compared to the other concert. They expect from you that... everything that you do they expect from you. Now you must also be a good inclusion teacher. And you must be well-well, because otherwise... what then? So all those expectations... the demands are just many, to now add extra demands that are not ‘Mickey Mouse’ demands. It is just as if you say, listen here... just quickly do this then you will be able to do it well. To be able to do all these things well is not just a matter of a small training course on a Saturday morning or something... it is asking for much. It is not just you must be able to do this and this and then you will be a good inclusions teacher. There will be a few things that you must be able to do and that is asking for much.”

“The multicultural context in schools, where in addition to the many children, there are also children whose education language is not necessarily the child’s first language.”

“With this new curriculum one must sit for 3 afternoons per week for up to 5 hours to plan. Then I am not yet talking about netball and swimming and tennis and revue and everything.”

5.5.4.3 Parental involvement

Some participants indicated that lack of parental involvement could have a negative influence on the responsibility of the teacher.

“Parents are less and less involved – parents all work.”

However, it was also stressed that the parents who are involved should not intrude in the classroom, but must have a collaborative relationship with the teacher.

“The parent must be sensitive not to make a nuisance of himself. This must be kept at a professional level. That they don’t want to go and bother the teacher every day – because there will be days when she inevitably just won’t be able to. That one really must make an arrangement – put diaries together, and decide these is the days on which we will talk.”

5.5.4.4 Attitudes

Participants in all three focus group discussions indicated that negative attitudes towards inclusion and the child with specific educational needs also had to be kept in mind. It was indicated that the majority of teachers have a negative attitude towards the whole notion of inclusive education. However, the roots of this attitude problem were also identified and included aspects such as lack of knowledge, fear for the unknown, fear of failing the child, lack of insight in the child’s problems, too much pressure in the current education system and not knowing how to cope with the child with a hearing loss in a regular classroom.

“Teachers often feel threatened about that – terribly.”

“Generally speaking teachers react rather often negatively about these

children, who they think have behavioural problems.”

“He will inevitably possibly not progress scholastically because he can't hear. He won't be able to write one sentence because he can't hear what you say. Then inclusion has, for me personally... I can say for you... this is for me emotionally incredibly difficult.”

“Teachers are especially scared of children with cochlear implants. They are so scared that they may break something.”

“The problem is – we don't know what we don't know. This is what makes it so dangerous.”

“I have knowledge of a child who has another scholastic problem and who can be helped with just a little bit of remediation or my knowledge. I can't spend half of my time on a child for whom I don't even have the knowledge required to help him.”

“How should I, I don't know, I don't have speech therapy, I don't have a speech therapy background, I don't know how to teach a hearing impaired child to listen. I am stupid in this regard. Do I have to teach him to read lips, do I have to teach him sign language, what must I do?”

“I can't accommodate that child in the class because I don't know how. It's not that I don't want to. It's not because I think they are different. It's not that I think they are not good enough. It's simply a practical fact... I can't. I am so scared that they [the department] will come and quickly give me another textbook or another this or that and then think that I can do it.”

“If a child can't hear... I don't know what his needs will be. Maybe this child cries his eyes out every evening because... maybe I don't know that this child needs to see my face.”

5.5.4.5 Support services

According to some participants, adequate support is strongly associated with the teachers' ability to cope with inclusive education. In general, it was indicated that *general support services*, as had been available in the past, had to be re-implemented.

"I think that with inclusive education it is first of all necessary to get the psychological services back that were previously there because currently there is not enough help at each school."

"I think support services – those support services at every school. And that it should not be far and that it should be cost effective, because parents can also not afford extra help and that support services are constantly available for the teachers."

The *support from the school principal* was also indicated as an important factor.

"The support of the principal. You know, if that person doesn't want to be involved or isn't interested – I think the teachers will have a very lonely fight."

Most of the participants also indicated the need for *support for the teachers*, with particular focus on the teachers' needs in the first place and then on classroom strategies, in order to ensure that the classroom environment is responsive to the child's range of learning needs.

"A support network, a support basis for the teacher as such. And the teacher doesn't easily or inevitably want to go and talk with the parent. The person must be a crisis line: 'Help, I'm struggling with this child, how should I handle him?'"

"It is also important for me that that teacher must somewhere have a support structure, be that from a professional person or from a fellow teacher or someone who has already walked a similar road... Somewhere that teacher must have a person with whom he has a trusting relationship... on a regular basis..."

“I think that a person must walk a type of road with a teacher. I don't think that it works to dump a child in a class and to make certain assumptions regarding knowledge and skills. And therefore I believe that one must walk a road with someone, but that you then come with basic information that the person does not have. To first empower that person and then become a support structure for his specific needs.”

“Yes, support. Say someone can come around to you once per day and sit and identify things with which you have a problem and sit together with you and talk... This is a support with which one can go quite a way.”

The need for more sufficient support for the teacher was emphasised by the fact that teachers indicated that they were not receiving enough support.

“Which support do I have? You get such a thick book or paper or whatever and then the mother says to you, sorry, my child is hearing impaired, this is the information, study it. In the class situation you need extra help to help the child. If you don't have it, you and I can't do it.”

“I think I have experienced a terribly gap with speech therapists. There wasn't regular contact. I didn't always know with what she was doing.”]

5.5.4.6 Teacher training

The need for appropriate teacher training was an aspect that was identified as a very important pre-requisite for the implementation of inclusive education, not only in terms of pre-graduate training but also as a part of continued education.

“All these things must already be built into their curriculum. Pre-graduate – before they begin practicing - that they at least already know what are the results of a hearing loss, what this implies, and how they must handle the child. They must already be aware of the child's needs and must have a general knowledge. And they must even have a few skills for talking with the

hearing impaired and for making adjustment and even to know what to expect if such a child is placed in the class.”

“Compile a further education course, with a bunch of modules... let's say hearing impairment, sight impairment... and you do all so that you know a little about all, then you can do something with inclusion. I mean... I won't only get hearing impaired children... I will eventually get sight impaired or physically disabled with wheelchairs... so rather get a decent Further Diploma in Education (FDE) course, let the teachers do it... and the necessary knowledge... and then get a category rise or whatever. It is like further training.”

In order to summarise the above results and to link the specific issues to the sub-aim, the following table (Table 5.24) was developed.

Table 5.24 Theme 4: Other demands facing the teacher of the child with a hearing loss

Theme 4: Main discussion points indicating the demands facing the teachers	Corroboration in literature
Teachers need to cope with a too high teacher/child ratio.	Prinsloo, 2001:345; Ngidi & Sibaya, 2002:7; Hay et al., 2001:218
<p>Teachers need to cope with an education system that poses different demands to the teacher:</p> <ul style="list-style-type: none"> • System not yet conducive to inclusive education • Too much pressure on the teachers 	<p>Swart et al., 2002:178; Lomofsky & Lazarus, 2001:215; Hay et al., 2001:218</p> <p>Swart et al., 2002:178; Ngidi & Sibaya, 2002:8; Forlin, 2004:199</p>
Teachers need to cope with a lack of parental involvement	Prinsloo, 2001:344; Engelbrecht et al., 2001:82
<p>Teachers need to cope with their own negative attitudes as a result of:</p> <ul style="list-style-type: none"> • Lack of knowledge /training • Perceived lack of personal efficacy • Lack of support 	<p>Swart et al., 2002:178; Prinsloo, 2001:345; Graves & Tracy, 1998:223; Lomofsky & Lazarus, 2001:213; Chorost, 1998:8-11</p> <p>Swart et al., 2002:183; Carrington, 1999:264; Prinsloo, 2001:345; Avramidis et al., 2000b:289; Luckner, 1991:302</p> <p>Swart et al., 2002:184; Prinsloo, 2001:345; Luckner, 1991:302</p>
<p>Teachers need to cope without the necessary support:</p> <ul style="list-style-type: none"> • Support from the principal • Educational and teacher support 	<p>McLeskey & Waldron, 2002:2; Graves & Tracy, 1998:222</p> <p>Swart et al., 2002:184; Hay, 2003:136; Engelbrecht et al., 2001:81; Luckner, 1991:302; Rose, 2001:151</p>
<p>Teachers need to receive the necessary training regarding inclusive education of the child with a hearing loss:</p> <ul style="list-style-type: none"> • Pre-service training • Further training / in service training 	<p>Swart et al., 2002:179; Eloff et al., 2002:95; Avramidis et al., 2000(b):289; Hay et al., 2001:218</p> <p>Swart et al., 2002:183; Prinsloo, 2001:345; Carrington, 1999:264; McLeskey & Waldron, 2002:7; Rose, 2001:151</p>

5.5.5 Summary of results: sub-aim #4

The findings concerning sub-aim 4 may be summarised as follows:

- Teachers need **knowledge** regarding the following aspects:
 - Hearing loss
 - Characteristics and needs of the child with a hearing loss
 - Language development
 - Auditory processing
 - Hearing aids
 - Classroom strategies
 - Other disabilities

- Teachers need **skills** regarding the following aspects:
 - Establishing an environment conducive to teaching a child with a hearing loss
 - Using and monitoring amplification systems

- Working in a team (collaboration and consultation)
- Addressing the social and emotional needs of the child with a hearing loss
- Using the necessary classroom accommodations and modifications to facilitate an inclusive learning environment
- Assessing the performance of a child with a hearing loss
- Adapting to a multicultural/multilingual context
- Using effective classroom communication
- Teachers need to develop **positive attitudes** towards inclusive education and the child with a hearing loss
- Teachers face the following challenges with regard to including the child with a hearing loss:
 - Too high teacher/child ratio
 - A system not yet conducive to inclusive education – insufficient facilities and infrastructure
 - Too much work-related pressure
 - Lack of parental involvement

- Inadequate knowledge, skills and training
- Negative attitudes as a result of perceived lack of personal efficacy
- Lack of educational and teacher support

5.6 CONCLUSION

Inclusive education is a reality in the South African context. The challenges posed to the teachers in carrying out of their professional role and responsibilities should be determined if the inclusive philosophy is to be implemented successfully. It has been the aim of this study to identify the specific challenges posed to the teacher of the child with a hearing loss.

The quantitative findings of the first phase of this study (questionnaires) were supported by the qualitative findings of the second phase (focus group discussions). This method of triangulation played a constructive role as it lead to an enriched way of synthesising and integration of results, thereby providing fuller and more comprehensive results.

When the results of the four sub-aims were integrated, the following aspects emerged:

- Teachers and student teachers have relatively good basic knowledge of inclusive education, but lack knowledge regarding the child with a hearing loss. (sub- aim 1) They appear to have negative attitudes towards the child with a hearing loss as well as inclusion of the child with a hearing loss (sub-aim 2). Statistically, a positive trend was observed in the relationship between the teachers' knowledge of a child with a hearing loss and their attitude toward the inclusion of such a child. This was confirmed by the results of sub-aim 3 as they indicated a need for training with regard to the characteristics and needs of the child with a hearing loss. The result of sub-aim 4 corroborate the above-mentioned results as the participants clearly indicated that the teachers' lack knowledge regarding the child with a hearing loss is

a result of insufficient training (theme 4). It was stressed that they need knowledge and skills, as this in turn would support the development of positive attitudes (themes 1, 2 and 3).

- Teachers and student teachers lack knowledge regarding the classroom accommodation/modifications necessary for the child with a hearing loss (sub-aim 1) and they (especially the primary school teachers) appear to have negative attitudes towards these classroom accommodation/modifications (sub-aim 2). Statistically, a positive trend of a relationship was observed between the teachers' knowledge regarding classroom accommodation/modifications and their attitudes towards these classroom accommodation/modifications and inclusion of the child with a hearing loss. This was confirmed by the results of sub-aim 3 as the respondents indicated a need for training with regard to including the child with a hearing loss. The results of sub-aim 4 corroborate the above-mentioned results as the participants clearly indicated that teachers need to have knowledge and skills regarding classroom accommodation/modifications (themes 1, 2 and 3) but lack the necessary knowledge as a result of insufficient training (theme 4).
- Variants identified to be significantly related to the teachers knowledge and attitudes were their willingness to include a child with a hearing loss and their years of teaching experience. Personal experience of hearing loss is related to the attitudes of teachers and student teachers, but not to their knowledge.
- A wide variety of demands that are placed upon teachers in terms of their knowledge, attitude and the unique South African context were identified.

5.7 SUMMARY

Chapter 5 presented the results of the empirical research, which included the questionnaire surveys and the three focus group discussions. The results were organised, analysed and discussed according to the sub-aims of the study. The chapter ends with a conclusion and a summary.