CHAPTER 4
RESULTS AND DISCUSSION

4.1 INTRODUCTION

The results of this study are described and discussed, in this chapter, in accordance with the aims of the study as outlined in Chapter 3. A description of teachers' attitudes towards the communication board and Alpha Talker 9 is provided which is followed by a comparison of teachers' attitudes towards these devices.

4.2 TEACHERS' ATTITUDES TOWARDS THE COMMUNICATION BOARD AND ALPHA TALKER 9

Teachers' attitudes towards the two AAC devices are described and discussed in accordance with the TAS. The results of each section of the TAS are presented in a table, followed by a description and a discussion of the results. The sections of the TAS include:

- teachers' perceptions of their own abilities,
- teachers' expectations of students,
- teachers' perceptions of classroom interactions,
- teachers' perceptions of the device, and
- teachers' perceptions of students communication abilities.

4.2.1 Teachers' perceptions of their own abilities

Table 4.1 depicts teachers' perceptions of their own abilities in coping with a student with LNFS using the communication board and Alpha Talker 9. A total of six statements were used to ascertain teachers' perceptions of their own abilities as can be discerned from Table 4.1.

Table 4.1: Teachers' perceptions on their own abilities in coping with a student with LNFS using the communication board and Alpha Talker 9.

No.	Section	Device	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	I would be able to teach this child.	Communication Board	32.6%	44.2%	18.6%	2.3%	2.3%
		Alpha Talker	32.6%	44.2%	16.3%	4.7%	2.3%
2	I would be able to teach this child to read.	Communication Board	20.9%	44.2%	23.3%	7.0%	4.7%
		Alpha Talker	9.3%	48.8%	25.6%	14.0%	2.3%
3	I would feel confident About Teaching this child.	Communication Board	39.5%	34.9%	23.3%	2.3%	-
		Alpha Talker	32.6%	44.2%	16.3%	4.7%	2.3%
4	I am trained to teach this child.	Communication Board	11.6%	23.3%	16.3%	39.5%	9.3%
		Alpha Talker	14.0%	20.9%	4.7%	51.2%	9.3%
5	I would need Extra training to teach this child.	Communication Board	62.8%	27.9%	-	7.0%	2.3%
		Alpha Talker	60.5%	37.2%	2.3%	-	-
6	I would be able to cope with this child in my class.	Communication Board	11.6%	34.9%	25.6%	16.3%	11.6%
		Alpha Talker	11.6%	34.9%	20.9%	18.6%	14.0%
7	I would Need an assistant if this child were in my class.	Communication Board	34.7%	41.9%	9.3%	9.3%	4.7%
		Alpha Talker	27.9%	44.2%	11.6%	11.6%	4.7%

The results of statements 1 to 3 indicate that teachers felt that they would be able to teach a student with LNFS using an AAC device. Hence, these teachers had a positive belief in their own ability to perform the necessary actions that would result in student learning and student acquisition of literacy skills. By contrast, however, the findings for statements 4 and 5 indicate that teachers felt that they were not trained to teach these students. Statements 4 and 5 served as a check against acquiesce type responses. The consistency of teachers' responses is a positive indicator for the reliability of the information obtained. The majority of the teachers (62.8% and 60.5%) perceived the need for extra training in order to teach a student with LNFS

using an Alpha Talker 9 and communication board respectively. Finally, statement 6 reveals that teachers were positive about their ability to cope with these students in their classrooms while statement 7 reveals that they perceived the need for an assistant.

Teachers' positive perceptions about their ability to teach these students, particularly to read, is promising. This attitude has important implications for the development of literacy skills for these students as Light & McNaughton, (1995) suggest that teachers' expectations and students' exposure to literacy activities are important for the acquisition of literacy skills. The acquisition of literacy skills for these students is vital, due to the fact that many AAC users have severe physical impairments that limit vocational options to those that require literacy skills rather than manual skills (Smith & Blischak, 1997). However, despite the importance of the development of literacy skills in these individuals, very few AAC users achieve functional literacy skills (Smith & Blischak, 1997; Alant & Emmett, 1995).

A possible explanation for poor literacy skills in this population, according to recent publications, may be the lack of exposure of AAC students to literacy activities that can facilitate functional reading and writing skills (Koppenhaver, Evans & Yoder, 1991: Light, Binger & Smith, 1994). Similar teaching trends were identified in the South African context, as 78% and 70% of teachers reported spending little to no time on reading and writing activities respectively (Alant & Emmett, 1995; Alant, 1999). Alant & Emmett (1995) investigated the communication and education of children with severe disabilities. Their study was conducted at schools for children with mental disabilities and used teachers as respondents. The teacher sample in their investigation was similar to those included in the current study, as they were primarily from historically under-served, peri-urban schools for children with mental disabilities. Although teachers perceived that they were able to teach these students literacy skills, the teaching environment has little focus on these skills. Hence, there appears to be a discrepancy between teachers' perceptions and the reality of the teaching context. This discrepancy may be attributed to the orientation of special education, which emphasises that teachers be caring rather than educationally oriented (Alant & Emmett, 1995). They found that 50% of teachers spent a fair amount of time on free

play, with 13% spending most or all of the time on free play. This is indicative of a less demanding teaching context for these students. This highlights the need for efficient teaching, something that is crucial to handicapped students whose development is behind that of their peers (Baine, 1990).

The need for teacher training is supported by the fact that teachers surveyed in this study had limited exposure to AAC. In addition, literature highlights the need for teacher training for the successful implementation of AAC within the school context (Baker, 1993). Similarly, Alant (1999) found that while teachers perceived students' with LNFS as having a desire to communicate, they did not use AAC techniques with these students. Instead, they relied on unaided techniques with these students. It is postulated that this reliance on unaided techniques may be attributed to teachers' limited knowledge of AAC. Furthermore, the results of the current study indicate that teachers perceived the need for training in order to teach these students, particularly those utilising an Alpha Talker 9. Hence, teachers' attitudes towards training varied as a function of the device, as more teachers felt the need for training with regard to the Alpha Talker 9. This may be attributed to the Alpha Talker 9 being a high technology device (Quist & Lloyd, 1997); teachers may feel threatened by the device, as they are not confident with technology (Baker, 1993).

4.2.2 Teachers' expectations of the child

Table 4.2 reflects teachers' expectations towards the student with LNFS using a Communication Board versus an Alpha Talker. A total of seven statements were utilised to ascertain teachers' expectations of the student.

Table 4.2: Teachers' expectations towards students with LNFS using a communication board versus an Alpha Talker 9

No.	Section	Device	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	This child Wants to learn.	Communication Board	69.8%	25.6%	2.3%	2.3%	-
		Alpha Talker	62.8%	37.2%	-	-	-
2	This child will eventually learn to read.	Communication Board	20.9%	51.2%	18.6%	9.3%	-
		Alpha Talker	16.3%	58.1%	11.6%	11.2%	2.3%
3	This child is a quick learner.	Communication Board	16.3%	32.6%	9.3%	30.2%	11.6%
		Alpha Talker	9.3%	27.9%	16.3%	44.2%	2.3%
4	This child will need extra help to learn.	Communication Board	46.5%	39.5%	4.7%	2.3%	7.6%
		Alpha Talker	- 9.3%	2.3%	-	44.2%	44.2%
5	This child will be able to go to normal school.	Communication Board	4.7%	7.0%	9.3%	34.9%	44.2%
		Alpha Talker	32.6%	34.9%	20.9%	9.3%	2.3%
6	This child will eventually need a disability grant.	Communication Board	58.1%	23.3%	2.3%	9.3%	7.0%
		Alpha Talker	46.5%	37.2%	7.0%	4.7%	4.7%
7	This child will find a job one day.	Communication Board	32.6%	41.9%	11.6%	9.3%	4.7%
		Alpha Talker	18.6%	44.2%	16.3%	14.0%	7.0%

The results for statements 1 and 2 reveal that the majority of the teachers perceived the students as capable of acquiring literacy skills. Statements 3 and 4 reveal that teachers' perceptions of students' abilities to learn varied as a function of the device. 32.6% and 27.9% of the teachers perceived the student using the communication board and Alpha Talker 9 respectively as being able to learn quickly. By contrast,

however, 46.5% and 9.3% of the teachers felt that the students using the communication board and Alpha Talker 9 would need extra help to learn. Hence, teachers might have an underlying perception that students using the Alpha Talker 9 as more intelligent. This is supported by literature that indicates that high technology is positively perceived, due to its association with high intelligence (Alm,1991). Furthermore, this notion is supported by statement 5, which reveals that 34.9% and 7.0% of the teachers perceived the students using the Alpha Talker 9 and communication board respectively, as being able to attend regular schools. Finally, statements 6 and 7 reveal that teachers perceived these students as requiring a disability grant, although they felt that these students have potential for employment.

Teachers' positive expectations of these students have implications for student-teacher interaction and subsequently student performance (Parson *et al.*, 1982; Light & McNaughton, 1993). However, positive expectations alone are not sufficient to facilitate students' progress. Positive expectations coupled with appropriate learning experiences will enhance students' progress. While the teachers in this study had high expectations of students in terms of acquisition of literacy and motivation to learn, research indicated that students with LNFS spend most of their school time engaged in free play activities and spend very little time on reading and writing instruction (Alant, 1999). Hence, there is a vital need for teacher training to ensure that teachers are capable of providing students with appropriate learning experiences.

There is a need to improve the quality and effectiveness of teaching for these students as Alant & Emmett (1995) found that, currently, teachers do not expose students to activities that would enhance independent living. The current study found that most teachers felt these students would require a disability grant, which reveals an unexpressed perception that they do not really believe these students can live independently. In addition, this perception is a reflection of the situation in South Africa in which 99% of the disabled population are unemployed (Department of Health, 1994, Section 15). While teachers felt that these students could be employed, they also stated that these students would need a disability grant. Hence, it is postulated that while teachers expect these students would find employment, the type

of employment and remuneration would be limited, thereby making these students dependent on disability grants.

4.2.3 Teachers' perceptions of classroom interactions

Table 4.3 reflects teachers' perceptions of classroom interactions with a student with LNFS using a communication board and an Alpha Talker 9.

Table 4.3: Teachers' perceptions on classroom interactions with students with LNFS using a communication board and Alpha Talker 9.

No.	Section	Device	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	This child would disturb others in class.	Communication Board	16.3%	18.6%	14.0%	39.5%	11,6%
		Alpha Talker	4.7%	32.6%	11.6%	32.6%	4.7%
2	This child would be able to answer questions in class.	Communication Board	25.6%	46.5%	7.0%	11.6%	9.3%
		Alpha Talker	16.3%	69.8%	2.3%	7.0%	4.7%
3	This child would be able to participate in class.	Communication Board	37.2%	34.9%	11,6%	11,6%	4.7%
		Alpha Talker	14.0%	69.8%	2,3%	14.0%	-
4	This child would be able to ask questions in class.	Communication Board	20.9%	37.2%	16.3%	9.3%	-
		Alpha Talker	11.6%	34.9%	27.9%	20.9%	4.7%
5	This child would be lonely in class.	Communication Board	-	20.9%	23.3%	37.2%	18.6%
		Alpha Talker	2.3%	18.6%	20.9%	44.2%	14.0%
6	This child would be isolated from participating in class.	Communication Board	7.0%	9.3%	11.6%	53.5%	18.6%
		Alpha Talker	4.7%	14.0%	9.3%	55.8%	16.3%
7	This child would be able to tell a story.	Communication Board	16.3%	39.5%	14.0%	16.3%	14.0%
		Alpha Talker	16.3%	39.5%	11.6%	20.9%	11.6%

The results for statement 1 reveal that teachers perceived students using the Communication Board as less disruptive to the class. Teachers were divided, however, regarding the student using the Alpha Talker 9 with an equal percentage (i.e. 32.6%) perceiving the students as a disturbance and not a disturbance. It is postulated that the presence of the voice output may contribute to teachers perceiving the Alpha Talker as a disturbance. This could indicate an underlying perception that students need to be quiet in class. Statements 2, 3 and 4 reveal that teachers perceived students as being able to participate in class. 69.8% of the teachers perceived the student using the Alpha Talker as being able to answer questions and participate in class as opposed to 46.5% and 34.9% of the teachers for the students using the Communication Board. Statements 5 and 6 revealed that students using either device would not be isolated in class. These statements served to check against acquiesce type responses. The consistency of the teachers' responses is a positive indicator of the reliability of the information obtained. Finally statement 7 reveals that teachers perceived these students as being able to tell a story and, therefore, to participate in class academically and socially.

Classroom participation has important positive implications for social and academic development of these students within the classroom context (Pierce & McWilliams, 1993). While teachers perceive that students are able to participate in class, research indicates that teachers adopt altered patterns of interaction with students with LNFS (Beveridge & Hurrell, 1980; Popich & Alant, 1997).

AAC should facilitate interactions within the classroom setting. However, teachers' perceptions that the Alpha Talker 9 as a disturbance could indicate an underlying perception that these students should be quiet in class. This is in contrast with literature that highlights the importance of interactions to student learning (Ashton & Webb, 1986). In addition, the ability to answer questions in class is important as teachers use the questioning technique to stimulate thought, maintain control, provide repetition and emphasise central issues (Camp, 1993). Questioning also has an influence on the amount of learning that takes place (Cicognanvi & Zani, 1992). The need for training is highlighted as teachers need to be trained in terms of the importance of classroom participation in facilitating student learning and the

importance of providing appropriate communication opportunities for these students in class.

4.2.4 Teachers' perceptions of the device

Table 4.4 depicts teachers' perceptions of the communication board and Alpha Talker 9. A total of eight statements were used to ascertain teachers' perceptions of the device.

Table 4.4: Teachers' perceptions of students with LNFS using a communication board and an Alpha Talker 9.

No.	Section	Device	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	The way this child 'talks' is preventing him from progressing at school.	Communication Board	7.0%	14.0%	18.6%	41.9%	18.6%
		Alpha Talker	9.3%	20.9%	4.7%	55.8%	9.3%
2	The way this child 'talks' is helping him progress at school.	Communication Board	37.2%	44.2%	9.3%	7.0%	2.3%
		Alpha Talker	14.0%	58.1%	11.6%	9.3%	7.0%
3	The way this child 'talks' is preventing him from speaking.	Communication Board	11.6%	7.0%	18.6%	41.9%	20.9%
		Alpha Talker	7.0%	18.6%	23.3%	39.5%	11.6%
4	The way this child 'talks' helps others to communicate with him.	Communication Board	32.6%	55.8%	4.7%	4.7%	2.4%
		Alpha Talker	14.0%	67.4%	2.3%	14.6%	2.3%
5	The way this child 'talks is easy to understand.	Communication Board	11.6%	44.2%	23.3%	11.6%	9.3%
		Alpha Talker	16.3%	34.9%	11.6%	27.9%	16.3%
6	This child takes too long to talk.	Communication Board	4.7%	60.5%	9.3%	18.6%	7.0%
		Alpha Talker	11.6%	57.2%	9.3%	20.9%	7.0%
7	The way this child 'talks' can only be used with trained teachers.	Communication Board	2.3%	25.6%	-	30.2%	41.9%

		Alpha Talker	44.2%	32.6%	7.0%	14.0%	2.3%
8	The way this child 'talks' can be used with other children in my class.	Communication Board	9.3%	48.8%	11.6%	16.3%	14.0%
		Alpha Talker	11.6%	39.5%	16.3%	18.6%	14.0%

Statements 1 and 2 served as a check against acquiesce type responses and revealed consistency of teachers' responses. Teachers perceived both AAC devices positively and did not consider them a hindrance to academic progress. Statement 3 revealed that teachers did not perceive the device as preventing the students from speaking. In fact, teachers felt the device was a means of facilitating communicating as revealed in statement 4. Statement 5 revealed different perceptions towards the AAC device where 44.2% of the teachers disagreed and strongly disagreed with the statement regarding the Alpha Talker 9, as compared to 20.9% for the communication board. Hence, the VOCA option was not perceived more positively. Statement 6 revealed that teachers perceived both devices as time consuming. Statement 7 revealed that teachers perceived the need for training, particularly for the Alpha Talker. The need for training for the Alpha Talker was also evident in Section 4.2.1. Finally, statement 8 revealed those teachers who perceived both devices as having a wider application and, therefore, appropriate for other students in their classes. This finding is relevant as 44.2% had experience with between 5 and 41 students with LNFS, as is evident in Figure 3.5 (Methodology).

The results revealed that teachers perceived both the devices positively in terms of promoting academic success and enhancing students' communication abilities. Teachers' perceptions of devices being time consuming is supported by literature which indicates that one of the major difficulties associated with aided communication is a slower rate of communication (Quist & Lloyd, 1997). In addition, the Alpha Talker was perceived as being unintelligible, which is a disadvantage of VOCA's identified in the literature (Musselwhite & St Louis, 1988). It is postulated that the voice may have been foreign to the teachers, resulting in its perceived unintelligibility. Furthermore, it is postulated that the teachers were inexperienced in listening to voice output technology and, therefore, considered it unintelligible. These findings, together with the fact that the Alpha Talker 9 was

unintelligible. These findings, together with the fact that the Alpha Talker 9 was perceived as a disturbance (Section 4.2.4), could reflect a certain intolerance or apprehension towards the device. This would serve to indicate the need for teacher training regarding the interactive advantages of VOCA.

4.2.5 Teachers' perceptions of communication abilities

Table 4.5 depicts teachers' perceptions of the communication interactions of these students. A total of six statements were used to obtain teachers' perceptions.

Table 4.5: Teachers' Perceptions on the communication interactions o f students with LNFS using the communication board and an Alpha Talker 9.

No.	Section	Device	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	This child is able to ask for things that he needs.	Communicatior Board	25.6%	53.5%	9.3%	7.0%	4.7%
		Alpha Talker	25.6%	48.8%	7.0%	16.3%	2,3%
2	This child can start a conversation.	Communicatior Board	11.6%	51.2%	20.9%	9.3%	7.0%
		Alpha Talker	16.3%	41.9%	14.0%	16.3%	11,6%
3	This child will have difficulties in developing personal relationships.	Communicatior Board	9.3%	14.0%	23.3%	39.5%	14.0%
		Alpha Talker	2.3%	23.3%	18.6%	46.5%	9.3%
4	This child is impolite.	Communicatior Board	2.3%	14.0%	20.9%	39.5%	23.3%
		Alpha Talker	2.3%	11.6%	25.6%	39.5%	20.9%
5	This child is well mannered.	Communicatior Board	20.9%	44.2%	20.9%	11.6%	2.3%
		Alpha Talker	25.6%	48.8%	20.9%	4.7%	-
6	This child has difficulty in sharing information with others.	Communicatior Board	14.0%	16.3%	20.9%	39.5%	9.3%
		Alpha Talker	4.7%	34.9%	11.6%	37.2%	11.6%

The results for statements 1, 2 and 3 revealed that teachers perceived the students using either device positively in terms of their ability to ask for things, initiate conversations share information and develop personal relationships. In addition,

statements 4 and 5 revealed that teachers perceived the students as well mannered and polite. These statements revealed consistency of teachers' responses. A high percentage of teachers were uncertain, with between 20.9% and 25.6% of the teachers being uncertain about whether these students were well behaved. Finally, statement 6 revealed that teachers perceived that the student using the communication board would not have difficulties in sharing information. Teachers were divided however, in their perceptions towards a student using the Alpha Talker 9with 34.9% of the teachers agreeing and 37.2% disagreeing with the statement.

The results reveal that teachers had positive perceptions of the students' communication needs. This has important implications, as the aim of the AAC intervention is not only to meet students' learning needs but also to meet their communication needs in order to develop their fullest potential (Musselwhite & St. Louis, 1988) as AAC facilitates classroom interaction and subsequently students' learning.

While teachers were positive about these students, they perceived that students using the Alpha Talker 9 would have difficulties sharing information. This may be attributed to the reduced intelligibility of the voice output as discussed in Section 4.2.4. In addition, teachers were uncertain about the behaviour of students. This may be indicative of a perception that AAC users are more demanding, due to their increased communicative competence. This competence may have been perceived as potentially changing the dynamics of the classroom as students would not be passive and, therefore, well behaved. Hence, teachers may be unsure about these students' behaviour. The underlying perception that VOCA are not necessarily perceived more positively than low technology is highlighted again. This may be attributed to low technology devices having more appeal, in terms of appropriateness and acceptability of the technology, to their peri-urban context or communities.

4.3 COMPARISON OF TEACHERS' ATTITUDES TOWARDS THE COMMUNICATION BOARD AND ALPHA TALKER 9

In order to make possible a comparison of teachers' attitudes towards the two AAC devices, a classic crossover design was used. The crossover design allows one to make comparisons employing:

- The carry-over test, which enables one to ascertain whether the first viewing (group 1 video 1; group 2 video 2) influenced the second viewing (group 1 video 2; group 2 video 1);
- The treatment effect, which enables one to ascertain the influence of the videos (devices) on teachers' perceptions. This can only be calculated if the carry-over test yields statistically insignificant p values.

4.3.1 Carry-over test

The N par 1 Procedure–Wilcoxon scores (rank sums) of the SAS statistical procedure were calculated for each section. A statistically significant crossover effect is indicated when $p \leq 0,05$.

Table 4.6: P value for carry-over test.

No.	Section	P Value	Statistical Significance
1	Section A Teachers' perceptions of their own abilities	0,0103	Present
2	Section B Teachers' perceptions of the child	0,8937	Absent
3	Section C Teachers' perceptions of classroom interactions	0,3494	Absent
4	Section D Teachers' perceptions of the AAC device	0,6527	Absent
5	Section E Teachers' perceptions of the communication interactions	0,6012	Absent

The results reveal that a statistically significant carry-over effect was present for Section A i.e. teachers' perceptions of their own abilities. This implies that the first viewing influenced teachers' perceptions of the second viewing. Since the teachers included in the study had limited exposure to AAC, it is postulated that exposure to the first video may have provided them with an unintentional training in AAC, which resulted in a change in their perceptions' regarding their sense of self-efficacy. Hence, the treatment effect cannot be discerned for Section A. Therefore, a non-parametric

test was used to compare teachers' attitudes towards the two AAC devices for Section A.

The non-parametric Wilcoxon rank sum test was used to compare teachers' attitudes towards the two AAC devices for Section A. The level of significance was $p \leq 0.05$. The result revealed a p value of 0,2684, which is not statistically significant. Hence, there was an insignificant difference in teachers' attitudes towards the two AAC devices.

4.3.2 The influence of the device on attitudes

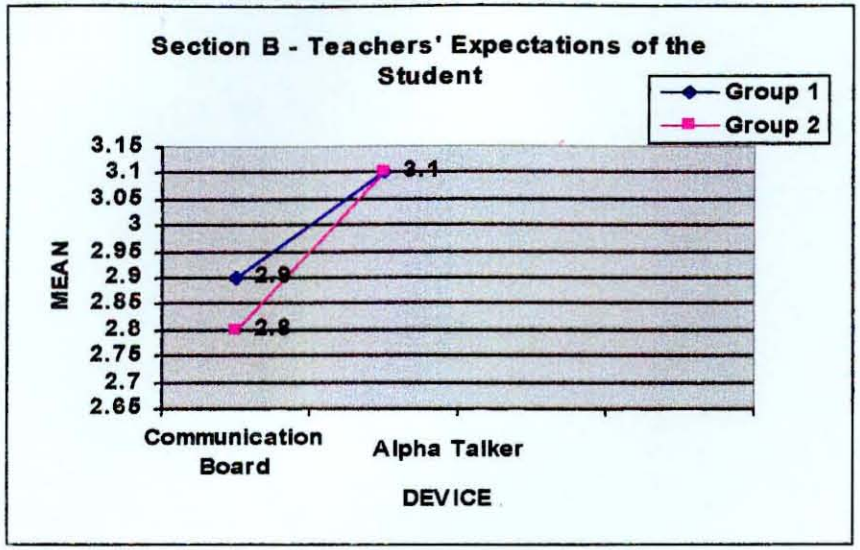
The treatment effect was calculated for Sections B to E, as the carry-over effect was statistically non-significant, as discussed in Section 4.3.1. A p value of $\leq$ 0,05 is considered statistically significant for the treatment effect. Table 4.7 illustrates the p value for treatment effect for Section B to Section E.

Table 4.7: P Value for the Treatment Effect

No.	Section	P Value	Statistical Significance
1	Section B Teachers' perceptions of the child	0,4713	Absent
2	Section C Teachers' perceptions of classroom interactions	0,9320	Absent
3	Section D Teachers' perceptions on the AAC device	0,1042	Absent
4	Section E Teachers' perceptions on communication interaction abilities	0,3872	Absent

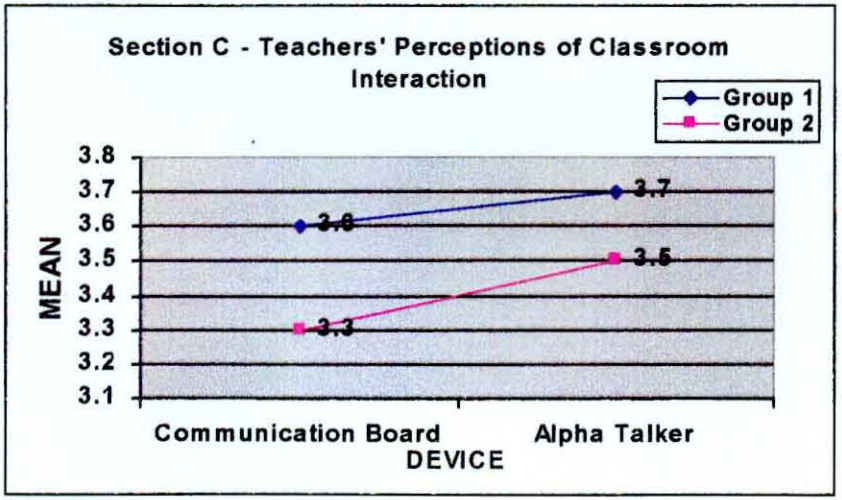
The result reveals no statistically significant difference in teachers' attitudes towards the two AAC devices. Hence, both devices were perceived similarly by the teachers. However, on comparison of the mean score for each group towards each device, there is a tendency for teachers to perceive the Alpha Talker9 more positively than the communication board. This tendency is evident as both groups have a higher mean for the Alpha Talker9 then the communication board, which is evident in Figure 4.1 to Figure 4.4.

Figure 4.1



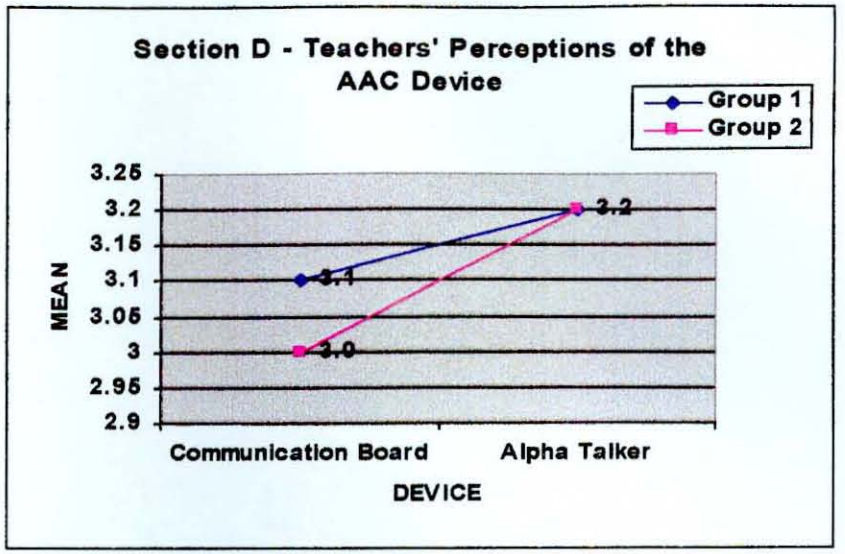
The graph illustrates a tendency for teachers to perceive the Alpha Talker more positively.

Figure 4.2



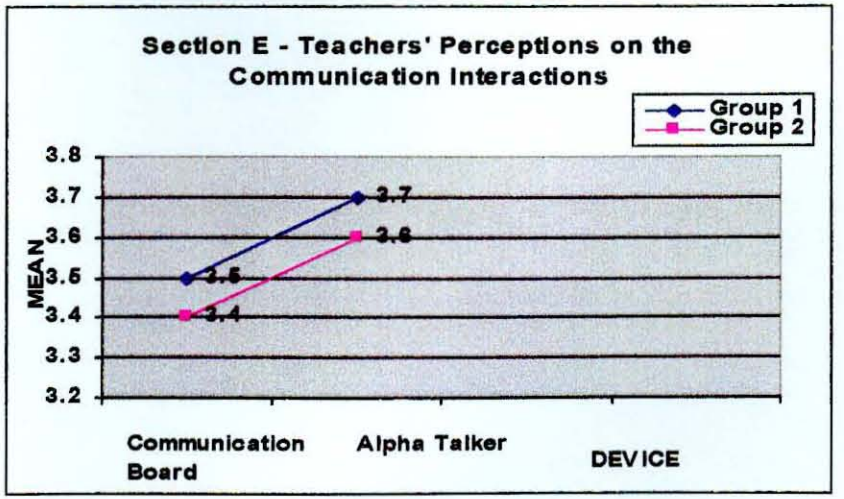
The graph illustrates a tendency for teachers to perceive the Alpha Talker more positively.

Figure 4.3



The above illustrates a tendency for teachers to perceive the Alpha Talker more positively.

Figure 4.4



The graph illustrates a tendency for teachers to perceive the Alpha Talker more positively.

The results of Figure 4.1 to Figure 4.4 revealed that there is a tendency for teachers to perceive the Alpha Talker9 more positively than the communication board, albeit not significantly. The presence of high technology VOCA, despite its interactional advantages, did not significantly influence attitudes of the teachers in this study. The results of the current study are in contrast with attitudinal investigations, conducted in the United States of America, which revealed more positive attitudes towards high technology devices with VOCA (Coxson & Mathy-Laikko, 1984; Gorenflo & Gorenflo, 1991).

It is postulated that both technologies were perceived as similar, that is as a means of facilitating communication. High technology devices were not necessarily perceived more positively, it is postulated, due to their being perceived by some teachers as unintelligible and a disturbance. Finally, the low technology devices may have been perceived as more acceptable, affordable and appropriate to their peri-urban context, as it is possible for teachers to make the devices themselves at a low cost. The high technology device may have been perceived as uneconomical, in terms of the initial cost and maintenance and repair of the device, which is considerations that are particularly relevant in South Africa.

4.4 SUMMARY

This chapter described and discussed the results of this study. The results revealed that the majority of the teachers had positive attitudes toward students with LNFS using the communication board and Alpha Talker 9. While there was no statistical difference in teachers' attitudes toward the devices there was a tendency for teachers to perceive the Alpha Talker9 more positively than the communication board. The implications of teachers' attitudes toward their sense of self-efficacy, expectations of students, student-teacher interactions, and classroom and communication interactions, were discussed with reference to the current context of special education in South Africa.