CHAPTER ONE
INTRODUCTION TO THE
STUDY

1.1 PROBLEM STATEMENT

The issue of education, and access to it, is a problem that exists in many countries. This problem is further exacerbated, in developing countries like South Africa, by limited financial and personnel resources (Guma, 1992). Resource limitations have resulted in mainstream education taking precedence over the provision of education for children with special needs. Similarly, in South Africa the perceived prohibitive cost of special education services has been cited as a reason for not providing services (Gwalla – Ogisi, 1988). Fortunately, during the past two decades special education has received considerably more attention. The International Year of the Disabled in 1981 marked a renewed interest in both the welfare and education of the disabled, throughout the world. This renewed interest was also evident nationally, in the National Health Plan that stressed the importance of access to education for all, including students with disabilities (National Health Plan, 1994).

Unfortunately, despite legislation propagating the need for education for children with disabilities, the reality is that special education in South Africa is still problematic. Often, institutionalization and residential care are considered the only alternatives for these students. The mismatch between legislation and the current reality regarding special education may be attributed to a variety of factors including lack of political will, lack of knowledge, restrictive attitudes, poorly trained teachers, lack of professional support and inappropriate curricula (Malapka & Sakui, 1992; Baine, 1990).

Special education curricula are often merely "watered down" versions of mainstream education curricula (Baine, 1988). More difficult tasks are replaced with simpler craft activities or more practical skills Alternatively, students with disabilities are expected to follow mainstream curricula but at a slower pace than mainstream students. Other

problems inherent in the curricula are that greater emphasis is placed on memorization and there is a separation of school and community. This separation results in students being trained in skills that leave them unfit for life in their respective communities (Baine, 1988).

It is evident that special education has various problems in meeting the needs of disabled students and lags behind, particularly regarding facilitating their integration into society, independence and the development of students' communication skills. The gap in the development of students' communication skills is particularly relevant for a large group of students with disabilities. These students are classified as having little or no functional speech (LNFS). It is estimated that approximately 39% of students with disabilities at special schools, i.e. for children with disabilities, have LNFS (Borman, 1995). These students' access to education is further hampered by their limited speech, as research indicates that teachers of these students adopt limited and altered patterns of interaction with these students. Students' limited speech output results in teachers feeling uncertain about what the student understands, needs and prefers, thereby limiting the communication opportunities provided to these students and their access to interaction. Limited access to interaction results in limited social, educational and occupational opportunities (Blackstone, 1989) which is in contrast to current trends regarding human and individual rights to a better quality of life.

Alternative and Augmentative Communication (AAC) is an instructional approach that can facilitate students with LNFS towards more fully realizing their potential (Lloyd, Fuller & Arvidson, 1997, p.1). AAC has been defined as the "supplementation or replacement of natural speech and or writing using aided and unaided symbols" (Lloyd *et al.*, 1997, p.524). The aim of AAC intervention, within classrooms, is to enable students with LNFS to attain their fullest potential through meeting their communication and learning needs with effective communication skills (Musselwhite & St Louis, 1988). In addition to enhancing the communication of students with LNFS, AAC also promotes the development of literacy skills by providing students with access to symbols which can function as a "bridge" to literacy (Alant & Emmett, 1995, p.3). The implementation of AAC services at schools serving students with LNFS is, therefore, important in ensuring that students receive a relevant education. AAC provides individuals with the ability to participate actively in

interaction, recreation and education, resulting in an improvement in their quality of life (Beukelman, 1991; Lock & Piche,1994).

The provision of appropriate AAC systems to students with LNFS is pivotal to facilitating their participation in classroom interactions and subsequently student learning. However, researchers caution that the mere provision of an AAC device does not improve students' ability to meet the social and academic demands of school. The successful use of AAC within the classroom context is enhanced by teachers supporting and implementing AAC strategies, as well as carefully prepared AAC intervention procedures.

AAC intervention involves a team approach that includes, amongst others, teachers and support personnel including occupational therapists, speech language therapists and physiotherapists. However, there is little provision for such services in our current educational context, due to the lack of trained professionals and to limited financial resources. Hence, there has been a general movement, both nationally and internationally, towards therapists functioning as consultants (Goodman & Kroc, 1981; Baker, 1993), rather than being the individual responsible for implementing AAC. Teachers are, therefore, provided with support from therapists, while teachers retain the primary responsibility of implementing AAC in the classroom. Hence, the commitment, support and co-operation of teachers are required in order to ensure that AAC is successfully implemented in the classroom (Soto, 1997).

However, prior to teachers implementing AAC, there is a need to provide teachers with training and support. Teacher training is required as teachers, working with students with LNFS, often do not have special training in working with children with disabilities. Furthermore, teachers have little or no exposure to AAC, or training in the implementation and use of AAC. Many teachers may feel threatened by AAC systems, as they are not confident with technology and, therefore, do not feel competent when interacting with an AAC user (Baker, 1993).

In order to gain insight into interactions between teachers and students who use AAC, it is important to understand the attitudes that each communication partner brings to the interaction (Kraat, 1987). It is vital to investigate teachers' attitudes, as teachers'

behavior is guided by their thoughts, judgements and decisions (Shavelson, 1983). In addition, teachers' attitudes towards AAC are important, as teachers play a primary role in implementing AAC strategies, and their negative attitudes may form barriers to interaction and the successful implementation of AAC strategies within the classroom context.

Attitudinal investigations of the effect of the provision of an AAC device on attitudes towards non-speaking individuals have been controversial (Gorenflo & Gorenflo, 1991) and limited. Alm (1991) suggests that while the use of computer technology for communication may be positively perceived due to its association with high intelligence, others feel it highlights the disability, thereby negatively influencing attitudes (Cavalier, 1987). In addition, there is a possibility of attitudes being influenced by the physical and design characteristics of the device (Blockberger, Armstrong, O'Connor & Freeman, 1993). Research investigating adults' attitudes towards AAC as a function of the device utilized revealed more positive attitudes as the method of communication became more complex (Gorenflo & Gorenflo, 1991). Hence, adults in the study had more positive attitudes towards devices with speech output and less positive attitudes towards alphabet boards and unaided communication. Studies which investigated teachers' attitudes have been limited primarily to a study conducted in the United States of America in which teachers' attitudes towards AAC were investigated (Soto, 1997). However, there is a paucity of research on teachers' attitudes towards children with LNFS as a function of the type of device they utilize.

It is in terms of this framework that the current study investigates teachers' attitudes towards students with LNFS using two AAC devices. It is hoped that this investigation will result in a clearer understanding of teachers' perceptions of communication devices and of these students' communication and classroom interaction abilities. The information will be useful when considering the implementation of AAC at schools, as well as in highlighting areas that need consideration when training and preparing teachers to work more effectively with this group of students.

1.2 DEFINITION OF TERMS

The following frequently used terms need clarification.

1.2.1. Little or no functional speech

For the purpose of this study, the term little or no functional speech will refer to students
who speak less than fifteen intelligible words (Burd, Hannes, Bornhoeft & Fischer, 1983).

1.2.2. Alternative and augmentative communication

Alternative and augmentative communication is the "supplementation or replacement of natural speech and or writing using aided or unaided symbols" in order to enhance the communication skills of persons with little or no functional speech (Lloyd *et al.*, 1997, p. 524).

1.2.3. Picture communication symbols

This refers to a set of symbols composed "primarily of simple line drawings with words printed above them" (Lloyd *et al.*, p.537).

1.2.4. Voice output communication aids

An augmentative and alternative communication device that has an electronic voice output capability. The voice output may be synthesized or digitized speech (Lloyd, *et al.*, 1997, p.543).

1.2.5. Alpha Talker9

An Alpha Talker9 is a high technology AAC device. It has a digitized recorded speech output (Quist & Lloyd, 1997, p.148).

1.2.6. Communication board

A communication board is a low technology AAC device. "Typically, letters, words, pictures or other graphic symbols are arranged on paper, pasteboard, oil cloth, an apron or other material according to pre - determined categories or topics" which are referred to as Communication Boards (Quist & Lloyd, 1997, p.110).

1.2.7. Attitudes

Attitudes refer to an internal tendency, which influences an individual to react positively or negatively to an object, person or situation (Aiken, 1996; Mendes & Rato, 1996, p.12).

1.2.8. Teacher self-efficacy

This construct refers to teacher's expectations that their teaching can result in students learning (Ashton & Webb, 1986, p.4)

1.2.9. Expectations

Expectations are unavoidable predictions that teachers make about the academic achievement as well as classroom behavior of their students (Brophy & Good, 1970). The effects of expectations depend on the accuracy, flexibility and manner in which teachers' expectations are communicated to students, which in turn may affect students' behaviors or responses (Larsen, 1975, p.1).

1.2.10. Interaction

Interaction refers to the pattern of mutual influence as well as adjustment in which both partners are involved in creating in a common communicative context (Malamah-Thomas, 1988).

1.3 OUTLINE OF CHAPTERS

Chapter 1 provides a motivation for the study and an outline of the chapters as well as a definition of the key terms used.

Chapter 2 describes the role of teachers in facilitating interactions with an AAC user. The importance of teacher' expectations, self-efficacy and attitudes are highlighted in terms of their influence, both on interactions and the successful implementation of AAC, within the classroom context.

The methodology is described in Chapter 3. This includes a description of the aims, the research design, pilot study, the schools, teachers, material and equipment used in the study, the data collection procedures and finally the data analysis and statistical procedures.

Chapter 4 presents a description and discussion of the results, in accordance with the aims of the study. A description of the attitudes towards the communication board and Alpha Talker9 are described and compared.

An integrated discussion of the results is the focus of Chapter 5. A critical evaluation of the study is presented followed by implications of the study and finally recommendations for future research.

1.4 ABBREVIATIONS

AAC - Augmentative and Alternative Communication

VOCA - Voice Output Communication Aids

LNFS - Little or No Functional Speech

TAS - Teacher Attitudinal Scale

PCS - Picture Communication Symbols

1.5 SUMMARY

This chapter has provided a motivation for the study, highlighting the current situation in special education and the need to examine teachers' attitudes. This chapter concluded with definitions of key terms and an outline of the chapters to follow.