

<p style="text-align: center;"><b>CHAPTER FIVE</b></p> <p style="text-align: center;"><b>SUMMARY, CONCLUSION AND RESEARCH IMPLICATIONS</b></p>
--

## **5.1 INTRODUCTION**

This chapter provides a brief summary of the results obtained in this study and also an integrated discussion of the results. This is followed by a critical evaluation of the study. Finally, recommendations for future research are made.

## **5.2 SUMMARY OF RESULTS AND INTEGRATION OF RESULTS**

The purpose of this study was to investigate whether the children's performance on a phonological awareness assessment battery using both a non-spoken and a spoken mode of response was comparable, and therefore a valid accommodation in determining "Yes/No" responses. The non-spoken mode of response required the children to answer the questions using eye-gaze only. This was achieved by looking at the top left hand corner of the E-tran to indicate "Yes", or by looking at the bottom right hand corner of the E-tran to indicate "No". The spoken mode merely involved the children responding with a verbal "Yes" or "No". The Constitution of South Africa (Republic of South Africa, 1996) mandates that all South African learners, including those with disabilities, be granted access to basic education. Children who do not have sufficient physical abilities to respond via a spoken "Yes" or "No" to questions which assess their knowledge require accommodations so that they may participate in the assessment and accountability systems of the schools in which they are educated.

The Draft Guidelines for the Implementation of Inclusive Education (National Department of Education, 2002) in its summary of recommended assessment accommodations for children who have LNFS suggest that the following accommodations be permitted: time, amanuensis, reader, learning programme credits, oral to examiner and AAC strategies.

Eye-gaze is one of the strategies used by individuals who use AAC and is therefore an accepted strategy for the assessment of children with LNFS in South African schools.

Because of the emphasis of the social model of education, which views barriers to learning as being primarily within the environment and not within the individual, the emphasis has moved from viewing the child as the problem, to creating an environment in which that child can succeed (National Department of Education, 2002). To achieve this objective, amongst others, adaptations in the manner in which these individuals are assessed are necessary. The accommodations, which are afforded to individuals with LNFS, therefore provide the teachers with information on the effectiveness of their teaching strategies, information about the learning needs and strengths of the children, as well as identifying the barriers that the children may be experiencing.

Although this study was conducted on typically developing children, the equivalence of the spoken and non-spoken modes of response is a positive result, as it indicates that in typically developing children the test accommodations provided (as in the study comparing scanning versus direct selection of Arvidson, 2000) acted neither as an advantage nor as a disadvantage in the test of phonological awareness. This was a positive finding because in South Africa, as in other developing regions in the world, the issues of affordability and accessibility are pivotal when implementing specialized services, both in specialized and mainstream schools (Dada, 1999). This is a low cost method that can be explored further with children with varying degrees of disabilities.

### **5.3 CRITICAL EVALUATION**

This is an initial study of its kind, as it investigates test accommodations for children who have LNFS. The need for evidence-based practice to determine the equivalence or non-equivalence of assessment accommodations is necessary as the barriers to assessment are being removed internationally (Thurlow et al. 2003). This study compares two response modes, namely spoken and non-spoken, in typically developing Grade One children. These children belonged to both English First Language and English Second Language groups. It highlights that there is no

significant difference between responding in a spoken format or a non-spoken format. The findings suggest that, in typically developing children, those who receive accommodations in their assessment will be neither advantaged nor disadvantaged in their response via eye-gaze.

Although Higginbotham (1992) feels that typically developing children may provide a viable alternative to AAC users as research participants, these results may not, however, be generalized to the population of children who have little or no functional speech, as a methodological constraint of the study is that it was conducted on typically developing children. These children were able to make use of well-developed articulatory skills to assist in the memorization of questions while simultaneously working out the answers to the questions posed. Children who have disabilities, and in particular those with LNFS, do not have the advantage of articulating the phonemes within the words and therefore may have difficulties when participating in the test. For this cohort, reliance on the oral motor feedback is reduced and they are required to identify sameness of words primarily through the acoustics of the word. In order to justify the generalization of research findings from typically developing individuals to the population of individuals who have LNFS, a sufficient number of comparable studies need to be conducted (Bedrosian, 1992). As a first step, it should be field-tested on children with disabilities who are able to provide a consistent verbal “Yes/No” as well as to utilize eye-gaze to indicate “Yes/No”. If, in a replication of this study, equivalence of this population cohort is found, then it may be generalized to a group of children who are unable to indicate “Yes/No” in a spoken mode of response.

The strengths of the study are as follows:

- i. This is one of the very few studies that investigate accommodations of response modes for the assessment of children. Other than the Arvidson (2000) and Wagner (1994) studies no other studies, have investigated the validity of accommodations in response modes.
- ii. The assessment procedure provides the tester with reliable information on the skills of the testee. In contrast to the Wagner (1994) study, where any consistent response was recorded in the affirmative and an absence of

response was recorded in the negative, this test required a definite “Yes” or “No” to all questions posed.

- iii. It compares favourably with the accommodation studies on various response modes. As with the Wagner (1994) and Arvidson (2001) studies, it found that accommodations in the response modes neither advantaged nor disadvantaged the cohorts participating in their studies.
- iv. There was methodological equivalence between the two groups with respect to the two modes of response.

There were a number of limitations present in this study. They are as follows:

- i. The findings were limited to a group of six and seven year old children. Children younger or older may not produce the same results. Should the same age children be assessed on more complex aspects of phonological awareness, those results may also differ from those found in this study.
- ii. Eye-gaze as a response mode can be applied in tests using binary communication but it is limited, as in binary communication there is a 50/50 chance of providing the tester with the correct response. Using binary communication to test phonological awareness results in the test only assessing the skill at a receptive level and not at an expressive level. By not being able to generate words or pseudo words, it means that the whole range of phonological awareness (rhyme oddity, rhyme production, oral production of phonemes, articulating individual segments in words, phoneme deletion and synthesis) would therefore not be assessed (Blischak, 1994).
- iii. The phonological assessment battery used for this study was not a standardized test, but rather a screening test, which used benchmarks to indicate whether further investigation and intervention for the children to achieve satisfactory levels of phonological awareness was necessary.
- iv. A further limitation of this study is that it can be only used in a one-to-one test situation and not in a group or class situation.

#### **5.4 RECOMMENDATIONS FOR FUTURE RESEARCH**

Recommendations for future research are:

- i. Further development of phonological awareness tests which require “Yes” or “No” responses at a more complex developmental level.
- ii. Testing response modes using eye-gaze to indicate from an array of more than two items, without providing cues for the participants.
- iii. Testing response modes using a switch to indicate “Yes” or “No”, which can be used for children with cortical visual impairment or children with blindness and who have LNFS.
- iv. Testing response modes using a Speech Generating Device.
- v. A replication of this study to investigate on a more comprehensive scale in order to facilitate the generalization of results. Replication of the use of the two response modes on individuals with severe disabilities and who are unable to communicate orally.

## **5.5 SUMMARY**

This chapter summarized the results and discussion of the study. This was followed by a critical evaluation of the study and its clinical implications. Finally recommendations for future research were provided.