Bringing children to their senses: A study of the influence of sensory experience on year 4 children's writing

Zenda Johnson
Edith Cowan University

Follow this and additional works at: https://ro.ecu.edu.au/theses

Part of the Education Commons

Recommended Citation

This Thesis is posted at Research Online.
https://ro.ecu.edu.au/theses/1088
Edith Cowan University

Copyright Warning

You may print or download ONE copy of this document for the purpose of your own research or study.

The University does not authorize you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site.

You are reminded of the following:

- Copyright owners are entitled to take legal action against persons who infringe their copyright.

- A reproduction of material that is protected by copyright may be a copyright infringement. Where the reproduction of such material is done without attribution of authorship, with false attribution of authorship or the authorship is treated in a derogatory manner, this may be a breach of the author’s moral rights contained in Part IX of the Copyright Act 1968 (Cth).

- Courts have the power to impose a wide range of civil and criminal sanctions for infringement of copyright, infringement of moral rights and other offences under the Copyright Act 1968 (Cth). Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.
USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.
BRINGING CHILDREN TO THEIR SENSES -
A STUDY OF THE INFLUENCE OF SENSORY EXPERIENCE ON YEAR 4
CHILDREN'S WRITING

BY

Zenda Johnson, Dip. Teach., B.Ed.(Hons)

A Thesis Submitted in Partial Fulfilment of the
Requirements for the Award of

Master of Education

at the Faculty of Education, Edith Cowan University

Date of Submission: 01.03.94
ABSTRACT

Based on the theory of experiential learning for reading and writing, the purpose of this study was to observe and describe changes in the writing outcomes of Year Four children after the activation of the senses of smell, touch and taste. Children's attitudes towards writing, and gender differences in their writing were minor foci of the study. Middle primary children were selected because there is an absence of previous research which relates directly to sensory learning and middle primary children's writing.

A descriptive case-study methodology was undertaken with a group of twenty nine Year Four children of which six target children, who represented three ability groups, formed the focus for closer observation and interviewing procedures. Children's writing samples, done before a series of sensory activities, were analysed using two holistic scoring criteria, to provide benchmark data of the children's writing abilities, and for the selection of the target children. In addition, writing samples from each sensory activity were analysed using the constant comparative method, to assess qualitative changes which occurred. An attitude questionnaire was administered and scored before the sensory activities in order to provide thicker benchmark data for realistic analyses. Attitude data were triangulated with self reports from recorded interviews, all writing samples, and observation notes. Results indicated that the sensory programme, which included sensory manipulation, discussion, pre-writing, independent writing, and sharing components,
enabled the children to create topics, and experiment with a wide variety of genres for their written texts. Some children were able to identify the senses which were beneficial to their writing, and use them to write more effectively. The children demonstrated noticeable changes in their attitudes towards writing, and some gender differences in topic and genre choices were evident.
DECLARATION

I certify that this thesis does not incorporate, without acknowledgement, any material previously submitted for a degree or diploma in any institution of higher education and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in the text.

Signature of Candidate: [Signature]

Date: 10.3.94
ACKNOWLEDGEMENT

I wish to acknowledge the assistance given to me by Judith Rivalland in the supervision of this thesis. Her patience, availability and insightful advice have been greatly appreciated. I also wish to acknowledge the help I have received from Bronwyn Mellor, who supplied a wealth of valuable information, and Kate Zuvich, whose enthusiasm for learning about children and their writing made this all possible.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>2</td>
</tr>
<tr>
<td>Declaration</td>
<td>4</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>5</td>
</tr>
<tr>
<td>List of Tables</td>
<td>11</td>
</tr>
<tr>
<td>List of Figures</td>
<td>12</td>
</tr>
<tr>
<td><strong>CHAPTER</strong></td>
<td></td>
</tr>
<tr>
<td>I  <strong>INTRODUCTION AND STATEMENT OF THE PROBLEM</strong></td>
<td>13</td>
</tr>
<tr>
<td>Background to the Problem</td>
<td>13</td>
</tr>
<tr>
<td>Prior Knowledge</td>
<td>14</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>20</td>
</tr>
<tr>
<td>Research Questions</td>
<td>22</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>23</td>
</tr>
<tr>
<td>Organization of the Thesis</td>
<td>23</td>
</tr>
<tr>
<td><strong>CHAPTER</strong></td>
<td></td>
</tr>
<tr>
<td>II <strong>REVIEW OF LITERATURE</strong></td>
<td>25</td>
</tr>
<tr>
<td>Introduction</td>
<td>25</td>
</tr>
<tr>
<td>Children's Writing Development</td>
<td>26</td>
</tr>
<tr>
<td>What is Writing?</td>
<td>26</td>
</tr>
<tr>
<td>The Writing Process - Opposing Viewpoints</td>
<td>27</td>
</tr>
<tr>
<td>Process Writing</td>
<td>28</td>
</tr>
<tr>
<td>The 'Whole' Language Approach</td>
<td>30</td>
</tr>
<tr>
<td>Genre-Based Writing Approach</td>
<td>31</td>
</tr>
<tr>
<td>Writing as a Social Construct</td>
<td>32</td>
</tr>
<tr>
<td>Prior Knowledge and Children's Writing</td>
<td>33</td>
</tr>
<tr>
<td>Writing</td>
<td>35</td>
</tr>
<tr>
<td>Writing and Personal Input</td>
<td>37</td>
</tr>
<tr>
<td>Gender Differences</td>
<td>39</td>
</tr>
<tr>
<td>Attitudes to Writing</td>
<td>40</td>
</tr>
<tr>
<td>Summary</td>
<td></td>
</tr>
<tr>
<td>Writing, Creativity and the Senses</td>
<td>41</td>
</tr>
<tr>
<td>The Senses and Creativity</td>
<td>43</td>
</tr>
<tr>
<td>The Impact of the Senses and Creativity on Writing</td>
<td>44</td>
</tr>
<tr>
<td>Writing Ownership</td>
<td>46</td>
</tr>
<tr>
<td>Personal Voice in Writing</td>
<td>49</td>
</tr>
<tr>
<td>Summary</td>
<td>51</td>
</tr>
<tr>
<td>The Sensory System and Cognition</td>
<td>52</td>
</tr>
<tr>
<td>Introduction</td>
<td>52</td>
</tr>
<tr>
<td>The Sensory System</td>
<td>53</td>
</tr>
<tr>
<td>Visual and Aural Perception</td>
<td>54</td>
</tr>
<tr>
<td>The Skin Senses</td>
<td>54</td>
</tr>
<tr>
<td>The Chemical Senses</td>
<td>54</td>
</tr>
<tr>
<td>Sensory Perception and Cognition</td>
<td>55</td>
</tr>
</tbody>
</table>
Connotative Learning
Summary

Methodology of Related Research
Final Summary of Literature Review
The Place of Theory in this Study

CHAPTER

III METHODOLOGY

Introduction
Case Study Defined
Characteristics of a Case Study
Natural Setting
Human Instrument
Tacit Knowledge
Qualitative Methods
Purposive Sampling
Inductive Data Analysis
Grounded Theory
Reliability and Validity

Design of the Study
Research Setting and Participants
Gaining Access and Ethical Issues

Pilot Study
Initial Writing Session
Questionnaire
Sensory Activity
Interviews
Summary

Design Instruments
The Attitude Questionnaire
Baseline Writing Ability Data

Validity and Reliability of Data
Triangulation of Data and Methods
Long Term Observation
Member Checking
Peer Examination
External Validity
Reliability

CHAPTER

IV DATA COLLECTION

Contextual Data
Role of Researcher
Initial Observation
Resources and Spatial Arrangement of Classroom
Behaviour of Teacher and Children
Teacher's Role and Methods
Management Techniques
<table>
<thead>
<tr>
<th>Type of Interaction</th>
<th>91</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration of Attitude Questionnaire</td>
<td>91</td>
</tr>
<tr>
<td>Collection of Baseline Writing Data</td>
<td>92</td>
</tr>
<tr>
<td>Graded Writing Samples</td>
<td>92</td>
</tr>
<tr>
<td>Sensory Activation and Writing Activities</td>
<td>94</td>
</tr>
<tr>
<td>Session One</td>
<td>96</td>
</tr>
<tr>
<td>Session Two</td>
<td>96</td>
</tr>
<tr>
<td>Interviews - Target Children</td>
<td>97</td>
</tr>
<tr>
<td>Interviews - Class Teacher</td>
<td>98</td>
</tr>
<tr>
<td>Development of Teaching Procedure</td>
<td>99</td>
</tr>
<tr>
<td>During the Pre-Writing Session One</td>
<td>101</td>
</tr>
<tr>
<td>Session One</td>
<td>104</td>
</tr>
<tr>
<td>Session Two</td>
<td>105</td>
</tr>
<tr>
<td>Activity Three - Taste</td>
<td>105</td>
</tr>
<tr>
<td>Summary of Collected Data</td>
<td>107</td>
</tr>
<tr>
<td>Procedures Used to Analyse Data</td>
<td>108</td>
</tr>
</tbody>
</table>

**CHAPTER V**

**DATA ANALYSIS**

<table>
<thead>
<tr>
<th>Introduction</th>
<th>110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishing Categories</td>
<td>111</td>
</tr>
<tr>
<td>Programme Processes</td>
<td>111</td>
</tr>
<tr>
<td>Connections to Research Questions</td>
<td>112</td>
</tr>
<tr>
<td>Main Research Question</td>
<td>113</td>
</tr>
<tr>
<td>Connected Categories</td>
<td>113</td>
</tr>
<tr>
<td>Subsidiary Research Questions</td>
<td>113</td>
</tr>
<tr>
<td>Connected Categories</td>
<td>114</td>
</tr>
<tr>
<td>Major Classifications</td>
<td>115</td>
</tr>
<tr>
<td>Programme Outcome Matrix</td>
<td>117</td>
</tr>
<tr>
<td>Perceptions of Writing</td>
<td>117</td>
</tr>
<tr>
<td>Personal and Social Development</td>
<td>118</td>
</tr>
<tr>
<td>Writing Characteristics</td>
<td>119</td>
</tr>
<tr>
<td>Writing Responsibility</td>
<td>120</td>
</tr>
<tr>
<td>Attitudes</td>
<td>121</td>
</tr>
<tr>
<td>Triangulation</td>
<td>121</td>
</tr>
<tr>
<td>Validity and Reliability</td>
<td>122</td>
</tr>
</tbody>
</table>

**CHAPTER VI**

**RESULTS AND DISCUSSION**

<table>
<thead>
<tr>
<th>Introduction</th>
<th>123</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis of Group Case Study</td>
<td>124</td>
</tr>
<tr>
<td>The Attitude Questionnaire</td>
<td>125</td>
</tr>
<tr>
<td>Graded Writing Samples</td>
<td>126</td>
</tr>
<tr>
<td>Discussion</td>
<td>128</td>
</tr>
<tr>
<td>Outcomes</td>
<td>129</td>
</tr>
<tr>
<td>Process One - Experiencing Sensory Materials</td>
<td>130</td>
</tr>
<tr>
<td>Outcomes of Process One</td>
<td>132</td>
</tr>
<tr>
<td>Process Two - Connecting Sensations</td>
<td>132</td>
</tr>
</tbody>
</table>
CHAPTER VII

ANALYSIS OF INDIVIDUAL CASE STUDIES AND THE SENSORY PROGRAMME

Case Study for Child One
Case Study for Child Two
Case Study for Child Three
Case Study for Child Four
Case Study for Child Five
Case Study for Child Six
Summary of Individual Case Study Data
Analysis of Sensory Programme
Programme Structure and Processes
Effectiveness and Suitability of the Sensory Programme as a Teaching Method

CHAPTER VIII

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

Conclusions
Limitations
Implications
  Theoretical Implications
  Practical Implications
Recommendations for Further Research
Concluding Statement

BIBLIOGRAPHY

APPENDICES

Appendix A - Transcripts of Interviews with Three Teachers
Appendix B - Letter to School
Appendix C - Consent Letter from Principal
Appendix D - Letter to Parents
Appendix E - Material for Grading Writing Ability
Appendix F - Diederich's Analytic Scale for Holistic Scoring
Appendix G - Tiedt's Holistic Scoring Criteria
Appendix H - Attitude Questionnaire
Appendix I - Guidelines of Interviews with Target Children
Appendix J - Exemplars of Children's Interview Transcripts
Appendix K - Exemplars of Children's Writing
LIST OF TABLES

Table 6.1
Girls' and Boys' Scores and Means for Attitude Questionnaire 125

Table 6.2
Girls' and Boys' Scores and Means for Writing Samples 127

Table 6.3
Cross-Classification of Programme Processes and Outcomes 130

Table 6.4
Frequency and Variety of Genre Choices of Girls and Boys During the Sensory Programme 168

Table 6.5
Boys' and Girls' Topic Choices During the Sensory Programme 171
LIST OF FIGURES

Figure 1
Overview of the Study Design 73

Figure Two
Framework of Cross Classification Matrix 117
CHAPTER ONE
INTRODUCTION AND STATEMENT OF THE PROBLEM

Introduction

This study sought to determine and describe changes which occurred, over a period of time, in Year 4 children's writing, and children's attitudes towards writing, when their sensory perception was directly challenged by the activation of three of the vital senses, namely, smell, touch and taste. The following discussion provides a context for the research.

Background to the Problem

For the past two decades a great deal of attention has been paid to methods of teaching reading and writing and the ways in which children cognitively process language. Indeed, with the emergence of the psycholinguistic theory of reading (Smith, 1971), process methodologies in writing (Graves et al), and recent genrist theory (Kress, 1982; Rothery and Martin, 1984), real changes have been made in many long established beliefs about literacy.

One of the most important changes was the realization that, for optimum language learning, children benefit from being immersed in activities which combine all four aspects of language, i.e. reading, writing, speaking and listening (Butler and Turbill, 1984; Cambourne, 1986). Teachers began to understand better the relationships between children's familiar oral communication and their written communication.
Also, it was realized that a valuable language base for the teaching of communication was child-driven, that is to say, the language children use every day (Ashton-Warner, 1965).

The reason for this change in thinking was because theorists and teachers began to recognize the importance of children's prior knowledge of language and the world, and the role it played in reading and writing (Latham and Sloan, 1979). In order to capitalize on children's prior knowledge, teachers immersed them in whole-language activities which involved first-hand experiences, called the language experience approach, so that children could draw upon implicit knowledge for making meaning in reading and writing (Hall, 1970; Holdaway, 1978). This approach, which was in direct contrast to the basal reader approach, was found to produce better reading and writing results (Stauffer and Hammond, 1967). The language experience approach to reading and writing, and the notion that prior knowledge is essential for meaning making, drive much of what is practised in language teaching today.

**Prior knowledge**

Prior knowledge is all the information which enters the brain and is cognitively processed. It forms the data bank which can be drawn upon by humans to make sense of their world (Smith, 1978). The sensory system forms one of the major areas in the cognitive processing system. According to Winne (1971, p. 798), "the sensory system is the gateway
through which all information from the environment enters the cognitive system." The sensory system records both tangible and abstract ideas, feelings and emotions. Feelings and emotions are closely linked with creativity (Yardley, 1970). Each child has a huge store of personal and vivid emotions, and the impact these emotions may have on written discourse, should not be underestimated.

However, the idea of creativity being important for writing development is not without criticism. During the 1980's, linguists such as Halliday, Martin, Rothery, Kress and Christie have forcefully criticized the whole idea of writing which is based on creative, imaginative, self-expression in favour of teaching children how to construct a text, that is, teaching the craft of writing. Pam Gilbert shares this view and states (1991, p.59) that, using process writing methodology, "the craft of writing is thus bypassed by the creativity of writing." Linguists argue that, after 20 years of process writing methodology, with its emphasis on creativity and self-expression, children, particularly those at secondary level, have achieved little in learning how to write. In fact, Christie (1986, p.23) suggests that "creative writing tends to deny the role of any teaching activity in ensuring that children learn to write". Martin, Rothery et al. encourage teaching of writing based on genres, that is, "providing written models for children when they are learning to write" (Martin, 1986, p.142). It is relevant to point out that different approaches lead to different kinds of writing that serve different purposes. Using the senses
produces one kind of writing; other activities produce other kinds. It appears that, at best, certain aspects of process methodology for writing have been misunderstood and/or abused. Indeed, according to Richardson (1991), Graves himself was expressing concern about the ways in which his work had been interpreted and used in the process approach. However, creative self-expression will, most likely, always be a component of Language Arts, and needs to be addressed in the teaching of writing.

This study supports the idea that personal writing allows children to explore their own ideas, values, feelings and emotions, thereby affording them an opportunity to be introspective. Green (1987) and Wilkinson (1986) suggest that introspection promotes a deeper, clearer understanding of the self - a quality which then can be brought forcefully to writing in any form. Ideally, for writing development to occur, there is a case to promote and practise (a) exploration of personal experience, (b) opportunities for creative expression through discussion and writing and (c) formal teaching of all types of genres. In this way, children may well produce writing which is well structured, coherent and which displays a viewpoint which stems from a personal conviction about the topic. This study sought to explore the idea that sensory experience challenges children to access and examine their thoughts in a way in which they were not accustomed, and hence, bring a truly personal viewpoint to bear on their writing. The idea of challenging children is endorsed by Christie and Rothery (1990, p.199)
who state that "students at both primary and secondary levels are gratified when they feel their capacities to be challenged, their potential as learners and thinkers extended and enriched."

Despite the fact that there are differing views of how to teach writing, some educators (Graves, 1983; Halliday, 1975; Thomson, 1990) agree that personal experiences play a vital role in children's learning. Others (Clay, 1979; Hall, 1970; Yardley, 1970) suggest that vivid personal experiences are the key to creativity.

Hall (1970, p.41) argues that creativity in content and form makes writing powerful and, that the following conditions promote creativity in children's writing; (a) an atmosphere of acceptance and freedom, (b) individual evaluation of a pupil's written expression, and (c) freedom to select topics, length and form.

For motivation, Hall advocates the need for oral discussion before writing and suggests that:

Some of the proven means for encouraging thought on a particular topic are presenting a children's literature story or poem, showing some provocative pictures, asking stimulating questions and suggesting imaginative topics. (p.43)

Thomson (1992) posits that literacy development is a social activity which occurs in the midst of others. It is precisely the feedback from peers, in the form of different
ideas and viewpoints, which enables children to interpret and understand reading and writing. This means that classroom talk is important - focussed talk, which prompts children to re-work their own ideas, orally and in writing, and develop a feel for the interpretations of others.

The methods of motivation suggested by Hall, are all designed to activate prior knowledge which children can use to write creatively. However, none of the suggested methods include direct activation of the senses of smell, touch and taste. They appeal to sight and hearing senses only. Anecdotal evidence suggests that it is quite usual for teachers to neglect the senses of smell, touch and taste in their language programmes. Therefore to test that idea, and document the problem, two Year 4 teachers were observed for one week during writing time. During the observation, the researcher recorded the teaching strategies and methods of motivation for writing, which actually occurred in the classrooms. Each teacher (plus a third, Year 3 teacher) was interviewed about her teaching procedures and methods for motivation for writing, and summaries of the transcripts were given to them for verification (See Appendix A).

Briefly, the results confirmed that teachers rarely use sensory stimulus for writing motivation. One teacher described sensory activation as his "most under-used strategy." Two of the three teachers stated that they thought stimulation of the senses of smell, touch and taste, could be valuable in language learning.
Scientists Francq and Wright (1985), in their studies, confirm that children can more ably express themselves when they make skilful use of all of their senses, that is, when their sensory skills are developed. Eichenberg (1965, p.517) agrees by stating that "a child will add to his writing skill if he takes time to use his five senses." However, the absence of research and activities on sensory experience and its influence on reading and writing, in the Ministry of Education's curriculum documents, suggests that sensory experience which involves all five senses seems to be confined to Kindergarten and Year One. At the same time, there is evidence to suggest that many children find it difficult to write freely and fluidly (Elbow, 1981; Newkirk and Atwell, 1986). Certainly, when writing becomes arduous, children will most likely become uninterested, or worse, hateful of the process. Too often children are expected to write about topics to which they can contribute little or nothing. When that happens, there is little to combat writing paralysis. Children should be allowed to write about topics to which they can contribute. Using the sensory systems seems one possibility.

The research is based on four theoretical assumptions, which are:
1. Children write more effectively from first-hand, first-person observations.
2. All writers draw upon prior knowledge, that is a personal accrued store of data, for their writing.
3. When children are involved in vivid, personal experiences, they more readily access and use their prior knowledge, including their multi-sensory data and emotions, for making meaning orally and in writing.

4. Creative writing stems from personal experiences which stimulate children's depth of perception and sensitivity.

**Statement of the Problem**

Based on observations of two middle primary teachers' techniques for teaching writing where pictures and music, which appeal to sight and hearing senses only, were used, this study asserted that the senses of smell, touch and taste are neglected as tools for learning in the primary curriculum. The problem central to this study was concerned with determining whether the activation of the senses of smell, touch and taste enables children, irrespective of their writing ability, to think introspectively, access stored information, be willing to write, and whether qualitative changes occurred in their writing when the senses were aroused.

Children in Year 4 were selected for this research because:

1. at this age, children are beginning to infer, and think abstractly (Carr, 1983),
2. writing conventions are usually well established (Graves, 1983), and
3. No research has been located on sensory perception and writing with middle primary children.

The purpose of the study was to observe Year Four children during (a) activities which involved the senses of smell, touch and taste, and (b) the discussion and writing time which immediately followed the activities. Six target children, both male and female, who represented a stratified sample of writing skills, were more closely observed and interviewed for richer information concerning personal writing assessment and attitudes.

Hence, the study sought to build on the existing theory of the importance of first-hand experiences for reading and writing competence by adding to the experiential base for writing. At the same time, the study asserted that first-hand experiences on their own, are not enough to promote writing development. Focussed peer discussion, which provides critical feedback, and time to plan writing are essential components for writing development. Thus, the results of this research contribute realistically and practically to knowledge about the development of young writers. It is recognized that the sample size of children (approximately 30) limits broad generalizations of the results, however, the quantity of data, the richness of analysis, and the triangulation of data and sources, adequately allow for a sound measure of transferability of the results.
Research Questions

The following essential study questions provided a starting point for data collection and analysis, and research methodology.

Major Research Question

1. What changes can be observed in Year 4 children's writing after the activation of the senses of smell, touch and taste, over a period of time?

Subsidiary Questions

2. Is there any evidence to suggest that, after sensory activation, Year Four children will experiment with their writing, in terms of form and style, longer sentences, more details, better vocabulary, and greater organization of ideas?
3. Does the writing of Year Four children reflect a preference for one particular sense, and if so, in what way?
4. Can gender differences be observed in the writing outcomes of Year Four children after sensory activation, and in what way?
5. Are Year Four children's attitudes towards writing influenced after sensory activation over a period of time, and if so, in what ways?
Significance of the Study

This study is significant because, if the data suggest a relationship between sensory experience and improved writing quality, then the educational implications are that teachers might:

1. provide a classroom environment which is filled with sensory materials of all kinds,
2. encourage learning with all five senses in children in all grades,
3. make explicit the connections between sensations, feelings and emotions, and ideas for creative activities,
4. allow children to explore their sensations through any creative activity such as drawing, painting, writing, drama etc..

In practice, teachers who take opportunities to use children's sensory knowledge in all areas of the curricula, may enable children to look introspectively for information which may give power to their work. Educationally, any practice which facilitates children's creation of different kinds of texts is worth investigating and documenting.

Organization of Thesis

Chapter Two reviews the literature on children's writing and sensory perception. Chapter Three details the methodology for the study in which the design, sample,
instruments, and data collection procedures are discussed. Chapter Four explains how the contextual data were collected. Chapter Five discusses how the data were classified and analysed in terms of the research questions. Chapter Six describes, in detail, the findings of the study from the whole group's perspective. Chapter Seven describes the findings of the study from the target children's perspectives and analyses the effectiveness of the sensory programme. Chapter Eight draws conclusions and suggests implications and recommendations for future research.
CHAPTER TWO

REVIEW OF LITERATURE

Introduction

In his study of the history of teaching methods, Connell (1971) refers to Pestalozzi (1746-1827) who stated that:

Sense perception is the beginning of all knowledge. But what should a teacher do with sense perceptions? He must follow .... a process which would make initial sensory contact into clear and distinct ideas. This is the fundamental task of a teacher in the intellectual development of the pupil. (p.5138)

Thus, according to Pestalozzi, sensory perception is an active component in the acquisition of knowledge, and, although he advocates that teachers should capitalize on sensory contact, the absence of research on the senses and children's learning, other than with remedial children, suggests that current teaching practices do not place importance on sensory activation for learning, beyond Year One.

This study was concerned with understanding if and how activation of the senses of smell, touch and taste influences children's writing and attitudes to writing, over a period of time. These three senses were selected because observations from the literature and a study of two middle primary teachers' writing techniques confirmed that the senses of smell, touch and taste are almost completely neglected as tools for learning. In fact, it was difficult to find literature that related to the topic, as no research which
relates specifically to the senses and children's writing appears to have been carried out. Background literature relating to the study was reviewed under the following headings:

1. Children's Writing Development
2. Writing, Creativity and the Senses
3. The Sensory System and Cognition
4. Methodology of Related Research

Children's Writing Development

Educators, researchers and linguists have had much to say about children's writing development over the past twenty five years. Indeed, with the implementation of new teaching practices in writing, many opposing viewpoints about children and writing development have emerged. This section discusses some definitions of writing, and outlines, from an historical viewpoint, some of the claims made by experts, which have influenced the teaching of writing and children's writing development.

What is Writing?

Writing is a way of preserving ideas which can be used at any place and time (Graves, 1983). John McNeil (1987, p.164) elaborates by describing writing as an "active process for creating meaning, a tool for representing, interpreting and shaping one's experience." The key elements in this statement are that writing is an active process which
reflects personal experience, and that it is a means for re-working and permanently capturing those experiences. But why is personal experience valuable for writing? Thomson (1990, p.6) advocates the need to "use personal experience as a beginning because it allows the writer to focus on what is known in the midst of learning to control a great deal that is unknown."

In the classroom context, Kamler (1991, p.9) suggests that "there are benefits in writing of personal experience in that children are encouraged to value their own experience and at the same time learn accepted ways of sharing that experience in our culture." One of the accepted ways of sharing personal experience is through the social process of classroom talk. Alan Luke (1992, p.67) confirms that "children's literacy is being 'done' and 'made' through the labour of classroom work, that work is talk." Language is learned in a social context, therefore writing can also be described as a social activity. However, some researchers (Graves, Walshe) suggest that writing is individualistic. In fact, Walshe (1986c, p.204) states that "the Product depends on a Process which in turn depends on a Person. Writing is always essentially individual."

The Writing Process - Opposing Viewpoints

The Personal Growth Model
In the late 1960's, the development of writing changed from skill practices, which were often carried out in decontextualised conditions, to emphasis on the development of the individual and the way in which she used language to shape experiences. James Moffett suggested that language and learning were connected, and that children developed as writers through the process of de-centering. Indeed, Moffett (1981, p.145) states that, as the child develops, "He gradually builds up his initial emotionally preferred vantage point and expands his perspective so as to include many other points of view."

At the same time, Britton (1970) endorsed the notion of personal growth, or the importance of the individual, and described a functional model of writing development, which begins with the self and expands to others. He also advocated that one develops as an individual through the process of socialization.

Process Writing

In the 1970's, Graves advocated that children needed to learn how to write and he recommended specific writing instruction called the writing process approach. Process writing methodology became widely accepted in schools throughout Australia. This methodology recognizes that writers complete a series of tasks which culminate in the production of a written text. In this approach, writers recursively work through five stages, which are: pre-writing,
drafting, revising, editing and sharing. Throughout each stage, children constantly draw upon their prior knowledge of all aspects of language as they strive to construct meaning. The focus is on the child's ideas and language — that is, the child's personal input. However, process methodology is not without criticism. According to Christie, process methodology has not allowed children to develop as competent writers. Christie (1990, p.8) goes on to say that a preoccupation with process methodology caused teachers to overlook opportunities for real teaching of language and "instead to focus upon the relatively surface features of spelling, punctuation, sentence structure, and so on." It seems that teachers adopted features of process writing, but did not change their traditional, skill-oriented practises and beliefs.

Another criticism of process methodology (Christie, 1990; Gilbert, 1990a) is that it emphasises the personal, imaginative, creative nature of language at the expense of learning the skills associated with the craft of writing. Gilbert (1990a, p.56) states that the focus in literacy classrooms is "not about work, not about texts, and not about construction. Instead, they are about imagination, expression and creation: about personal and creative growth through language." Creativity in language seems to defy specific definition, however, a new idea, and an innovative way of treating an idea, both seem to fit the term "creative." Christie (1990, p.9) argues that creativity can be "learned and constructed in language" and talks about
children making their own choices in using language. Perhaps then, experimenting with language, that is, being able to recognize and exercise choices in language, demonstrates not only competence in the use of language, but also creativity. The idea of creativity being important for writing is addressed in more detail in Section Two of the Literature Review.

The 'Whole' Language Approach

Based on Graves' work, "whole language" literacy teaching emerged in the 1980's. Cambourne's 'Model of Learning' (1986) provided a framework for a 'whole' approach to teaching language. The 'whole' approach emphasised four modes of language, namely: reading, writing, speaking and listening, and proposed parallel development in the four modes. Supporters of the 'whole' approach (Brown & Mathie, 1990; Cambourne & Turbill, 1987) hold the belief that traditional language teaching is somewhat fragmented, and in essence, language cannot be viewed and taught as a series of isolated skills. Their (Cambourne and Turbill, 1987, p.37) view is that teachers need to understand that there are strong relationships between the four language components and "that the cognitive processes involved in composing meaning from (listening, reading) and through (talking, writing) language are similar." Process writing took on a new light, yet even Cambourne and Turbill could not specify "with any precision just what it means" (p.5).
Genre-Based Writing Approach

The genre-based writing approach challenges the efficacy of process writing by claiming that children develop as writers only when they have a sound knowledge of language frameworks or genres. One of Martin's (1985, p.55) forthright criticisms is that process writing is "based on nothing more than 'folk-psychology'...... which serves to sustain the powerlessness of children and preserve the class divisions in Western culture." Genrists such as Christie, Halliday, Gilbert, Martin and Rothery argue that teachers need to be aware that learning to write involves learning how language works - how texts are made. Specific factual and narrative genres have been identified, and, according to Christie, cited by Richardson (1991, p.179) "for children to grasp new knowledge they need to have control of the appropriate written genres which need to be explicitly identified and taught."

However, there is also opposition to genre-based methodology. Some state that the genrist approach denies input from the self, which is an important factor in writing development. Wilkinson (1986, p.45) believes that "writing is a prime means of developing our thinking and our emotions, and therefore of defining and re-defining ourselves." This idea introduces the concept that writing is a way of encouraging introspection and gaining self knowledge. This view is shared by Green (1987) who, in his criticisms of genre pedagogy, states:
(In genre pedagogy, there is) a remarkable absence of introspection and self-criticism. As Gramsci (1971) notes, himself a leading figure in the language-&-learning movement: 'The starting point of critical elaboration is .... "knowing thyself."' Unfortunately there is little evidence of this to date in genre-based writing pedagogy. (p.87)

It seems that, although there are fundamental differences between genre-based and process-based pedagogies, they both have the same goal, that is, teaching children to develop as competent writers, in both content and form. Overall, despite the criticisms of process methodology, it did bring about an important renewal of interest in teaching writing, and many of the steps in process methodology lend themselves to social activities. A survey of the research suggests that process writing might be viewed as an excellent medium for collaborative language development.

Writing as a Social Construct

Current theorists challenge the individual notion of writing by espousing that writing is a social construct, and that language is learned in a social context, influenced by such things as gender, family and class backgrounds. Luke (1992, p.9) states that literacy is about "cultural knowledges and social power." This idea raises questions about the selection and appropriateness of texts and genres which are taught in classrooms. Supporters of this theory (Luke, 1991; Gilbert, 1990; Thomson, 1990) propose that children develop as readers and writers when they can unpack
texts, look at them from different viewpoints, understand differences and question ideologies. For young children, this means an ability to de-centre. Moffett recognizes the importance of de-centering for language growth. He (1981, p.145) suggests that, as children de-centre, they move from "a private world of egocentric chatter to a public universe of discourse." James Britton (1970, 223) illustrates the importance of a social context within the classroom by stating that "the web of human relations must be spun in school as well as out." Children who write in a collaborative context, where teachers value ideas which are culturally and ideologically meaningful, may, as Thomson (1990, p.2) puts it, become "literate, textually powerful and responsible people".

One common thread in the literature under review, is the importance of prior knowledge for writing. In process methodology, content knowledge appears paramount; in genrist theory, structural knowledge emerges as most important, and in social construct theory, contextual knowledge is foremost. If one accepts that prior knowledge is important for writing, then it is also important to teach children ways in which they can access their known information for writing.

Prior Knowledge and Children's Writing

Researchers (Cambourne, 1979; Goodman, 1976; Graves, 1983; Holdaway, 1978) have stated that the learner's success in constructing meaning greatly depends on her input of prior
knowledge. Reid (1992, p.65) agrees with this by stating "No text can be understood apart from what readers bring to it."

One form of known information is sensorial knowledge. It is a shared knowledge - a common ground which provides a vital interactional link among children, and it may well be the trigger for associated information and ideas which children can bring to their writing.

Sylvia Ashton-Warner's methods of teaching reading and writing to Maori children stand as powerful evidence that, through her own exceptional sensitivity, she was able to motivate children to learn by activating a vocabulary which reflected deep, meaningful emotions. Graves (1983) suggests that one way of encouraging writing is to follow and extend children's own perceptions. Erikson (1985) suggests that perceptions include emotions, images, ideas, physical sensations and sensory perceptions. One way of following and extending the children's perceptions is through discussion with peers and the teacher. This discussion is described as a "conference" or "consultation" according to process/genrist inclination.

Children experience sensory and emotional feelings long before they associate them with words. It seems logical then, to assume that a child's sensory knowledge base is powerful, and should not be ignored. According to Halliday (1973, p.10) "Language is, for the child, a rich and adaptable instrument for the realisation of his intentions; there is hardly any limit to what he can do with it." In
young children, there is little or no consciousness of language and its form. Halliday (1986, p.5) suggests that it is "the act of writing which brings language into the child's consciousness". Perhaps this can be attributed to the fact that written language is long lasting and concrete, and, according to Stewart-Dore (1985, p.13) "can be reflected upon at length and returned to for clarification or confirmation."

Writing and Personal Input

Scholars such as Pestalozzi and Montessori recognised that, to teach language was to teach about the self, and to do that, one must begin with what children know best - their five senses. Montessori's work, cited by Williams (1971) concentrated on children from three to six years because she believed children of this age usually had high sensitivity to sensorial stimulation. Her claims seem to have lived on, because Kindergarten teachers, in particular, rely on the stimulation of children's five senses for language teaching and learning. Documents such as the Pre-primary syllabus confirm that teachers do provide activities which appeal to all five senses. They allow children to make and taste jelly, feel the crystals, smell and eat popcorn, play with clay and playdough, sift sand through their fingers - as part of a programme to stimulate language development.

However, Montessori also believed that children from seven to 18 years "are able to build upon their sensorial foundations with the acquisition of formal skills" (cited by
Williams 1971, p.3404). This implies that children in middle primary can extend their sensorial foundations using the tools of reading and writing. Extension of the sensory knowledge base increases children's prior knowledge which can be used for effective reading and writing. Yet, often, for middle primary children, language development relies on a greater input from the teacher and less from the self. This is confirmed by Green (1988, p.10) who states that "students are customarily and too readily in a receptive, passive position with regard to school learning."

There is no doubt that learning to write involves learning many skills. It is an on-going process of development and consolidation. Effective writers take control of their learning, and by so doing, gain confidence and greater self esteem. Prior knowledge is recognized by opposing theorists as being influential on how and what meanings are derived from texts. At the same time, prior knowledge of events, experiences and language conventions are the ingredients writers bring to the task of writing. Therefore, it seems relevant to teach ways in which students can access their prior knowledge. The literature which has been reviewed suggests that sensory exploration may be one way in which middle primary children can do just that, and thus add to, reflect upon and shape their prior knowledge into effective, meaningful written texts. Certain aspects of prior knowledge are influenced by gender, which impacts on writing in a variety of ways. Gender differences are evident in children's writing and are discussed in the next section.
Gender Differences

Gilbert and Taylor (1991, p.9) state that social practices at school, work and home are "gender structured."
Certainly, in the classroom, gender identity seems to permeate curriculum materials and, in some cases, teachers' interactions and practices. Recent research by Gilbert, (1990, 1991); Poynton, (1985); and Walkerdine (1989), highlights the idea that gendered ideologies are now being questioned, negotiated and resisted. However, sufficient research has been undertaken to establish the fact that gender has important implications for children's writing.

Poynton (1985), cited by Gilbert and Taylor (1991) claims that gender impacts on many aspects of primary school children's writing. The results of Poynton's research in New South Wales indicate the following:

Girls and boys write about different things almost from the start, with the difference increasing with age and the common ground becoming smaller. Girls write about home activities...dress and appearance, romance, and fantasy worlds inhabited by fairies, witches, characters from children's stories...commercial toys....and talking animals and objects. Boys write about playing or watching sport and other physical activities such as bike-racing...Boys' fantasy worlds are inhabited by creatures from outer space, assorted monsters (preferably of the kind that kill people unexpectedly and messily, with lots of blood), everyday burglars, kidnappers and murderers - and when the writer himself is a character in an adventure story then he is usually accompanied by a group of his male classmates...Boys also write about topics that do not lend themselves to 'story' writing, e.g. the solar system, dinosaurs, radios. (p.107)
Therefore, when children are challenged and encouraged to be introspective and create their own texts, it seems fair to suggest that gender differences may be evident. Based on his experience as a teacher, John Collerson (1988) agrees, suggesting that, when there is freedom of choice in writing, girls prefer narrative and boys prefer factual writing (p.10). Collerson confirms that gender also influences topic and language choice, and ways in which texts are framed, i.e. boys like horror, action-filled stories with male protagonists, whilst girls prefer fairy tale fantasies and animal stories. This phenomenon can be attributed to different levels of maturity, different background experiences, and cultural and social conditioning (Elkind 1978). Cultural knowledge is brought to bear on literacy tasks, illustrated by Gilbert (1992) thus:

*We as readers fill in the gaps of the story; we supply cultural knowledge to enable us to produce meaning from a story framework and much of this knowledge assumes certain positions and certain qualities for women and men.* (p.18)

The individual nature of sensory response may be an additional factor which could distinguish children's writing. Some have stated (Hall 1970; Yardley, 1970; Smith 1971; Elbow 1981) that reaction to sensory stimulus is highly individual, which is illustrated by Eichenberg's comment (1965, p.515) that "depth of perception and sensitivity differs from student to student." This is taken a step further by Yardley
(1970, p.39) who believes that "what pleases the eyes, ears and fingers of one person may offend the senses of another."

Therefore, the research suggests that, given a context in which the expression of sensations, feelings and personal ideas is encouraged both orally and in writing, one could expect highly individual responses which, in turn, may manifest themselves in gender differences being evident in the children's texts.

**Attitudes to Writing**

Attitude is a many-faceted phenomenon. It has considerable effect on behaviour (Elkind, 1978). In fact, it is a person's outward, observable behaviour which indicates the presence of the cognitive phenomenon of "attitude". Attitude is determined by a variety of cultural and environmental conditions (Santrock and Yussen, 1984). According to Hall (1970), Graves (1983) and Harste, Woodward and Burke (1984), some of the conditions which foster a positive attitude towards writing are when children:

1. have something to say.
2. have a personal stake in the writing.
3. are in control of the writing,
4. and when the writing environment is stimulating and supportive.

Educators agree that positive attitudes towards writing are identified by "on-task" behaviour, willingness to
participate, and productivity. Conversely, negative attitudes can be identified by disruptive behaviour, unwillingness to participate, and lack of productivity.

According to psychologists Santrock and Yussen (1984) acuity of the five senses challenges deeper perception, and deeper perception influences attitudes.

It appears then that effective writing is largely dependent upon writers possessing positive attitudes towards the task, and that certain classroom conditions are likely to produce positive attitudes towards writing. Attitudes can be measured in a variety of ways, one of them being a questionnaire, which, when triangulated with other data, such as observation notes, can provide valuable information about children's general attitudes towards writing. Attitudinal data are important, because they provide researchers with a richer picture of the child as she strives to master the necessary skills for writing.

**Summary**

The main points concerning children's writing development are as follows:

Writing is a multi-staged active process which reflects personal experience, and teaching children to value and share their experiences contributes to children's literacy.
Language is learned in a social context, and writing can be viewed as a social activity, which is influenced by culture.

Different viewpoints about teaching writing emphasize influential factors such as content, structure and context knowledge. There is agreement that prior knowledge is important for writing development, that is, prior knowledge of events, experiences and language conventions. Sensorial knowledge is part of one's prior knowledge. It includes emotions, images and ideas which may be brought to bear on children's writing, yet it appears to be neglected as a tool for learning. If challenging the senses does influence writing by helping children to take control over language through the creation of personal texts, then gender differences and attitudinal changes may be evident in their writing outcomes and behaviour.

Some suggest that being "textually powerful" is being able to recognize and exercise choices in language. That includes being able to access and be selective about prior knowledge. The ability to exercise choices and experiment with language can be described as being creative. The notion of creativity and its relationship to writing and the senses is discussed in the next section.

Writing, Creativity and the Senses

Much of children's writing in schools today falls into two camps, i.e. subject writing and personal writing (Walshe,
1986b). Although subject writing increases from Year Four, Walshe (1986b, p.14) believes that "personal writing needs to hold a valued place throughout all the years of schooling." Dumbrell (1986), in assessing children's writing recognizes "a depressing lack of spontaneity in students' work.... Spontaneity is an essential part of creativity" (p.116). Dumbrell, citing Dowling, defines creativity thus:

Bringing into being something new, unique, or uncommon through the use of imagination, inventiveness, association and flexibility of thought. (p.116)

Hall (1970) defines creative writing as:

Writing done by a child which is a reflection of his thoughts and experiences expressed in his choice of form and style. (p.42)

These definitions suggest that reflective thinking is linked to creativity and creative writing.

In writing terms, this means clear expression of innovative ideas using rich and imaginative vocabulary which may include personal feelings and emotions. However, Kress (1982, p.60) expands that idea by stating that "creativity exists in deciding in which type of genre to encode an idea." Therefore, it seems creativity in writing refers to two things: (a) texts which contain innovative ideas and rich vocabulary, and (b) texts which are appropriately and cleverly organized. Yet it is curious to note that Kress (p.6), a supporter of genrist theory, also states that "learning to write becomes the learning of forms, demands and
potentialities of different genres. Genres are fixed, formalized and codified hence learning of genres involves an increasing loss of creativity on the child's part." This point is taken up by Reid (1992) in his forthright criticism of genre theory, as follows:

It is necessary, I believe, to resist current attempts to tie reading and writing practices in a dogmatic way to narrowly defined generic forms. Some Australian linguists have been setting forth views on genre and learning which seem prescriptive...... One wrong thing with it is that it simply overlooks most of the interesting and distinctive things that can be going on in a text. (p.65)

The literature which is discussed in this section suggests a link between the senses and creativity, and, although much has been documented about creativity and children's writing, no specific research which connects the senses and children's writing was located. Therefore, the conclusions drawn in this section are derived from theoretical explorations of the topic.

The Senses and Creativity

Most humans use only a small portion of their energy and attention. Indeed, according to Erikson (1985) the senses are under-rated and under-developed. Erikson advocates the need for "appropriate stimulation....under the care of trained teachers (to) increase the acuity of the organs with which we have been endowed" (p.87).
Appropriate stimulation can come in many forms, such as art, pantomime, music, 'hands on' activities, etc.. Children who are immersed in activities which involve other than linguistic ways of knowing, broaden and organize their knowledge base according to their experiences. In fact, specific organization of knowledge is a function of culture and experience (Harste, Woodward & Burke, 1984), just as the body of knowledge which originates from personal experience consists of cultural knowledge, values and beliefs (Thomson 1990.) Thomson (p.4) adds "writers and their texts are shaped by their culture." Many suggest that experiences which challenge the senses lead to vivid self discoveries (Yardley 1970; Hall 1970; Holdaway 1978). Is this because physical sensations can trigger graphic images which are associated with important stored information? If this is true, then exploration of the self through the senses may enable children to perceive at greater depth. Yardley asserts that, in moments of deep perception, children can be truly creative.

The Impact of the Senses and Creativity on Writing

Feelings are associated with sensory experience (Yardley 1970, p.17). When the senses are activated, so too are feelings, emotions and the imagination. Rivalland (1991, p.300) states that "it is the development of thought, feelings, emotions and attitudes in writing, which probably differentiates expert writing from that of the competent or proficient writer." Wilkinson (1986, p.57) asserts that
there is a link between writing and the development of affective and cognitive power. Introspective thought, or, a dialogue with oneself, can be developed through the process of writing "to attain higher levels of thinking." Language is one tool for expressing feelings and emotions. According to Grace Fernald (cited by Holdaway 1978, p.31), language is not only "multi-functional" but it is "multi-sensory."

However, Graves (1983) reveals that:

Most research pretends that emotions are not part of writing. Emotions run high when we write because we meet ourselves so directly in the silence and aloneness of the act of writing. (p.165)

Holdaway (1978) agrees that writing is emotional and asserts that some part of language is always emotional by nature.

It could be said then, that creativity is closely linked to the activation of the senses and emotions. In order for children to write effectively and creatively, it is important that they have something to say, and are given opportunities to create and shape their own ideas in writing. However, according to Harste, Woodward and Burke (1984), much of children's writing is compulsory, and teachers often relieve children of the burden of topic and form selection. Many teachers believe they allow children to choose their own topics and forms when they direct them to choose from a shortlist. But it is quite a different thing to teach children to take on the responsibility of creating their own ideas and shaping them into organized, written evidence. In fact, past research in Australia (1980) reported by Walker
(cited by Walshe, 1986a p.178) revealed that "freedom to choose what they wanted to write about, especially when it involved their own feelings, interests, ideas and opinions, was what 'turned students on' to writing most." This is supported by Hayes and Flower (1989) in the following statement:

One of the time-honoured ways of improving student writing is to allow students to choose their own topics, in the hope of increasing both knowledge and motivation. (p.83)

Personal writing, that is, writing which involves personal topic and/or form selection, is usually referred to by teachers as "creative writing." Perhaps one of the reasons that personal writing appeals to children is that it fosters the feeling of "owning" the writing, as opposed to writing which has been directed by the teacher.

Writing Ownership

There is a great deal of cognitive work involved in writing, and, according to Green (1988, p.10) children "need to be active producers of their own texts, their own meanings." Certainly, the process of composition involves struggling with the organization of ideas, words and feelings. Successful composing promotes a feeling of ownership. But is ownership important? According to Thomson (1990, p.4), if students create and construct their own texts, they learn to appreciate the work of others. Perhaps
this means that writing ownership, that is, control over one's writing, allows for children to de-centre and develop socially.

Gilbert (1989c) argues strongly that the concept of "ownership" in student authoring precludes real teaching of writing, as follows:

This seemingly innocent discourse about ......... student ownership of texts needs much closer scrutiny. By constructing an elaborate edifice of personal artistic creativity over school writing, the discourse masks the ideological nature of the production of school texts. The act of creation, the individual expression of personal experience, becomes the focus of attention, not the efforts of children to construct texts from the available signifying systems. (p.199)

Much of the process writing literature gives the impression that the teacher is incidental in the writing process and that children's creative writing is beyond criticism. However, Gilbert, Luke et al. propose that the role of the writing teacher is to make children aware of, examine and confront what is ideologically acceptable or unacceptable, and/or gendered in writing, through an examination of different texts. If personal, creative writing freedom promotes "unsound" (Gilbert, 1989c, p.201) literature, then, just as the onus is on parents to intervene to correct unsound behaviour in their children, so too the task rests with the teacher of writing to seize opportunities to use "unsound" literature to openly discuss society's ideologies with their students. Gilbert, in other papers -
for example, *Reading Dolly Fiction* (1990b) - goes on to suggest that texts can be "critiqued" (p.18). She adds:

And this would seem to be an important position to move towards in the reading/writing classroom, because it not only offers potentially disempowered groups of students ways of making explicit their resistance to specific ideologies, but it also offers all students ways of understanding the constructed nature of textuality. (p.18)

Thomson (1990, p.5) asserts that understanding the ideologies of texts can be achieved with young children. He notes that "the ideology of a text is something that we need to help students to read and get control over, and it can be done from kindergarten to university."

Therefore, in writing terms, it appears that it is important that children are not only responsible for the quality of their writing, but also for the consequences of their writing. Certainly, it is not the teacher's task to prevent children from taking control of topics and forms in their writing because they fear that children may produce unacceptable literature. Indeed, according to the literature, children's writing can be viewed as valuable material for discussion and debate, which perhaps may bring about real social and literacy development.

If, over time, children are guided and taught how to perceive more deeply and listen to the viewpoints of others, then they may be able to reposition themselves as readers and writers, and thus de-centre. The process of de-centering may
lead children to question and prioritize their ideas and values, which may impact on their writing in a personal way. Personal writing is often associated with the notion of personal voice.

**Personal Voice in Writing**

Some argue that writing which has a fresh quality has a driving force called "voice" (Elbow, 1981; Moffet, 1981; Graves, 1983). Graves describes it as the "dynamo in the process" (p.227). The elements of voice are expressions of the self - that is, feelings and sensations. James Britton's (1975) classifications of writing functions categorize writing which includes expressions of the self and which stems from personal or imagined experience as "Expressive" and "Poetic." Graves (1983, p.229) contends that "voice contributes most to the development of the writer." Writing which contains voice has been described as truly creative. But Elbow (1971) maintains that voice is particularly difficult to teach. That may be so, but if personal voice is present in texts which are deeply meaningful to the author, then Holdaway (1978, p.163) notes that "the experiences which most effectively deepen and enrich meaning include the exploration of first-hand sensory experience."

The notion of personal voice being important for writing development is strongly criticized by linguists such as Kress, 1982; Christie, 1990; and Gilbert, 1990c. They argue that children develop as writers when they are taught
explicitly about the structural features of texts and how to select language which suits the different situations and purposes. Certainly Gilbert (1990c) acknowledges the presence of voice in texts, but asserts that 'hearing' voice depends entirely on, in this case, the disposition of the reader:

If voice seems to be something that readers can recognise (hear) it is clearly the result of framing (reading) a text in a particular way. (p.13)

If personal voice is associated with creativity, then Christie (1990) asserts that it is only when children have mastered the genres which they need, that they can afford to be 'creative.' Dumbrell (1986) notes that:

When, as speakers, we relate a story, we expect that listeners will respond to the message; we don't expect them to leap in with instant criticism of how we've expressed it. (p.117)

It appears that one perspective argues for the importance of form over content, and the other, content over form. Examination of both perspectives suggests that really effective writing needs both. Sensory experience may be one way of promoting and exploring introspective and reflective thought, which may prompt children to formulate creatively, in writing, descriptive, imaginative, fresh ideas and vocabulary, using both their knowledge of genres and the ideas which emerge. In fact, it may be one way of blending analytical skills of text structure with personal content - a
blend which may produce writing which is skilful and creative in both areas.

In writing, teachers such as Hall (1970), Clay (1979) and Harste, Woodward and Burke (1984) confirm that sensory expression is displayed by such features as word quality, imaginative ideas, richness of expression and organization of text. These features reflect a blend of language skills and creativity. Others (Elbow, 1981; Graves, 1983), suggest these features depict the presence of personal voice in writing. Perhaps there is a link between sensory expression and personal voice.

Summary

From the literature, it can be seen that, in writing, creativity is a reflection of thoughts and experiences which are expressed in the writer's choice of form and style. Some have stated that introspective thinking develops affective and cognitive power. It has been asserted that deeper perception encourages creativity, and influences attitudes. Experiences which challenge the senses promote deeper perception, therefore, developing acuity of the senses may trigger creativity in writing and change attitudes towards the task. Acuity of the senses can be taught through appropriate stimulation and by drawing relationships to sensations, emotions and ideas.
The literature notes that children are motivated to write when they have freedom of topic choice, and that the notion of "owning" the writing influences the disposition of the writer. Certainly the practice of allowing children to create their own texts and deal with a myriad of choices in language, may encourage children to re-position themselves as writers, and better understand different viewpoints.

It is asserted that current teaching practices in writing in middle primary reflect an experiential base which lacks recognition of the importance of the five senses for learning, and subsequently overlooks opportunities for children to access information and express themselves more fully, in a variety of forms, and thus, develop as confident, capable, creative writers.

Many agree that sensorial knowledge contributes to learning. That notion, as well as an overview of the sensory system, are discussed in the next section.

The Sensory System and Cognition

Introduction

As previously stated, the sensory system forms one of the major areas in the cognitive processing system. The role of the senses is to inform the mind. Erikson (1985) suggests that all knowledge begins with sensory experience. This section briefly describes the sensory system from a
physiological viewpoint, then discusses sensory perception and cognition. This discussion is based on an interpretation of Introduction to Sensory Processes by J. Ludel, 1978.

The Sensory System

Ludel (1978) comments on the sensory system thus,

The sensory systems are complicated. Their complexity is worth unraveling, if for no other reason than the fact that whatever we know about the world is based on what we find out through the senses. (p.1)

The human body is well equipped to adapt to the world. Humans do their adapting by learning from their sensations. Receptors (e.g. eyes, ears, skin) are units which gather energy from light, sound, temperature, or another kind of stimulus. They change the energy into a code for the nervous system. Ludel states that "the nervous system also analyses, changes, and abstracts the sensory information (Ludel 1978, p.2). The major anatomic functions of the sensory system and the brain are far too complex for a detailed discussion here. Suffice it to say, that the process of analysing, changing and abstracting the physical sensations is called perceiving. However, human perception is not just the result of physical events. It is the result of modifications, analyses and interpretations of physical events, and, it is important to remember, that humans perceive differently, depending on their thresholds of sensitivity, previous experience and enculturation.
Visual and Aural Perception

The visual system is a vast area and humans perceive according to their visual sensitivity. Optical illusions, particularly those in black and white, test the visual system. Some humans automatically focus upon the white areas of sketches, whilst others automatically focus upon the black areas. It requires a shift of visual concentration in order to see the reverse shading, and perhaps detect the object hiding in the illusion. The important point is that the illusion can only be interpreted, or perceived, depending upon one's visual sensitivity and acuity.

Likewise, auditory sensitivity differs in humans. Humans are not equally sensitive to sound frequencies, hence, sounds, tones and beats are perceived differently.

The Skin Senses

The sensations perceived through the skin are touch (vibration, tickle), temperature and pain. Receptors in the skin distinguish the sensations and information is sent to the brain cortex via the spinal cord. Tips of fingertips contain huge numbers of receptors and are therefore one of the most sensitive areas of the body.

The Chemical Senses
Chemical stimulation is sensed by taste and smell. Chemicals in the body (in the mouth, throat and nose) interact with the receptors to produce taste and smell sensations. Ludel suggests that there is great confusion of knowledge about the chemical senses, because they are poorly understood. However, two assertions are that, if chemicals are to activate the taste cells, they must be soluble in saliva, and, that humans are thousands of times more sensitive to olfactory stimuli than taste stimuli.

**Sensory Perception and Cognition**

Perception is defined by Gibson and Spelke (1983, p.2) as "the beginning of knowing, and so is an essential part of cognition. More specifically, to perceive is to obtain information about the world through stimulation." All information enters the brain through the sensory register. Perception depends on the receptors in the systems to pick up information from light, sound and pressure on body surfaces.

The body is richly endowed with the means of discovering and learning all about the environment. One interesting notion that is particularly important to this study is put forward by Gibson and Spelke (1983) thus:

exploration becomes increasingly specific and systematic with age" (p.9) and that our "means of exploring develop and become more skilful for many years - extending even into an adult's professional life. (p.59)
Elkind (1978 p.99) agrees that "children explore their perceptual world more fully as they grow older." Hence, it can be argued, that human perception improves not declines with age.

Children explore willingly, flexibly and efficiently, and, as they grow and develop, so too does their perception of such things as form, pattern, shape, size, spatial arrangements, etc.. They tune in to degrees of colour, textures and relationships of objects in a discriminate way (Elkind, 1978). However, tuning in means two things - firstly, it means observing, and secondly, it means reading the information. Older children have the capacity to do this, but they have to be taught how to make accurate observations by skilfully using their senses. Pestalozzi (cited by Erikson, 1985 p.93) held the principle that "children should be taught to observe - observing with every sense....to grasp with the senses, followed by doing, was the absolute foundation of all knowledge." Erikson goes on to suggest that, guided by trained teachers, and with appropriate sense stimulation, children will increase the sharpness of both their sense organs and their perception. Every child will respond in his/her own unique way. It is interesting to note that, according to Erikson (p.87) "gifted children are those whose senses are particularly acute." However, in this particular study, due to time restraints, no data regarding gifted children were collected.

Connotative Learning
Elkind refers to "connotative learning" which is highly sensorial, and occurs when children try to put their feelings and/or thoughts into words, or they try to translate words into feelings or thoughts. Wilkinson (1986) links emotional development with cognitive and social development - all of which are desired outcomes in schools today. Through exploration and talk, children can learn about their own and others' emotions, because, according to Wilkinson (p.46) "the (emotional) response will always be related to the (cognitive) appraisal" and "emotional development takes place predominantly in relation to other people." For successful connotative learning to occur, children need ample opportunities to express themselves and an abundance of cues from the environment (Elkind, 1978, p.100).

Smith (1971, p.76) also believes that "one aspect of cognitive learning involves the discovery of more and more cues." However, just as cognitive learning depends on cues from the environment which are picked up by the senses, it also depends on information from the brain about world knowledge which has already been acquired and organized. Cognitively, the two elements operate thus:

- **sensory stimulus** - is transformed by the brain into self knowledge and conceptual thought (Erikson 1985, p.85)
- **world knowledge** - allows for the prediction, identification and interpretation of incoming information (Smith 1971, p.71).
If children are to increase and access their world knowledge, they need more than just curiosity to see, hear, taste, smell and feel. If they are to be effective processors of information which comes from the senses, they must study each sensation overtly, and not merely respond with the sense of sight. Vital senses are crucial to learning, and may have an impact on writing, therefore it is important to teach children to observe, investigate, discover and discuss their sensations (Francq and Wright, 1985).

Children's oral discussions of their reactions to, and appraisals of, sensations, provide researchers with a window on their store of private knowledge and cognitive processes. Discussions provide the opportunity for an outsider to hear the dialogue which is going on inside the head. The talk-aloud protocol, as discussed by Lawrence 1981, is a valuable research tool to help the researcher understand the children's differences in cognitive processing, and to throw light on each child's ability to respond to sensory input. Jeannette Lawrence states that "thinking aloud provides unique direct reports of cognitive processes" (p.1). The protocol requires children to verbalize their thoughts as they work. Hence, verbalization can provide insights into the way in which students of different abilities employ strategies which link incoming sensory stimulus information to prior knowledge.
Summary

This section discussed the different sensory systems in physiological terms, and considered the ways in which perception develops. One point of note in the literature is that human perception improves, not declines with age.

Educators assert that children can be taught to observe with all five senses to sharpen their perception. Cognitively, sensory stimulus and world knowledge interact for effective learning. One way of observing this interaction is by encouraging children to verbalize their thoughts. Writing is one way of developing and preserving thoughts and emotions. Emotional development is linked to cognitive and social development. A major idea which has emerged is that sensory perception is highly individual. Individuality is an important component of creativity, which was discussed in the previous section. Methodology of related research is discussed in the next section.

Methodology of Related Research

In this section, pertinent methodological literature on related research is reviewed, and a final summary of the Literature Review concludes the section.

Many aspects of children's writing have been studied and documented. Researchers have examined children's composing processes, spelling, sense of audience, narrative and
expository understandings, use of syntax, ... the list is endless (Clay, 1979; Smith, 1982; Graves, 1983). However, Newkirk and Atwell (1986) assert that, prior to 1970's, educational research was usually conducted by the statistically skilled, using experimental designs. They (p.1) state that the "results often seemed irrelevant to classroom practice ...... the experimental procedures frequently failed to examine the settings, particularly the classroom context, where learning took place."

The pattern changed in the 1970's when researchers such as Clay and Graves began to study children's writing in its natural setting. They recognized the importance of children's talk, and viewed children in the natural language environment, taking into account such things as non-verbal cues, context, and using the children as informants.

Harste, Woodward and Burke (1984, p.221) state that language research methodology needs to be more in line with what is known today "about language and language learning." They argue strongly that ethnography is an appropriate paradigm for language research because it allows the researcher to enter the realm of the child, and, through informed observation, search for tangible evidence of what makes children's strengths and weaknesses in language learning. They adopted a naturalistic paradigm for their 1980's research with young children on early literacy and teaching instruction. Harste, Woodward and Burke's observations and descriptive data led them to conclusions
which questioned many current literacy instructional procedures, and which recognized children as reliable informants.

Anne Haas Dyson's (1988) study of eight primary grade children over a two year period led to the findings that children's writing and their perception of the wider world were closely interrelated. Visual stimulus allowed the children to respond firstly by drawing, and then in writing. Dyson's case study included field notes, children's drawings and written products, and audiotapes of children's talk.

Robert King (1984) conducted a qualitative study of four target children (from a broader group of 20 Third graders) in which he focussed on children's perceptions of the world in relation to their use of language. His data revealed that distinct differences in the children's perception was clearly noticeable in their writing.

The informed observations of past researchers provided direction for the present research. Researchers such as Graves, Clay, Harste, Woodward, Burke, Newkirk and Atwell, all recognized the importance of children as informants, and the natural context for learning. Dyson and King touched on this study's area of focus, in that they examined tangential aspects of perception and children's writing.

Bearing in mind the abovementioned, since sensory perception is highly subjective, case study design seemed an
appropriate method for gleaning rich data from children about the personal relevance of sensations and their influence on writing quality.

**Final Summary of Literature Review**

Although there is little evidence from past research which relates directly to sensory experience and writing, the review of related research has provided valuable insights into the nature of the problem. The important points of this review are that writing largely depends on the writer's contribution of prior knowledge which includes sensory perceptions in the form of emotions, images, ideas and sensations. However, sensory learning appears to be neglected in schools. Acuity of the senses deepens perception, and perception improves with age.

Research suggests that deep perception may enable children to think introspectively and thus, replace stereotyped descriptions with fresh new ones, orally and in a variety of written forms. Reflecting on their own responses to sensory input may help children gain self knowledge and prompt them to explore their responses in relation to their peers'. Group discussion provides an appropriate context for children to explore and re-work their ideas and receive feedback from others. With reactions to sensory input as a trigger for the discussion, all children are likely to have something to say. Past research suggests that children are
usually eager and willing to write if they have something to say—and they have a personal stake in the writing.

Gender differences have been documented in children's writing, however no literature was located on the writing outcomes of both genders in relation to sensory experience.

Because sensory knowledge is idiosyncratic, it seemed appropriate to focus on the whole child in terms of her attitudes, cognitive processes, verbalization, non-verbal cues and writing outcomes, in order to formulate a more complete picture of the influence of sensory experience and children's writing. For this reason, case study methodology was deemed to be the most viable and appropriate design for achieving that purpose, and is discussed, in detail, in the next section.

If the findings of this study suggest that activation of the senses of smell, touch and taste can be channelled in such a way as to contribute to children's writing development, then the implications are that teachers would be wise to use activities which incorporate all five senses as part of normal classroom practise, to re-vitalize children's oral and written language. Thus, the experiential base for language learning may be broadened and deepened at the same time.

A concluding comment which highlights the importance of sensory education comes from Dr. Maria Montessori (1965) -
Helen Keller is a marvellous example of the phenomenon common to all human beings: the possibility of the liberation of the imprisoned spirit of man by the education of the senses .... If one only of the senses sufficed to make of Helen Keller a woman of exceptional culture and a writer, who better than she proved the potency of that method of education which builds on the senses? (p.1)

The Place of Theory in this Study

This study accepts the view that writing is a social activity, in this case, within the context of the classroom. Context is important - it can and does shape the meanings which are made (Green, 1988). The process of writing, that is, the recursive steps, many of which hinge upon talk, is important. Knowledge of a variety of genres is also important. Genres are mechanisms which enable children to shape texts to produce meaning. Current theories of writing development espouse the importance of an experiential base and background knowledge for optimum language learning. This study recognizes and adopts the view that children's writing development benefits from an experiential approach, in a context which allows for discussion, change, and sharing, and recognizes that meanings are made by working through various stages of the writing process.

However, the most important concept in this study, is that children need to be taught ways in which they can access their prior knowledge which can be used effectively for writing. It is asserted that reaction to sensory stimulation
is a common denominator; a common talking point, and is perhaps one way of involving all children, irrespective of their level of development. As such, sensory experience may activate stored information by the power of association, and open doors for even the weakest children to think introspectively to creatively use both content and structure knowledge in their writing outcomes. Anecdotal evidence and teacher interview transcripts (Appendix A) suggest that language teachers today involve children in activities which appeal to the visual and aural senses, but they neglect the senses of smell, touch and taste.

Erikson (1985) challenges any who doubt the importance of the senses thus:

Dare we let our senses atrophy at any stage of the life cycle, cutting ourselves off from the sources of originality, intelligence, and personal knowing? (p.96)
CHAPTER THREE

METHODOLOGY

Introduction

The choice of paradigm and the main techniques for conducting research is largely dictated by the nature of the research questions. The researcher's theoretical orientation also shapes the process. This study was concerned with sensory activation and children's writing quality. It aimed to discover if activation of the senses influences children's perception, which may then impact on their ability and desire to experiment with language, and thus, develop as writers. The results may be important for current educational practices. Glaser and Strauss (1967) suggest that theories are built from the sensitive observer's insights.

A case study approach was adopted for conducting the research. Goetz and LeCompte (1984, p.46) describe case studies as "appropriate for intensive, in-depth examination of one or a few instances of some phenomena." The research required a qualitative approach because it focussed on recording, analysing and describing detailed accounts of a subjective nature.

This Chapter defines the term "case study" and outlines its general characteristics. In addition, an overview of the study design is presented, and all aspects of the design, procedures and instruments which were used in the pilot and main studies are detailed.
Case Study Defined

In Adelman, Jenkins and Kemmis' words, a case study is "the study of an instance in action" (1976, p.141). A later description of their's (1983) refers to the case as "a bounded system" which can be described thus:

The most straightforward examples of 'bounded systems' are those in which the boundaries have a common sense obviousness e.g. an individual teacher, a single school, or perhaps an innovatory programme. (p.3)

Goetz and LeCompte agree that a "case study analysis is appropriate for intensive, in-depth examination of one or a few instances of some phenomena" (1984, p.46).

As well as stating what case studies are, it is important to consider what case studies do. Dommoyer (1988, p.14) states that "case studies can take us where most of us would not have an opportunity to go. Case studies allow us to experience unique individuals within our own culture."

Characteristics of a Case Study

The characteristics of a case study as suggested by Lincoln and Guba (1985, p.188) are: natural setting, human instrument, tacit knowledge, qualitative methods, purposive sampling, inductive data analysis and grounded theory. The
present study adopted these characteristics as discussed below:

Natural Setting

Natural setting refers to the usual environment and practises of the individual, that is, the context remains the same. No phenomenon can be fully understood out of context, which is emphasized by Wilson (1977, p.249) thus, "(one) cannot understand human behaviour without understanding the framework within which the subjects interpret their thoughts, feelings and actions."

Human Instrument

Lincoln and Guba refer to studies by Campbell in 1955 which confirmed that humans were capable of providing reliable data. Sensitivity and perception, are unique to each individual. When phenomena such as these are the foci of a study, it is precisely an individual's uniqueness which provides richer data for thick description and deeper understanding.

Tacit Knowledge

Tacit knowledge is unspoken knowledge - everything that humans "know." It is the intuitive feeling that harmonises with another human's understandings, which have been derived from personal experiences (Stake, 1978). Stake (p.6)
suggests that "explanation belongs more to propositional knowledge, understanding more to tacit." Children's written products can be analysed objectively and subjectively. One's tacit knowledge allows for greater understanding of any piece of writing which embodies emotions and sensitivity.

Qualitative Methods

Qualitative methods of data collection include participant observation, and recorded interviews with those who have different viewpoints about the same situation - for example, children, teachers and parents. Watching, listening to and recording children's verbalization provides clues to their attitudes and abilities to process language.

Purposive Sampling

In any study, subjects may not be randomly sampled, for a variety of reasons. However, the subjects must be truly representative of a well-defined population, who are capable of providing sufficient information to answer the questions being researched. In this study, the subjects were selected based on the availability of a school, and a middle primary teacher's willingness to participate.

Inductive Data Analysis

Inductive data analysis occurs when data are recorded, classified and compared across categories for the purpose of
discovering relationships, looking for the natural variations within the data, and formulating hypotheses. Lincoln and Guba (1985) refer to this process as "the constant comparative" method.

Grounded Theory

Categories and classifications which emerge from the data need to be checked by others for verification. Data are verified by member checking, peer examinations, multiple data sources and triangulation of data and methods. These actions establish the consistency of findings within the data, which in turn, contributes to confidence in the analysis and the theoretical assertions which are derived from it.

Reliability and Validity

A researcher interprets data from her own perspective, which, of course, can be biased, or incorrect. Therefore, strategies must be undertaken to verify and validate the results from any qualitative study. Such strategies are: looking for rival explanations, examining cases which do not fit within the patterns, triangulating the data from different data collection methods and data sources, observation over an extended time frame, member checking to confirm the correctness of data, and peer examination of the data for discrepancies. A clear description of the study also allows for realistic replication.
The synthesis of the information included in each element of the case study is the written report which Stake (1978, p.7) describes as most useful "for adding to existing experience and humanistic understanding."

In any study of a subjective nature, it is important for the researcher to become acquainted with the subjects' perspectives. Case study methodology and techniques for data collection are appropriate for eliciting information which is not accessible in a controlled context. Wilson (1977, p.261) summarizes the choice of methodology thus: "there is no one right method: the method should match the study."

Design of the Study

Figure 1, as follows, depicts the overall design of the study.
Collection of Background Data from Teachers on Teaching Methods for Writing

Selection of Year Four Class
Contact with Principal and Teacher

Pilot Study to Trial Instruments
and Iron Out Problems

Collection of Baseline Data:
Attitude Questionnaire
Writing Samples
Teacher's Rating Scale

Selection of Six Target Children
Identified by Baseline Data

Series of Sensory Activities

Regular Interviews with Teacher and Target Children

Writing Samples Analysed using Constant Comparative Method

Analysis and Triangulation of all Data

Conclusions Drawn

Figure 1. Overview of the Study Design.
Research Setting and Participants

The pilot and main research were conducted with children from two Year Four classes in a Government metropolitan primary school. It was decided that, for the pilot study, a comparable group of children within the same school would reveal not only the strengths and weaknesses in the study design, but also the strengths and weaknesses in the environmental conditions within the school itself. The school consists of approximately 250 students in a total of nine classes. A class of Year Four children was chosen for the main study, and the Year Four component of a split Year 3/4 class (i.e. eight children) participated in the pilot study. The school is situated in a high socio-economic area where the majority of parents are professionals of some kind. Indeed, many of the parents attended the school themselves, and continue to support it in a variety of ways. Feedback from parents about this study was an unexpected but relevant aspect of the data analysis - see Chapter Six. It is asserted that the school is typical of any Government primary school in a similar area.

Year Four children were selected for the study for two reasons. Firstly, evidence suggests that teachers rarely use sensorial learning beyond Kindergarten and Year One levels. This is borne out by the lack of research in this area, and confirmed by classroom observations and interviews with three teachers - see Appendix A. Secondly, children of this age are emerging as capable writers who are able to
think and feel abstractly. Therefore, it was important to purposefully select children at middle primary level in order to establish whether or not direct sensory experiences could, and did, play a role in their learning and whether personal sensory knowledge influenced their writing in some way.

The particular class selected for the main study consisted of 29 children, namely 12 boys and 17 girls and, with the exception of one, all of the children had their 9th birthdays in 1992. Six focus children were selected from the broader group, in order to more effectively address the research questions. The six focus children satisfied the following criteria:
(a) even distribution of male and female, and
(b) a range of three general writing abilities, based on scores attained in writing samples done prior to the sensory programme. However, it must be remembered that these three ability groups were representative of the range of writing abilities in the particular class under study.

Gaining Access and Ethical Issues

In March 1992, the Principal of the school was approached for his verbal consent to use classes in his school for research purposes. He agreed, and instructed the researcher to discuss the issue with the relevant teachers. This was done and the class teachers also gave their consent to the study. A follow up letter detailing the planned research was sent to the Principal who consented, in writing,
to the research being conducted in his school (see Appendix items B and C). Guidelines for the ethical issues in Educational research by N. Hyde (1988) were adhered to in that a letter to parents, outlining the nature and purpose of the research, (Appendix D) was written so that their informed consent could be gained. The class teachers were provided with copies of the research proposal, which fully informed them of the nature of the research. All parties, namely, Principal, teachers and parents, were advised that all information gathered would remain confidential to the researcher and the University and where appropriate, to the class teachers. An assurance of anonymity was given to all parties.

Pilot Study

The pilot study, as outlined below, was conducted prior to the main research so that design problems could be detected and rectified.

Initial Writing Session

In order to test the efficacy of the scoring guides, and to establish baseline data about the children's writing abilities, two pieces of writing from each child were required for grading, that is, a response to an emotive passage, and writing on a pre-selected topic. The group of eight children were asked to read and respond, in writing, to an emotive excerpt from Colin Thiele's *Storm Boy* (Appendix
The children required considerably different lengths of time for reading the excerpt. Because time was a factor, it was decided that, in the main study, the excerpt would be read out to the children by the teacher, with the children silently following their own copies. The children did not experience any problems with their writing in this session.

The scoring guides by Diederich (1974) and Tiedt (1983), cited by Vacc (1989), (Appendix items F and G) which were used to grade the children's writing, proved realistic measures for gaining a reasonable evaluation of writing quality. Three of the children had their work cross-scored by the teacher, and similar scores as those of the researcher were given (within ten percent).

Questionnaire

The pilot group of children experienced problems with the attitude questionnaire (Appendix H). A de-briefing session with the children indicated that the problems did not lie in the content, but in the format, because the children frequently lost their places. Therefore, it was decided to re-conduct the questionnaire with the researcher reading out the questions one at a time and waiting for all of the children to answer before proceeding. This procedure was trialled and was found suitable. The questionnaire scores were discussed with the class teacher who felt that they provided valuable insights into the writing attitudes of these eight children.
**Sensory Activity**

The researcher conducted an activity on smell and touch with the pilot children. Notes were made on the administrative aspects which needed addressing prior to the main study, such as, spatial arrangements, size of groups, and volume and distribution of materials. Lack of time prevented the researcher from making detailed, focussed notes about the children's writing procedures, which confirmed the need for the class teacher to conduct the activities in the main study.

**Interviews**

Three main points emerged from the pilot interviews, namely:

1. More structure was needed in the questions. The researcher expected the children to talk more freely about their writing, which was simply not the case.
2. More time than originally anticipated was necessary to conduct each interview.
3. The school offered limited quiet areas for interviewing and availability of an appropriate site needed to be established. Although this aspect was addressed, further problems did occur in the main study.
Summary of Pilot Study

The pilot study provided valuable insights into a variety of administrative aspects which required attention. It also highlighted the strengths and weaknesses of the instruments and techniques for conducting the research. It was felt that summaries of interview transcripts, attitude questionnaire scores and writing sample analyses would be appropriate data for triangulation in the main study. Despite the early detection of pitfalls in the design, the children did produce some interesting writing. For example, one boy wrote:

*I enjoyed smelling all of the things. When you smell or feel or hear strange things, it's like letting your imagination out of a cage. It lets you and your imagination run wild.*

Design Instruments

The Attitude Questionnaire

A writing attitude questionnaire, which adopted a Likert scale for scoring, was used to assess attitudes as baseline data. Jongeling (1973, p.33) citing Kerlinger, defines attitude "as a predisposition to think, feel, perceive and behave toward a cognitive object." Although children's attitudes to writing were a minor focus in this study, it was asserted that attitudes might have some bearing on the children's writing performances and behaviour during the
sensory activities and writing times. Therefore, it was felt that a measure of attitude might be attained from the children's written responses. The attitude questionnaire provided benchmark attitude data which were checked for reliability in observation notes and in interviews with the target sample of children. Because the target children were both male and female from three ability groups, they were considered a representative few. Benchmark attitude data were considered important in order to establish a general statement about the children's attitudes to writing at the outset of the programme.

It is posited by researchers such as Graves, 1983; Walshe, 1986; Cambourne, 1986; et al. that the following behaviours are likely to be evident in a child with a positive attitude to writing. The child should:

1. express an interest in writing
2. show a desire for more writing
3. respond positively to questions about writing
4. endorse the importance of writing
5. confirm that good writing is a personal goal
6. agree that writing is a useful tool for all kinds of activities.

An existing and technically adequate questionnaire, devised for attitudes to Mathematics by Dr. S. Jongeling, was adopted and adjusted for writing, with Dr. Jongeling's approval (see Appendix H). Under Dr. Jongeling's testing
conditions, the questionnaire had a reliability coefficient of .81 and a high content validity.

Several factors contribute to children's attitudes towards writing, and any questionnaire should contain questions that represent various factors. After carrying out extensive factor analyses for the development of the Mathematics questionnaire, Dr. Jongeling concluded that four factors contribute towards attitude. It seemed appropriate to substitute 'Writing' for 'Mathematics' as follows:

1. Writing as a practical activity
2. Writing for enjoyment
3. Fear of Writing
4. Value and importance of writing

The questionnaire needed to be short (maximum of twenty questions) because of the children's age, and the content and administration procedures were trialled in the Pilot Study. A Likert scale was appropriate because it measured not only the direction, but also the intensity of the children's attitudes.

Henerson et al. (1978) assert that:

A questionnaire which asks about slightly different aspects of the same thing several times and uses a combination of the results from these questions... to indicate the presence of an attitude, is likely to be less effected in its results by random error. Therefore, it will be more reliable. A reliable attitude instrument can support a strong case for validity, and therefore credibility. (p.72)
The answers to the questions about writing attitude could be summed up to provide a single score, that is, a number of favourable/unfavourable responses served as a score for "overall attitude." The questionnaire data were triangulated with other data and sources, namely, interviews, observation notes, writing sample grades, to provide a clearer picture of the children's overall writing performances. The attitude questionnaire was not re-administered at the conclusion of the programme because this study did not aim to establish a cause and effect relationship between sensory activation and writing attitudes. Instead, the data were used to flesh out benchmark information which was being collected about the class as a whole, and in particular, the six target children.

Baseline Writing Ability Data

In order to collect baseline data of the children's writing abilities, the children were required to complete two pieces of writing which were scored holistically using two scoring procedures. It is asserted that a correlation of the two scores for each child produced a realistic assessment of writing ability. In addition, every third piece of writing was scored by at least two raters to establish interrater reliability. Holistic scoring, according to Huot (1990, p. 201) has been "one of the biggest breakthroughs in writing assessment." Nancy Vacc's research (1989 p. 91) indicated that "holistic evaluations of writing samples for the purpose
of obtaining a valid, global measure of quality appear warranted."

Holistic evaluation refers to scoring which occurs impressionistically, guided by scoring criteria. However, although particular features in the writing are scored separately, no attempt to count or tally any text features occurs. In this study, the scoring provided two sets of information, which are (a) ranking of the children and (b) benchmarks of each child's writing ability. In order to satisfy these conditions, two scoring guides, cited by Vacc (1989), were used - one which can be referred to as a general impression guide, and one which analyses separate components of the writing, thereby providing more information about the individual's writing skills.

The general impression criteria, devised by Tiedt (1983 - Appendix G) lists general writing attributes under five rubrics in which the writing can be scored from 1 to 10. The analytic scoring guide, devised by Diederich (1974 - Appendix F) for the Scholastic Aptitude Test in United States of America, lists prominent features of the writing, and weights them for an overall evaluation of writing quality. In this scoring guide, mechanics (grammar, punctuation, spelling, handwriting) account for only 20% of the final score, with the major emphasis going to quality and development of ideas, organization, style, individuality, wording and phrasing. According to Vacc's research (1989), correlations between the general impression and analytic scores "supports the
effectiveness of the holistic-scoring criteria as a quick evaluation of a writing sample's overall quality" (p. 91).

Validity and Reliability of Data

All research strives to be valid and reliable, however it is merely a construction of what is being viewed. Data always have to be interpreted and translated, which, of course, exposes them to contamination. In terms of internal validity, Goetz and LeCompte (1984), citing Cook and Campbell (1979) emphasize the need for researchers to be aware and critical of threatening factors as follows:

Estimating the internal validity of a relationship is a deductive process in which the investigator has to systematically think through how each (factor) may have influenced the data.... In all of this process, the researcher has to be his or her own best critic, trenchantly examining all of the threats he or she can imagine. (p.228)

The following strategies were used in this study to ensure credibility (Lincoln and Guba, 1985).

1. Triangulation of Data and Methods

The researcher carefully examined the data from multiple sources, i.e. children's writing, before and throughout the sensory programme, field notes, recorded transcripts, a questionnaire, teacher rating scale, and scores from writing samples, so that common links could be recognized and confirmed. The use of multiple methods, i.e. participant
observation, recorded interviews with the children and the teacher, and the administration of an attitude questionnaire, also enriched the data pool so that refined judgements could be made.

2. Long-Term Observation

The research was conducted over a ten week period, that is, a whole term, which allowed for the collection of a large volume of writing for analysis, and for repeated interviews.

3. Member Checking

Discussion with the target children of summaries of the raw and analysed data from interview transcripts confirmed the correctness of the data. Exemplars of such interviews are included in Appendix J.

4. Peer Examination

A disinterested peer and the classroom teacher periodically evaluated and commented on the raw and analysed data for discrepancies or agreement. Chunks of descriptive text were studied in an attempt to expose biases held by the researcher.
External Validity

Lincoln and Guba (1985) talk of 'transferability' rather than 'generalizability.' One way in which the researcher has provided the means for readers to determine the degree of transferability is by including a "thick description" (p.316) of the methods, data sources and contexts, to enable readers to make sound judgements of transferability to similar contexts.

Reliability

Merriam (1988) states that:

Reliability is problematic in the social sciences as a whole simply because human behaviour is never static. (p.170)

Merriam (1988, p.171) goes on to say that "replication of a qualitative study will not yield the same results." In this study, the researcher addressed the notion of reliability by the use of triangulation of methods and sources and a clear description of methodology.

Throughout the study, the researcher's main role was that of observer. Where practical, the class teacher and the researcher team taught the activities as part of the children's normal writing programme. It is believed that the class teacher's involvement and control minimised the possibility of any change in the children's writing being attributed to a temporary newcomer's teaching style, and,
hence, added to the dependability of the results. Collaboration with the classroom teacher of summaries of field notes pertinent to each activity and member checking summaries of interview transcripts with the children and teacher were further methods of establishing reliability.
CHAPTER FOUR
DATA COLLECTION
Contextual Data

Role of Researcher

Throughout the study, the researcher observed the children in all aspects of the classroom writing environment, and collected benchmark writing ability data, benchmark attitude data from a questionnaire and children's writing samples, over a term. In addition, six target children were observed closely during the activities and were interviewed regularly for feedback about the activities and their attitudes to writing. Once data began to take shape, key issues were identified and focussed upon. During the data collection phase, the researcher systematically classified the data for analysis and interpretation, using the "constant comparative" method (Lincoln and Guba, 1985), which is an appropriate research method for categorizing and analysing data from a variety of sources. Summaries of interview transcripts were triangulated with attitude questionnaire data, writing sample analyses and observation notes.

Initial Observation

In third Term 1992, the classroom teacher and the children were observed for one week during normal writing time, so that the context of the writing environment could be understood and described. The notes taken from the
Observation served to identify the rules and norms which operated in the classroom, and how the children participated during writing time. The researcher advised the children that she wanted to learn about children's writing, and that she would be watching and recording all aspects of their classroom writing time. Initially, the children were conscious of the researcher's presence and it was noted by the researcher and the class teacher that many children switched into 'model mode.' However, that was short-lived. The children's habitual, relaxed patterns of behaviour returned by the end of the first observation day.

The classroom writing context is described under the following headings:

1. **Resources and Spatial Arrangements of Classroom**
2. **Behaviour of Teacher and Children**
3. **Teacher's Role and Methods**
4. **Management Techniques**
5. **Type of Interaction**

**Resources and Spatial Arrangements of Classroom**

The classroom was small. Most of the space was taken up by desks which were grouped to accommodate five groups of six children of mixed ability. Although there were 30 children in the classroom, this study analysed data from 29 because of one child's frequent absences. A small carpeted area at the front of the room was used for convening the children into a whole group. Blackboards and an easel were also at the front
of the room. The teacher's desk was at the back of the room on the window side. The back wall of the room was reserved for a large display of children's writing, which was entitled "Authors' Corner" and "Riveting Reading." This area was filled with stories, poems, descriptions of planets, maths problems, etc.. A class library stretched along one wall of the classroom, with a large number and variety of books (which catered for different reading levels) on display. Generally, the room was light, well ventilated, and displayed appropriate, well organized resources.

Behaviour of Teacher and Children

The teacher was cheerful, humorous and positive at all times. She was very supportive of the children in their language attempts. She was enthusiastic about all of the writing tasks, and she captured the children's attention through voice and face animation. The children were quiet and well behaved group and listened intently. Overall, they followed instructions well. They remained on task for long periods of time.

Teacher's Role and Methods

During each writing session of approximately 50 minutes, the teacher's role was that of guide and supporter. She often sat at the children's level, or she moved about the room quietly and purposefully. Some of the methods used for teaching writing were:
demonstration of format (genre)
dramatisation (acting out an interview)
blackboarded directions
demonstration of note-taking
review of editing skills
conferencing

Overall, the teacher was always involved in the activity, doing the same tasks as the children. She encouraged peer consultation, referring to the children as tutors for each other. She intervened only if she felt the children were wandering from the task. At any one time, the children were performing a variety of tasks, i.e. interviewing, writing, re-writing, editing, conferencing, and preparing final copies for entering on the computer. The teacher was able to oversee all the tasks with ease. Writing time was generally very productive.

Management Techniques

The teacher had obviously established a structure for classroom management which was well known to the children. She did not raise her voice to gain the children's attention. The class responded to quiet signals such as "Excuse me" - everyone stopped, looked and listened; "Meeting time" - all children immediately went to the front and sat on the mat area. Positive praise was consistently given. The teacher delegated responsibility for a variety of jobs and, if the pace waned, she gave a time limit - "By the time I get to 10,
be organized!" One of her most forceful management techniques was simply being involved.

Type of Interaction

The teacher gave very clear instructions and demonstrations. Positive praise and encouragement were prominent features of her discourse, and her humour obviously delighted the children. The children responded quickly and well to input from the teacher, and remained on task nearly all of the time. It was a very relaxed atmosphere, with children discussing their writing plans, interviewing each other for ideas and seeking help for spelling, editing and conferencing. The interaction was task focused and positive.

Administration of Attitude Questionnaire

The teacher explained the purpose of the questionnaire to the children thus:

This is your chance to express your real feelings about writing. There are no right or wrong answers. Mrs. Johnson and I are your audience. Say what you really think and feel. The questionnaire makes a series of statements with which you may or may not agree. (Explained the scale). Let's do the practice item together. (Teacher demonstrated on the blackboard).

The questions were read out and answered one at a time. The teacher checked for understanding of each question. She waited for all to finish the answer before proceeding to the
next question. Some children asked if they could race ahead, but the teacher insisted that everyone should maintain the same pace, in order to avoid the confusion which had been experienced in the pilot study.

It was noted that the children were very secretive about their answers. They covered their work and did not discuss their answers. Even after the work was handed in, the children did not discuss it amongst themselves. It seemed that the children considered their writing attitudes as extremely private.

Collection of Baseline Writing Data

The class teacher provided a rating scale of the children's performances in writing. The teacher's ratings reflected an assessment of the quality of the children's work throughout the year, and were considered useful as yet another lens for data analysis. Scores from the graded writing samples were triangulated with the rating scale as a check for the selection of target children.

Graded Writing Samples

On the researcher's behalf, the class teacher conducted a specific writing session prior to the commencement of any sensory activities. The children's writing samples from this session were scored firstly, to provide benchmarks of the
children's writing skills, and secondly, to rank the children to fulfill the criteria for the selection of target children.

Paul Diederich (1974), a specialist in measurement and testing, confirms that actual samples of students' unaided writing are convincing evidence of writing ability.

In order to establish and increase reliability of the assessment, Diederich advocates the need for each student to produce two pieces of writing, in the same mode, on a different topic, which is scored by at least two raters. Cooper and Odell (1977) support that view by concluding that:

from previous research we know that either a comprehensive description of writing performance or a reliable rank ordering of a group of writers can be achieved only by asking for more than one piece of writing on more than one occasion and then involving two or more people in describing or rating each piece. (xi)

Therefore, in this study, prior to the commencement of any sensory activities, and in normal classroom writing time, each child produced two pieces of writing which were scored by two raters, in order to establish a reliable assessment of each child's writing performance at one point in time, which is relative to other children's writing performances at the same time, on the same topics. Charles Cooper (1977) claims that valid assessments of writing performance are obtained only from actual writing, that is, a whole piece of discourse, not a multiple-choice test of skills.
The writing session was conducted on a Tuesday at 1:10 p.m. Each child was given a copy of an extract from "Storm Boy." This piece was selected because the researcher felt that the children might be motivated by the highly emotive content. The class teacher read through the passage as the children followed silently. Then, in a time limit of 30 minutes, the children responded, in writing. They were asked to write about any feelings or ideas that may have emerged for them whilst they read the passage. For the second piece of writing, the children were asked to write a story on a selected topic, that is, The Best Meal I Ever Had, again in a time limit of 30 minutes. Again, this topic was selected because of its sensory nature. (See Appendix E for material).

The children regarded their writing as a test, and did not talk. Two children sought help, and the teacher directed them to re-read the passage and write about the pictures that came into their minds whilst reading.

Sensory Activation and Writing Activities

In the study, the primary technique for gaining access to data was the researcher's participant observation. The researcher was fully immersed in the Year 4 writing environment by observing a series of activities, prepared by the researcher and conducted by the class teacher, which stimulated the children's senses of smell, touch and taste. Where required, the researcher participated as a team teacher to ensure the smooth running of the activity. A detailed
teaching procedure which could be replicated is included in this Chapter. Some of the activities included material which appealed primarily to one sense, for example, the sense of touch, whilst others used material which appealed to all three target senses. It must be remembered that the senses of sight and hearing are difficult to eliminate, therefore conclusions which were drawn from the activities have taken this into account. It is important to note, however, that research literature suggests optimum learning occurs when all five senses are activated (Erikson, 1985). The sessions were activity-based. The children were involved in such things as making playdough, cooking, and identifying and classifying objects by touch, taste and smell.

The researcher observed all aspects of the writing climate, paying close attention to the six target children. Based on recent research on the role of talk in clarification of ideas, particular attention was paid to the target children's verbalization which occurred during the experimentation phase. Notes of salient points were taken, where possible, as events occurred, and added to and/or refined immediately afterwards. One valuable asset to the researcher is her ability to do shorthand.

The activities were conducted during two consecutive sessions each week (1:00 p.m. to 2:00 p.m. and 2:15 p.m. to 3:15 p.m.) for a period of eight weeks.

Session One
In Session One, the children, in groups of six, were given the material appropriate for the activity. The children were allowed to explore the objects and asked to focus their attention on smelling, touching and/or tasting them. The teacher encouraged the children to talk about and write down ideas, words and feelings evoked by their sensations. Their jotted information, or pre-writing, was used for their writing in Session Two.

The activities varied from week to week, to avoid boredom. The topics for each activity were as follows:

1. Identifying objects by touch.
2. "Smelling out" a partner.
3. Identifying by taste.
4. Making jelly (tasting, touching and smelling).
5. Making playdough (touch and smell).
6. Making popcorn (touch, taste and smell)
7. Exploration of body touch.

Session Two

In this session, the children referred to the notes they took during the sensory activity and, using their written ideas and vocabulary, they wrote something. The children were free to write on any topic, in any form they wished. The ongoing analysis of the children's writing included the
use and appropriateness of text structure to convey thoughts. The children were advised that their audience was the teacher and the researcher, and that legibility was important. One child asked if spelling was important, and, for this study, it was concluded that it was not. The teacher stressed that the most important point about their writing was that it should reflect the ideas and vocabulary which stemmed from the physical sensations of smell, touch and taste which they had experienced during the previous session.

At the end of eight weeks, there were approximately 220 written products, which were scored, analysed and described in terms of the research questions.

**Interviews - Target Children**

Six target children (even distribution of male and female) who were rated as below average/average/above average, were interviewed weekly, where possible for richer data relating to the activities, and their attitudes to writing. These richer data served to confirm or disconfirm emerging patterns in the children's work, and provided an in-depth personal view of the children's responses to the activities. Overall, the purpose of the interviews was to provide a window into the thought processes, sensory perception and writing attitudes of children from three writing levels. However, the interviews proved difficult because the school did not provide a regular, quiet place for the procedure. Interviews were interrupted by intruders and
external noise. The researcher found it necessary to re-locate three times. This was borne in mind when the data were analysed, as it was felt that the interruptions did have some bearing on the data.

The interview format and questions combined unstructured and structured modes and closed and open questions which related directly to the research purposes. Sample interview guidelines are located in the Appendix (I). Despite good quality taping equipment, external noise rendered many of the recorded transcripts inaudible. Therefore, it became necessary for the researcher to rely on her shorthand notes of the interviews as the prime source of record. The notes provided the bulk of the data which were transcribed into the interview summaries. (See Appendix J).

Interviews with Class Teacher

Regular informal interviews were conducted with the class teacher throughout the term for feedback about a variety of aspects of the sensory programme, as a reliability check on the accuracy of observation notes, and for background information about the children and their writing.

In early interviews, the teacher provided information about the class ground rules re topic selection and the children's knowledge of text structures. The teacher stated that the children did have some freedom of topic selection but that it was always within boundaries. For example, the
children could select a topic from a blackboarded list which was the result of a class discussion. A chart depicting a variety of genres was clearly visible on the back wall of the classroom. Formats for folk tales, letters, reports, narratives and recounts had been taught. However, the teacher usually directed the children to write in a specific genre, appropriate for the lesson.

Before the sensory programme began, the interview focus was on the establishment of a teaching procedure which would clarify the writing tasks for the children. The teacher was most concerned that the children would lose confidence in themselves if they were not given topics and told what format to use. In this study, the children were not given topics or instructed about the use of a particular genre.

Each week, the children's writing was read by the class teacher and the researcher, and was discussed in terms of the changes and patterns which were emerging. The class teacher also read and discussed the summaries of the transcripts from the researcher's interviews with the children and the researcher's notes from the previous sensory session.

Development of a Teaching Procedure

In the first two writing sessions, despite the researcher's well organized plans, the children were unclear and apprehensive about exactly what was required of them. Their unease was reflected in questions such as:
"How long does it (the writing) have to be?"
"Does it have to be true?"
"Can I write anything I like?"
"What if I can't think of a title?"
"Can I write a poem?"

Feedback from the children at the end of the session confirmed that problems existed. The teacher asked "Did anyone find writing difficult today?" (approximately 80% of the class put up their hands). "Why was that - who would like to talk about it?" asked the teacher. The conversation proceeded thus:

Child One - "I found it hard because I didn't know what to write, and I thought if I wrote what I wanted, you would think it was silly."
Teacher - "I said I would accept anything you wrote. I want you to write what you feel and think. Tell me about the pictures that came into your head as you touched things. They were real pictures - describe them to me."

Child Two - "Is that all you want. I mean, for us to describe our thoughts?"
Teacher - "Exactly. That's all I want."

After reading the observation notes from Sessions One and Two, the class teacher and the researcher conceded that future sessions needed to be more structured if the programme was to run smoothly. The points which emerged from the interview were:
1. The children should understand that the sensory activity was the forerunner to their writing.
2. The children should talk about and write down any vocabulary and ideas which were triggered by the physical sensations of taste, touch and smell and use that pre-writing as a guide in the writing session.

3. The teacher should make explicit the connectedness between physical sensations and ideas and vocabulary.

It was decided that a number of measures would be adopted, namely,

**During the Pre-Writing**

1. The children would be required to draw a treasure chest on paper and fill it up with ideas and descriptive words.
2. The teacher would interrupt regularly during the sensory activity and direct the children to focus on their pre-writing.
3. The children would be asked to close their eyes, concentrate on their sensations and write down all the ideas and vocabulary which were triggered by their sensations.
4. The children would be encouraged to debate and discuss their physical responses and subsequent ideas with their peers within the group, in order to clarify and organise their thinking and obtain feedback.

The researcher and the teacher recognised that, generally, adults are able to make connections between physical sensations and information stored within the memory. It appeared that these children did not make similar connections readily, and the teacher was concerned that they may not be able to do it at all. Perhaps the solution lay in
modelling. According to Christie (1986, p.21) "a great deal of children’s learning involves the use of models." Thus, the teacher decided to model the idea by adopting the term "this (touch/taste/smell) sensation has taken me on a trip to ... .... See if your sensations have taken you somewhere. (Wait several minutes). Who has been somewhere? Write it down. Let's go again."

Both the researcher and the teacher believed that the main writing session (session two) was a time for the children to be introspective - thus, a time for no interruptions. Therefore, the decision to target and structure the pre-writing session, that is, the sensory session, was based on both theoretical and practical premises.

In this study, the planning stage, which consisted of group discussion and pre-writing during the sensory activity, was critical for both individual and group learning. Christie (1989) states that teachers should

Encourage students to collaborate as they write. Group participation has all the benefits of allowing the students more opportunity to 'talk their way' into writing, pausing to debate and discuss the organization of what they write. (p.47)

As well as recognising the importance of working in groups and planning, modelling has been identified as an essential part of the writing process. Theoretically then,
modelling, discussion and planning make important contributions to writing.

In practice, the teacher felt that the "hack work" had to be done in the pre-writing session because the children were unfamiliar with the exploration of taste, touch and smell sensations and needed to be made aware constantly that sensations can be connected to ideas. That had to be done whilst the children were experimenting with the sensory material. Also, the children had to be reminded regularly of the importance of their pre-writing, as it was to become the guide for the writing task for the following session.

It was also decided to ask the children if they wished to expand their audience to include peers and parents. This idea was eagerly accepted by all of the children. Perhaps a wider audience triggered a clearer sense of purpose for some children. In order to complete the writing cycle, the teacher also decided to allow the children to revise and publish their work in subsequent daily writing sessions. However, much of the revised work was not completed in time for analysis, therefore the draft texts, not the revised versions, were used for analysis purposes.

From then on, the teaching sessions were more structured and, in turn, more successful in terms of the children's enthusiasm, sense of direction and ease for writing. A description of the teaching format for a 'typical' sensory activity and writing session is as follows:
Session One (approximately one hour)

1. The teacher read out five or six writing samples from the previous week. These were selected because of innovative ideas, clever use of genre, descriptive vocabulary, expression of emotion etc.

2. The activity was explained, and selected writing tools and materials were distributed. Children were asked to draw a treasure chest, or whatever was applicable, onto their paper.

3. In groups, the children participated in the activity - tasting, touching, smelling whatever was at hand, interacting throughout.

4. The teacher interrupted at appropriate times and instructed the children to stop, close their eyes and concentrate on the physical sensations, saying: "Close your eyes - this taste (touch, smell) has taken me to .... let the taste (touch, smell) take you away. (Pause) Who's been somewhere? Write down all about it. Try it again - see if you can go somewhere this time."

5. Step 4 was repeated (worded somewhat differently each time) two or three times, until all children had written something in their 'treasure chest.'

6. Children were encouraged to talk to peers about their ideas and plans for their writing.

7. Materials collected. RECESS.
Session Two (approximately one hour)

1. Children were instructed to read their pre-writing, and plan their writing. Discussion was encouraged at this stage.
2. Children began writing. This time was largely uninterrupted, and lasted 40-45 minutes.
3. At the conclusion of the session, the children were invited to share their writing with the rest of the class, by reading it out loud.

Activity Three has been selected as an exemplar, as follows:

Activity Three – Taste

The teacher discussed how taste buds work and gave a brief history of exotic tastes, as far back as the Aztecs. Four categories (Salty, Sweet, Acid, Sour) were listed on the blackboard. The children were instructed to classify each food into one of the categories. In hindsight, the classification aspect should have been omitted as it initially detracted from the real thrust of generating ideas and vocabulary.

The teacher distributed trays of foodstuffs to the children in five groups of six. The children were visibly excited, making such statements as "This will be great fun, I can't wait to try this." "I wish we could do this more often."
The children began tasting, identifying and categorizing. There was a great deal of excited talk. The children were describing certain tastes, commenting on textures, telling each other about associated ideas, expressing preferences and making notes. Just as peer discussion proved to be a vitally important component of the programme, so too did the teacher's interaction. After ten minutes of uninterrupted tasting, the teacher drew all of the children's attention and said: "I have put curry powder onto my tongue and the taste has taken me to an Indian market. Now, put something onto your tongue and let the taste take you away. Who has been somewhere? (Most of the children put up their hands.) Try it again - see if you can go somewhere this time." The children talked excitedly. Two children were overheard to say:

Child One - "I've got a great idea about a taste machine - I know exactly what to write about. This is the first time in ages I've known exactly what to write about."

Child Two - "Ooh! This vinegar reminds me of the medicine I had to take when I was sick. I could write about that. What an idea! I know just how to write it. Can I start straight away and will you let me read it out if the idea's good?"

The teacher constantly made children aware of the need to concentrate on their taste sensations and stressed that they should write down any connected ideas and vocabulary. The children discussed their written ideas with the others in and across their groups. The teacher checked that all
children had written something and asked if anyone did not know what to write about. Every child, even the weakest writers, had an idea they wished to write about.

During recess, some children asked if they could stay in and begin their writing. They did so.

After recess, the children who could wait no longer began writing straight away. Some children again discussed their ideas with peers. Within ten minutes, all children were writing. **No-one needed help.** The children remained on task steadily for approximately 35 minutes. Early finishers read their work to the teacher, the researcher or peers. The teacher drew all the children to the mat area at the close of the session and most of the children were eager to read out their work. The teacher selected three or four to do so. The atmosphere was excited and full of fun. Some children took the opportunity to give a dramatic verbal rendition of their work. Many children stayed after the bell still talking about their work and making changes before handing it in. All work was collected by the researcher.

**Summary of Collected Data**

A summary of the data which were collected throughout the study is:
1. Writing samples for grading - two pieces from each child at the beginning of the programme, for benchmark writing ability data
2. Writing attitude questionnaire benchmark data
3. Extensive field notes taken by the researcher as participant observer during all the sensory activities and writing sessions
4. Teacher rating scale
5. Interviews with target children and the class teacher
6. Children's writing samples from each sensory session.

 Procedures Used to Analyse the Data

According to Merriam (1988, p.119) "data collection and analysis is a simultaneous activity in qualitative research." Therefore, the researcher simultaneously analysed the data as they were collected. The constant comparative method, (Glaser and Strauss (1967)), cited by Lincoln and Guba (1985), was used. This method begins with an analysis of early observations which is continuously refined throughout the data collection period to identify and code categories. In this study, new datum was constantly compared with previous datum in order to identify regularities and irregularities, and establish relationships (Bogdan and Biklen, 1982; Lincoln and Guba, 1985).

Tables depicting quantified data pertinent to the research are used where appropriate. In the main, analyses of the data from field notes and interview transcripts are
presented in organized text. The focus of the study was to describe the quality of children's writing after heightened sensory awareness. The data were examined and analysed in terms of all aspects of the study questions, and according to newly emerged categories, which are detailed in the next Chapter.
CHAPTER FIVE

DATA ANALYSIS

Introduction

Case study methodology is an interpretive research method akin to ethnography. It is characterized by the collection of data from many sources, over an extended time frame, in a natural setting. Initially, this study focussed on one group of 29 Year Four children. In order to provide depth of description, six children were selected from the broader group for more intense focus. Thus, two cases were studied, that is, the group and the individual. However, as the study progressed, a third component, the sensory programme itself, emerged as a force which required attention, and thus, became the third case under study.

Establishing Categories

Case studies are inductive, in that they do not force classifications of observed behaviour into a pre-conceived format, but as Duignan (1981 p.290) suggests, they allow the data to "speak for themselves." In this study, the researcher identified categories from suggestions within the data, and, using the constant comparative method (Glaser, 1967), data from one incident were compared with data from previous incidents to establish consistency. Not all of the data "fitted" the initial categories which were determined by the research questions, necessitating further categorization of observations. For example, the children talked constantly
about the "mind pictures" which stemmed from sensory activation, therefore a new category labelled "Mind Pictures" emerged. Useful insights were gained from data which either did not fit within the patterns at all, such as the case of a child's total withdrawal and refusal to write after a particular type of sensory activation, or data which were inconsistent with the established patterns. For example, the majority of children stated that they thought children should choose their own topics for writing, but, in the writing sessions, many of these same children said they wished the teacher would tell them what to write about. Data sources were coded for ease of analysis, and a disinterested peer checked the data codes and categories for agreement. Realistic classifications were derived from a pooling of ideas. Re-classification by the researcher and a peer, after a period of three weeks, served to increase the reliability of the data.

Programme Processes

Six steps in the programme were identified and classified as "programme processes." Categories of data were analysed in terms of these classifications. It should be noted that the programme processes simply followed the movement of the activities in the two sensory sessions. The classifications are:

1. Experiencing sensory materials
2. Connecting sensations and ideas
3. Group talk
4. Pre-writing and planning
5. Writing phase
6. Sharing with others

Connections to Research Questions

In order to answer the research questions, 13 initial categories which intersected with the programme processes were established. These were:
(a) Sensory Awareness
(b) Creativity and Introspection
(c) Expression of Feelings
(d) Development of Vocabulary and Details
(e) Improved Writing Mechanics
(f) Organization of Ideas
(g) Experimentation with Form and Style
(h) Sense Preferences
(i) Gender Differences
(j) Writing Confidence
(k) Group Sharing and Interaction
(l) On task Behaviour
(m) Attitudes to Writing

These categories linked to the main and subsidiary research questions as follows:

Main Research Question
What changes can be observed in Year Four children's writing after the activation of the senses of smell, touch and taste, over a period of time?

Connected Categories
Collectively, all of the categories connect with the main research question.

Subsidiary Questions

Question Two
Is there any evidence to suggest that, after sensory activation, Year Four children will experiment with their writing, in terms of form and style, longer sentences, more details, better vocabulary, and greater organization of ideas?

Connected Categories
(d) Development of Vocabulary and Details
(e) Improved Writing Mechanics
(f) Organization of Ideas
(g) Experimentation with Form and Style

Question Three
Does the writing of Year Four children reflect a preference for one particular sense, and if so, in what way?

Connected Categories
(h) Sense Preferences

Question Four
Can gender differences be observed in the writing outcomes of Year Four children after sensory activation, and in what way?
Connected Categories

(i) Gender Differences

Question Five
Are Year Four children's attitudes towards writing influenced after sensory activation over a period of time, and if so, in what way?

Connected Categories

(j) Writing Confidence
(k) Group Sharing and Interaction
(l) On task Behaviour
(m) Attitudes to Writing

All collected data were carefully read and/or listened to, and coded according to the categories as listed above. New categories which were identified from within the data were coded:

(n) Children's Perceptions of Writing. For example, children said "Why should I have to think of a topic? The teacher does that."

(o) Desire for Writing Freedom. For example, children repeatedly expressed the view that they should be allowed to write what they liked.

(p) Mind Pictures. This term was used by most of the children. For example, "I got lots of pictures, like red jelly castles.... popcorn popping all over the place."

(q) Control of Writing. For example, "I am in charge of this today. I can do it the way I like."
(r) Importance of Topic. For example "When you think of a topic all by yourself, it makes you put more into the writing."

(s) Evaluation of Programme. For example, "The activities have been really good for me. My sensations help me with my writing."

(t) Self Esteem. For example "I'm getting good at this - aren't I clever?" and "I can't do this - I can't get anything right."

**Major Classifications**

Thus, it can be seen, twenty categories (a to t above) were recognised. In order to manage the volume and diversity of data for analysis, all data in the twenty categories were ascribed to five major classifications, under a new heading of Outcomes, namely:

A. Perceptions of Writing
B. Personal and Social Development
C. Writing Characteristics
D. Writing Responsibility
E. Attitudes

These five major Outcomes which include all of the data pertaining to Year Four children's writing and attitudes to writing in relation to sensory activation, were cross referenced to the programme processes which were identified earlier in this Chapter. Therefore, as a means of analysing the data, a cross classification matrix (Figure 2) was
created as an organizational tool, so that the researcher could work back and forth between the data and the matrix to identify intersections between a programme process and an outcome. Data could then be discussed in terms of the intersections. The matrix looked like this:
PROGRAMME

PROCESSES

1. Experiencing
   Sensory Materials
2. Connecting
   Sensations and Ideas
3. Group Talk
4. Pre-Writing and
   Sharing
5. Writing Phase
6. Sharing with
   Others

A. Changes in Perceptions of Writing
B. Changes in Personal and Social Development
C. Changes in Writing Characteristics
D. Changes in Writing Responsibility
E. Changes in Attitudes

Figure 2. Framework of Cross Classification Matrix.

Definitions of the outcomes follow.

A. Perceptions of Writing

This classification described the children's perceptions of writing in the classroom before, during and after the sensory programme, that is, the way in which the children perceived their roles in writing and how the children responded to the processes of talk, planning and pre-writing. Included here was the individual and group perceptions of the sensory programme and its connection with writing. For example, data showed how the classroom norm was that the children expected to be directed and helped by the teacher.
throughout the stages of devising a topic and form, planning and writing. Gradual change occurred as the children began to understand that personal writing required their own input that is, they had to devise, plan and shape their writing themselves. For example, children said "I didn't know this was writing. I thought writing was when you all do the same." As the teacher's control changed direction from providing ideas and formats to encouraging the children to think more for themselves, it was observed that the children's focussed talk increased, and that they became aware of the quality of ideas, for example, "I'll write about this idea - I can write better about this one." The children began to understand that sensations triggered cues for connecting stored information within the memory, and they were able to capitalize on those connections for writing. Data sources were open and semi-structured interviews, questionnaire answers, and observation notes.

B. Personal and Social Development

This classification included the children's development in knowledge and confidence about writing - "I've never done this before - I'd like to try", their establishment of sense preferences - "Touch is not good for me - I don't get too many pictures", their desire to entertain - "Can I read this to the class?", feelings of success - "I feel proud", self esteem and creativity - "I've never written a poem before - I think it's a good one".
The children also developed socially which was demonstrated by an increase in the expression of personal feelings and opinions, recognizing the differences in others' ideas for writing - "Look how I've done mine, it's nothing like yours!", and their ability to evaluate their own and other's writing - "I like this better than the one you did last week - it's a better topic". The children developed in sensory awareness and were able to prioritize their sensations as either helpful or unhelpful for writing ideas. Personal topic and genre choice led to feelings of success which were demonstrated by creative, dramatic oral readings of their work to the class. Data sources were interviews, observation notes, questionnaire, writing samples, and benchmark data samples.

C. Writing Characteristics

At the commencement of the sensory programme, the children were unfamiliar with decision making about the content and shape of their writing. As they became confident decision makers, they experimented with many aspects of their writing. This classification emerged from elements contained in the children's writing samples and benchmark data samples. The data noted rich, appropriate vocabulary - "mushy, gooey, spectacular, guilt-ridden", correct grammar and punctuation, and various literary devices to express meaning, for example, changes in perspective - "I'm just a little popcorn seed", large print for emphasis, speech bubbles, direct involvement of audience - "as I told you; you may remember", metaphor -
"coffee is the comfortable smell of the farmhouse at breakfast." Also included was evidence of referring to pre-writing - some children marked off ideas and vocabulary as they used them, use of imagery - "a waft of harvest smells", imaginative organization - a chart depicting the cycle of a popcorn seed - and gender differences in topic choices. It was noted however, that, in some children's cases, writing mechanics declined. For example, some children's spelling deteriorated, words (particularly verbs) were omitted, tenses were mixed etc. This is discussed in more detail in the next Chapter.

D. Writing Responsibility

This classification included the children's attempts to control their writing by creating and talking about their own ideas, and their ability to plan and refer to their notes for the main writing task. Writing responsibility was also evident in the children's desire to share their finished products, and their frequent statements about the pleasure they were experiencing from being in charge of their writing - "It's good to think of things all by yourself. You realise that you have to work harder, but that makes it better." Once they realised that some of the controls had been lifted, both weak and strong writers sought to improve and diversify their work, and were eager to expand their audience. Data sources were interviews, writing samples and observation notes.
E. Attitudes

This classification included the children's attitudes to writing and the sensory programme. Aspects which were noted were individual planning, group work, peer consultation, willingness to participate and share, and on task behaviours. Initially, the children were sceptical of the value of the programme. However, as time progressed, the sensory programme became an important motivator for writing which was evidenced by the children's increase in concentration, peer consultation and quality of ideas, and a considerable amount of excited talk about the activities on the previous and following days. The teacher had originally believed that the children would lose confidence if she did not constantly help them. However, she began to help them in a different way - that is, by teaching them to use themselves as prime sources of information. Hence, real attitudal changes were observed. Data sources were observation notes, questionnaire, interviews, parental feedback and writing samples.

Triangulation

Triangulation of data was possible when statements from interviews with the children matched questionnaire answers, observed behaviours and elements in the writing samples which the children produced. For example, a child strongly agreed in the questionnaire that writing is an enjoyable subject, confirmed that statement in interviews, was observed in the
classroom to be writing enthusiastically and easily, produced a variety of ideas and forms in her writing over the term, and was always eager to perform her texts for the class. Further triangulation was possible when findings were endorsed by the class teacher and parents. In this way, the triangulated study allowed the researcher to be more confident of the results.

Validity and Reliability

Validity and reliability in this study were achieved by the triangulation of data and methods, member checking, peer checking of classifications, inter-rater reliability for scoring benchmark data samples, re-classification of data by the researcher and a peer over time, participation of the teacher in all teaching activities, a clear description of the methodology and the inclusion of many examples from the data for verification of points under discussion.

The results and discussion follow in the next Chapter.
CHAPTER SIX
RESULTS AND DISCUSSION

Introduction

In order to represent realistic data analyses and create an holistic picture of this research, the data were grouped into three case studies and analysed from each perspective, namely, the group, the individual and the programme. The descriptions for the group case study are presented according to the classifications which were developed to organize the emerging categories of data. These classifications are cross referenced to programme processes (see Table 6.3). Case studies for the six target children are discussed, in writing terms, throughout the sensory programme, and the programme itself is analysed in terms of its processes, effectiveness, and suitability as a teaching method. Validations of points under discussion are by examples from the data. Exemplars of some of the children's writing are located in the Appendix (K).

This Chapter discusses the changes which occurred in the children's writing samples and attitudes to writing, from the whole group's perspective. The next Chapter discusses and details the individual perspective of each of the six target children, and the relevance of the sensory programme for children's writing. The three case studies are related and interdependent, and collectively, the data came together to create a body of emerging theory. The results of this analysis were verified by triangulation of methods and
sources, cross checking by a peer and the lack of rival explanations.

Analysis of Group Case Study

The main research question asked - What changes can be observed in Year Four children's writing after the activation of the senses of smell, touch and taste, over a period of time? This question generated four specific research questions which focussed on four areas of writing, namely:
1. writing quality (including organization, form, style, details, vocabulary and length of sentences)
2. sense preferences
3. gender differences
4. attitudes

Before the commencement of the sensory programme, a writing attitude questionnaire was administered, and two pieces of writing were completed by each child in the group. These data were important because they provided benchmarks of writing attitudes and abilities against which comparisons could be made throughout the programme, and data checked for reliability. The scores were cross-checked with the teacher's rating scale and were used as the criteria for the selection of target children.

The Attitude Questionnaire
The attitude questionnaire (Appendix H) measured the direction and intensity of the children's attitudes to writing, so that rich data might be obtained regarding writing attitudes at the outset of the programme. The questionnaire contained twenty statements with which the children either agreed or disagreed, with a possible score of one hundred in a positive direction or zero in a negative direction. Table 6.1 shows the girls', boys' and total group's scores and means for the writing attitude questionnaire.

<table>
<thead>
<tr>
<th></th>
<th>Girls</th>
<th>Boys</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>11</td>
<td>12</td>
<td>29</td>
</tr>
<tr>
<td>Total Score</td>
<td>1289</td>
<td>845</td>
<td>2134</td>
</tr>
<tr>
<td>Mean</td>
<td>75.8</td>
<td>70.4</td>
<td>73.5</td>
</tr>
</tbody>
</table>

The highest individual questionnaire score was 94 and the lowest was 43. Two children scored higher than 90 and two children scored lower than 50. Item 3 which stated "I find it easy to express my feelings in writing" evoked the strongest disagreement response from 16 children and Item 1 which stated "I always want to do well in writing" evoked the strongest agreement response from 19 children. According to these results, the girls held a more positive attitude
towards writing than did the boys. Based on the means, it was felt that the majority of children held positive attitudes towards writing.

**Graded Writing Samples**

The graded writing samples provided base data of the children's general writing ability, and scores which were used to guide the selection of target children. The holistic scoring procedures by Diederich and Tiedt (Appendix F and G) were used and correlated to provide an overall assessment of writing ability. The criteria included attributes such as understanding and discussion of topic, coherence, details, organization, paragraphing, sense of audience, sentence structure and quality and development of ideas. Spelling was discounted by the researcher as, in this case, it was deemed to be an insignificant aspect of the children's writing. The children were required to respond to an emotive passage from Colin Thiele's *Storm Boy*, and write a story entitled *The Best Meal I Ever Had*. Table 6.2 shows the girls', boys' and total group's correlated scores and means for the writing samples.
TABLE 6.2 Girls' and Boys' Scores and Means for Writing Samples

<table>
<thead>
<tr>
<th></th>
<th>Girls</th>
<th>Boys</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>17</td>
<td>12</td>
<td>29</td>
</tr>
<tr>
<td>Total Score</td>
<td>960</td>
<td>606</td>
<td>1566</td>
</tr>
<tr>
<td>Mean</td>
<td>56.4</td>
<td>50.5</td>
<td>53.5</td>
</tr>
</tbody>
</table>

The highest individual correlated score was 92 and the lowest was 17. It was observed that, for this task, many children seemed uneasy about writing, and needed help. Perhaps this was because the children were concerned about a newcomer in their room, and because they perceived the writing as a test. Perhaps too, the children were confused about the nature of the task and were not sure what to do. The teacher resisted helping the children and it was stressed to them that the work had to be done alone. The scores did not indicate that the children found the first writing task more difficult than the second. Most children wrote only three or four sentences for each piece. Again, it should be noted, that the girls' scores were higher than the boys'. A few children took the opportunity to reflect and express feelings and opinions, such as in the following examples:

Child A - *When I read that piece I got a huge jolt in my stomach and then it turned to butterflies.*

Child B - *It makes me want to kill them (the hunters) because they killed Mr. Percival. It makes me very angry!!*
Child C - It made me feel helpless ..... It taught me not to take friends for granted.

Discussion

Analysis of these data indicates that the girls held a more positive attitude towards writing, and were more capable writers. Recent Monitoring Standards research by the Department of Education in Australia shows that girls seem to be more capable than boys in reading and writing. This corresponds with findings in Janet White's (1986) national writing testing in the United Kingdom, which is cited by Gilbert and Taylor (1991). They state that:

In relation to girl's and boys' attitudes to writing and to their different abilities with school writing tasks...(White) makes the claim that 'in each of the surveys conducted, on all of the analytic criteria used, girls have been found to achieve higher mean scores than boys'. (p.104)

In this study, gender differences in attitude and writing ability were evident, but, it was felt that, based on the narrow gaps in the mean scores, the difference was unlikely to impact greatly on the writing which was to come. The scores for writing ability were randomly cross checked by the class teacher. The teacher used the same rating scales and scored the work separately. Each rater's scores were within ten percent. However, the scores were generally low. This came about because the children scored poorly in the weighted rubrics which included quality and development of ideas, phrasing and style and organization. In contrast,
their scores for writing mechanics were average. This indicated that the children's writing competence lay in their understanding of the mechanics of writing, not in the quality of writing.

There seemed to be an imbalance between the positive scores in the attitude questionnaire and the children's writing ability, and certainly, some of the questionnaire responses did not match the writing results. For example, only seven children agreed with the statement "I find it difficult to arrange my thoughts in writing." Yet, the writing samples indicated that almost all of the children experienced difficulty in this area. Perhaps the children related being "good" writers to being effective, mechanical writers. Most of them were competent in spelling, grammar and punctuation. This could account for their generally high positive attitudes.

**Outcomes**

The main research question asked - What changes can be observed in Year 4 children's writing after the activation of the senses of smell, touch and taste, over a period of time? In order to answer the question and conceptualize the changes which occurred in the writing outcomes of this group of children after the activation of the senses of smell, touch and taste, the following table was developed according to the cross classification matrix (Figure 2) outlined in Chapter Five.
### TABLE 6.3 Cross Classification of Programme Processes and Outcomes

<table>
<thead>
<tr>
<th>PROCESSES</th>
<th>OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>1. Experiencing Sensory Materials</td>
<td>X</td>
</tr>
<tr>
<td>2. Connecting Sensations &amp; Ideas</td>
<td>X</td>
</tr>
<tr>
<td>3. Group Talk</td>
<td>X</td>
</tr>
<tr>
<td>4. Pre-Writing and Planning</td>
<td></td>
</tr>
<tr>
<td>5. Writing Phase</td>
<td>X</td>
</tr>
<tr>
<td>6. Sharing with Others</td>
<td></td>
</tr>
</tbody>
</table>

Note.

A. Changes in Perceptions of Writing  
B. Changes in Personal and Social Development  
C. Changes in Writing Characteristics  
D. Changes in Writing Responsibility  
E. Changes in Attitudes

The changes which occurred in the children and their writing are now discussed in detail, according to the Process/Outcome intersections shown in the table. In each case, firstly the process is described, using several examples from the data, then the outcomes which are linked to the process are detailed.

**Process One - Experiencing Sensory Materials**
The initial process of experiencing the sensory materials stimulated language development in these children, and supports the early research which led to the Language Experience approach for writing. In Language Experience, children are encouraged to use their own language to explore and extend personal experiences and, based upon the language they generate, the children proceed to write (Goodman, 1976; Smith, 1978). In this study, the children were encouraged to manipulate the sensory materials and write down words which described tastes, textures and smells - words which could then be built upon, expanded into ideas and shaped into texts. Observations noted that rich descriptive vocabulary and personal preferences began to emerge. For example, the children generated words such as pummel, pound, stretchy, gooey, pliable, inhale, sticky, fuzzy, irritating, ticklish, heavenly, upsetting, disastrous, wonderful. Children were overheard to say:

Child 1 - "I love the feel of this - it's cold, wet and slimey." C(2) "I don't like the feel. I think it's disgusting, but I love the way it smells - really fruity."

Some children argued about their sensory preferences as in this conversation:

Child 1 - "Feel how squelchhy this is."

Child 2 - "That's not squelchhy at all - this one is much better."

Child 1 - "You must be crazy (looking for support from someone in the group) Who agrees with me? Feel these. Which one is squelchier - is that a word?"
A third child stunned the group when she replied "One man's meat is another man's poison."

Child 1 - "I've never thought of that before. Maybe we're both right."

The interaction which occurred certainly confirms the work by Eichenberg (1965), Hall (1970) and Yardley (1970) that reaction to sensory stimulus is highly individual. Discussion of personal responses was the beginning of introspective thought. The ability to think introspectively is an important skill for framing a text, in both reading and writing terms.

The children's enthusiasm for the experimental component of the activities was sustained throughout the entire programme. This was demonstrated by a considerable amount of excited classroom talk which was reported by the teacher, on the days preceding and following the activities.

**Outcomes of Experiencing Sensory Materials:**

* Changes in Writing Characteristics
* Changes in Personal and Social Development

Evidence from observation field notes shows that written and oral language generation was one important outcome from the "hands on" process. Once the children developed an awareness of their sensations, they recognized that their physical sensations prompted a range of descriptive vocabulary. They seemed to feel a measure of success when
they were able to describe their sensations to each other, and began to show discerning qualities in their vocabulary choices. Several children tried to out-do their peers by using interesting descriptive words. For example:
Child A - "This tastes great."
Child B - "No, it's delicious. It's more than delicious."
Child C - "What about scrumptious?"
Child B - "What about extra scrumptious?"

Another important outcome was the children's emerging awareness that everyone perceives differently and that physical sensations can trigger a variety of reactions and emotions. For example:
Child A - "That's a lovely smell. I like that a lot."
Child B - "How can you say that? It's just awful!"
Child A - "I could write a good description of that smell."
Child B - "I could write a good complaint."

Individual perspective is an important factor in the creation and understanding of a text in terms of its ideology, originality and emotional qualities. The sensory material seemed to provide an opening for the children's realization of likes and dislikes, and, as they talked their way through the experience, they discussed some of the reasons for their opinions. This, in turn, led to an understanding of their sense preferences for most of the children and was the beginning of an awareness that the same issue could be constructed in a variety of ways, from a variety of viewpoints.
Therefore, the first process in the sensory programme, that is, experiencing the sensory materials, was a fruitful time for the children's development, in terms of developing awareness of sensations, the generation and acceptance of different viewpoints, an expansion of vocabulary and the establishment of sense preferences.

Process Two - Connecting Sensations to Ideas

Whilst watching the children manipulate the sensory materials in the first session, it was noted that a few of them were able to connect their physical sensations to ideas stored within the memory, and use those ideas as cues for writing. Observation notes recorded the following:

Child 1 - "This reminds me of liver - I hate liver. Mum made me eat it once. I'll never forget that time - it was so yukky! That would make a good story eh?"

Child 2 - "This elastic band reminds me of a slingshot, and this bottlebrush reminds me of my little brother - he's a pain.

Child 3 - "What, is his hair like that?"

Child 2 - "No, silly. Mum's always washing out his bottles for his milk - everything's got to be so clean for babies. Mum would be pleased if I wrote a story about him!"

However, other children experienced problems. For example:

Child 4 - "I don't see what this has got to do with writing."

Child 5 - "These things don't remind me of anything. Leave me alone. I'll work it out."
Once the teacher introduced the structure as discussed in Chapter Four, all of the children, with practice, were able to make connections and, as time progressed, they were able to explore the connections and bring them to bear on their writing. Evidence from the children's pre-writing shows that all were able to make mind pictures triggered by the vocabulary which they used to describe their sensations, and turn them into writing. For example, some of the children's pre-writing includes the following:

"The words remind me of sandpaper - sandpaper that Dad and I used to sand down the billy-cart. The words remind me of a jar. A jam jar that Mum uses to store almonds in. The words remind me of Blu-Tak. Blu-Tak I used to make my little red Indian sculpture. The words remind me of nails. Spikey nails that Dad used to make my treehouse."

Clearly it can be seen, that any one of these ideas could be used as a basis for a piece of writing.

Interview records show that mind pictures seemed to be a very important part of the writing process for most children, as follows:

Child (male - average ability) "I see lots of pictures when I taste and smell things, but not too many from touch."

Researcher "Tell me about how you turn those pictures into writing."
Child - "I think of words and see pictures - I just sort of mix them together and create a story. Because we've done it more times, I'm getting used to it. It's becoming easier."

C (female - average ability) "I've learned that you can have lots more ideas from this kind of method from the senses, and you can imagine things a lot better."

Researcher "How do you do that?"

Child "Oh, you can see pictures in your mind, and, if you close your eyes, you think of lots of things to say and write about."

The children also began to recognize the value of the sensory programme for writing. Interview transcripts and observation notes suggest that the children looked forward to the sensory sessions because they knew they would produce some of their best writing. One child stated: "I think it (the sensory programme) has been helping everyone. I can tell. If you look at Term One and Term Two writing, it just wouldn't be the same. This way, it gives you much more ideas." The class teacher confirmed that the diversity of ideas, the quality of descriptions and the exploration of style had been considerably enhanced by the sensory programme.

Outcomes of Connecting Sensations to Ideas:
* Changes in Perceptions of Writing
* Changes in Personal and Social Development
* Changes in Writing Attitudes
The process of connecting sensations to ideas was essential for the success of the programme, and produced several important outcomes. It was reported in detail in Chapter Four that this aspect of the programme required structure and explicitness. Once that had been achieved and practised, all of the children, from each ability group, used their descriptive vocabulary as cues to access ideas, which formed the basis for their writing. The children's perceptions of writing began to change with the realization that the ideas for writing topics were their own responsibility, which made them aware of, and selective about, the quality of their ideas, and whether or not they could think them through sufficiently to create a piece of writing.

Evidenced by the extra details in their pre-writing, the children grew in confidence in their ability to make the connections. An increase in their amount of pre-writing, from an average of five words after the first two sessions to an average of twenty words at the conclusion of the programme, and the observed ease with which it was carried out, indicate that the children were changing in terms of their input at the early stages of the writing task. Where once they had held back and waited for the teacher to do the work, they were now contributing. For example, this is the pre-writing completed by a child of average ability in session Three:

"grainy, lumpy, mountainous, icy mountins, waterfall, mushy lava, volcano, brittle."
Two weeks later, in session Five, the same child wrote:

"A rainbow, water dripping from a fern, slippery soft wet moss, hard ice from hail the night before, cherry, sweet smell of spring, wings of a bird in the rain forest, sparkly pond, tropical gardens, crackling apple, a cawking frog, chirping bird, sunsetting, a fire fly's glow flickering in the darkness."

As the children took on the new role of determining their writing topics, their attitudes to writing changed. It was observed by the researcher and the class teacher that the children lost their early feelings of apprehension about writing personal thoughts down. Interview transcripts confirm that children do associate personal topic creation with ownership in writing, therefore it appears that the feeling of ownership is an important component of successful writing. For example:

Child 1 "I feel better about writing about my own topic."

Child 2 "I think they (children) should have their own ideas a lot more. How else would teachers know what the child is really like, or what she is thinking if she just writes the same old boring stuff that everyone else writes?.....I'm really proud ... because it was all my own work - my ideas."

A further consequence of the connection process was audience awareness. Once the children were armed with several writing ideas, they wanted to construct texts for their classmates to read. The teacher extended their audience further, by suggesting that the children might wish
to make folders of their work, which their parents could read. The children readily accepted this suggestion. Sharing is an active component of the process of writing. After all, writing only becomes meaningful to others if it is read or listened to (Graves, 1983; Walshe, 1981). In this class, audience awareness stemmed from the social context of language and ideas in relation to others. It is asserted that audience awareness was a factor which prompted the children to improve their writing. The children seemed to consider how classmates and parents would react to their texts, and thus, they paid more attention to the construction of their texts. It was noted by the researcher and the teacher that the extension of audience contributed considerably to the children's enthusiasm for writing. The children's eagerness to please their parents with their writing is borne out in their responses in the attitude questionnaire.

Therefore, the second process in the sensory programme, that is, connecting sensations to ideas, allowed children to recognize and accept the role of determining their own topics, appraise and expand their ideas, consider their texts in relation to audience, give more of themselves in the initial stages of writing and develop a feeling of writing ownership. Underlying the process was the teacher's explicitness and timely intervention - both of which were extremely important.
Process Three - Group Talk

It must be remembered that the processes of experiencing the sensory material, connecting sensations to ideas, and the beginning of pre-writing, were simultaneous and interdependent, and all hinged upon group talk. Through careful observations, the teacher had placed the children into harmonious working groups of six. Each group had both boys and girls of mixed ability. Just as talk was important for helping to trigger ideas, it also provided a means for the children to build background knowledge. Through discussion, the children worked through their ideas, bandied opinions and criticized and encouraged each other (see conversation which follows). This contradicts the individual notion projected by process writing. The children did not regard their writing as private, and did not struggle through personal ideas. Instead, they were happy to expose their plans and ideas through talk.

The teacher constantly drew children back to their sensations through her interaction and modelling. Cambourne (1979) asserts that modelling is an essential component in learning. That was demonstrated in this study. The teacher's powerful focus was the vital link in the process. In the first two sessions, many of the children struggled for ideas and vocabulary, because the familiar teacher control had been removed and the children were unsure of what was expected of them. It was precisely the teacher's interaction and modelling which enabled them to concentrate, 'free-up' and
contribute. By Session Three, almost all of the children were capable of generating ideas and vocabulary, which made them eager to extend their thinking through talk. Talking transformed single words into ideas which could be shaped for writing. For example, from observation notes:

Child 1 "This is lemon flavour."
Child 2 "No, it's pineapple."

Child 1 "It's lemon - I know because we've got a lemon tree. I know the taste and smell. It hangs right over our pool. The smell makes me see a picture of Dad in our garden. He's always scooping the lemons out of the pool."

This child did go on to write about this - see Appendix K.

Through discussion the children grew in awareness of writing quality and audience, and drew on background knowledge, evidenced in this conversation:

Child 1 "I've got two good ideas from smelling this stuff. I might write about the pine trees at our farm, or my pet turtle, Zack."
Child 2 "I wish I had a pet turtle."
Child 1 "Do you think the turtle would be more interesting?"
Child 2 "You bet. Not everyone's got a turtle. Remember that funny book when the kid ate the turtle? (Both laughed)."

A third child became involved.

Child 3 "What do you know most about - pine trees or turtles?"
Child 1 "Turtles - I can write better about turtles."
Child 3 "Then do it. We think it would be better anyway."

This child then wrote:
TURTLE SHELL

The smooth plates that make up a turtle shell. The grainy sand that he burrows in. The slimy rocks the turtle slides on. The seeweed that tugs him into the water.
HELP!

The children's talk reflected their interest in the activity at hand and perhaps the power of sensory manipulation, because it was task focussed. Therefore, focus is the key to successful discussion. In this study, focus was provided by the teacher, which led back to her control. The effect of group discussion and debate was seen in the changes and additions which the children made to their pre-writing.

Outcomes of Group Talk:
* Changes in Perceptions of Writing
* Changes in Personal and Social Development
* Changes in Writing Responsibility
* Changes in Attitudes

Through the process of group talk, the children gradually came to realise that their personal impressions and sensations could be connected to ideas for writing, and that, individually, they had to make decisions about the content and shape of their writing. Interview data reveal that the children were accustomed to the teacher being the decision maker. They perceived themselves as passive recipients of instructions. This supports Green's (1988) view that children are, too readily, passive learners. Green (p.10) goes on to suggest that children need to be "active producers
of their own texts, their own meanings." Group interaction helped to change the children's perceptions of writing, by encouraging them to take on the responsibility for their writing at the early stages of its development. In groups, the children orally planned and reviewed their work, laying the foundation for the writing that was to follow.

Based on observations, the characteristics of group talk which brought about changes in the children's personal and social development were:
1. teacher control
2. focussed discussion
3. attention to pre-writing
4. exploration and expression of personal ideas
5. acceptance of other viewpoints, and
6. involvement of peers in planning stages.

What cannot be overlooked is the motivation behind the talk. Just as this study is concerned with the interpretation of data, so too were the children concerned with their interpretations of physical sensations and reactions. Their interpretations were diverse, paradoxically simple yet complex, and necessary for the vivid imagery which led to the association of ideas. Sensory manipulation provided a powerful starting point. The clever control of the teacher took it from there. This was real teaching - the structure of which was implicit. It placed the onus on the children. It required the children to accept the responsibility for their writing - and it worked.
Throughout the discussion times, the children remained on task, consulted more frequently with their peers, and paid more attention to their pre-writing. Therefore, it appears that their attitudes to writing were changing. Positive feedback from the teacher and several parents confirmed this idea. (See page 175 for parents' comments).

This study suggests that group talk has real impact on writing. In this case, talk helped to provide positive outcomes in terms of the children's perceptions of writing, their personal and social development, and attitudes towards the task. To a large degree, the construction of the children's texts depended on early discourse, not just the "hands-on" component.

4. Process Four - Pre-Writing and Planning

In an early interview, the teacher confirmed that the usual way in which the children planned their writing was for them to list ideas for writing, according to a specific, teacher-directed genre and topic. She stated, "I get them (the children) to write down ideas following a format. For example, Introduction-Complication-Resolution, but usually, when they write, their writing doesn't follow the ideas and format. They don't seem to be able to transfer their framework to their written work." In this study, evidence suggests that, given the freedom to select their own ideas and genres, the children were able to transfer ideas and a
pre-conceived framework to their writing. Why was this? Was it the creation of their own ideas which empowered the children to take control of their writing in content and form, or, did the children take control because they were able to cognitively frame and organize their ideas, based on their knowledge of genres? Perhaps the group talk led to a fuller understanding of the topic which gave the children the cognitive space to make this possible. Genrists would argue that knowledge of text structures facilitates writing by providing definite directions in which to channel ideas. Certainly that may have been the case in this study. However, there was no outward demonstration of planning at all. It appeared that the children did their planning in their heads. Indeed, the children felt that formats and outward organization of ideas got in the way of their writing, as interview data indicate:

Researcher: "How did you decide on the form the writing would take?"

Child: "I like doing... television reporting. It's easy and bonus fun."

Researcher: "How did you plan your writing?"

Child: "In my mind I could see the way I wanted it to be."

Researcher: "Did you write down a plan?"

Child: "NO WAY! There was no need. I KNEW what I was going to do."

Researcher: "Do you think planning your work like creating story maps, flow charts etc. helps you to organize your writing?"

Child: "No. Teachers go on and on about that, and usually
you forget the reason you even started it. I like to just play around a bit in my head, and then write."

This child perceived that organizing and planning writing was too time-consuming - a view which was shared by a second child, thus:

Researcher - "How did you plan your writing?"
Child - "Do you mean how did I get my idea?"
Researcher - "No, I mean how did you work out a framework for your writing? Did you organize it in some way?"
Child - "No. I mean, yes, in my head. If I had to write out a story map or something, that would take so long that I would have no time left to write."
Researcher - "Do you ever make a quick list of ideas that you want to include in your writing?"
Child - "No. We've never been taught to do that."

Another child seemed to be unaware of his mental planning. He stated that he didn't do any planning at all - having an idea was enough:

Researcher - "Which parts of this writing did you do in the planning stage?"
Child - "I didn't do any planning - I thought my ideas would disappear. I am a quick writer - I like to get it all down, otherwise I would forget."

These children had been taught a variety of text structures, the implicit knowledge of which enabled them to concentrate on capturing the content of their texts first. The interview
data relate much more to what writers say they do when they actually create texts.

Certainly, a few children's pre-writing reflected some planning of the ensuing texts. They grouped descriptive words under headings such as Pleasant and Unpleasant, or Taste, Smell and Feel. Others listed descriptive words on one side and the connected ideas on the other. Evidence suggests that the children did refer to their pre-writing during the independent writing stage. For example, several children crossed off listed words as they used them in their writing, and, without exception, each child drew on topic ideas, based on the physical sensations of smell, touch or taste, which they had listed at the pre-writing stage.

Outcomes of Pre-Writing and Planning:
* Changes in Writing Characteristics
* Changes in Writing Responsibility

The pre-writing and planning process in the sensory activities demonstrated both visible and mental output, which impacted on their writing characteristics and responsibilities. The children's performances were in keeping with the Flower and Hayes' (1989 p.83) description of the planning process where the "visible output (notes etc.) and mental output seem to be nearly identical - the child generates a list of topics, content information and actual language for use in the text."
In this study, the children were required to plan their work without teacher guidance. Therefore, they had to make notes, determine their own topics and forms, and organize their writing according to known conventions. Writing samples and interview transcripts demonstrate real experimentation with form and perspective. Also, in many cases, due to a knowledge of implicitly and explicitly taught genres, the writing was imaginatively organized, for example, advertisements with pictures, charts, letters. (This is discussed in detail under the heading Writing Independently).

By allowing the children to choose their own topics, based on personal sensations, and giving them the time to shape their writing through focused discussion and pre-writing, the children took control and explored ways in which they could express themselves effectively. The positive effects of planning and pre-writing are seen clearly in changes in the children's writing samples, in terms of diversity of forms and ideas, manipulation of perspective, and use of descriptive language. The following examples, completed by one girl in five of the eight sessions, illustrate exploration of texts:

1. Pre-writing was organized under the heading "Shopping List." It included carrots, Pine-o-Clean, fruit, basket, mushrooms, lemon, spice, tools (garden), roasted peanuts, custard powder, chemicals, bird seed, bandaids.
Text One: letter (from the public to compliment perfume manufacturer -

Dear Sir,
All of us here in the public love your perfume and aftershave. We buy it for presents all of the time. Please don't stop making it.
Sincerely yours,
The Mayor.

Text Two: Advertisement

It's New! It's floral! It's fresh! It's great! It's rich!
VANDECK'S NEW PURFUME! IT'S VANDECK'S!
From one of Australia's leading perfume companies! Perfect Purfume with the sweet, floral smell of fruit and flowers! Here Only $8.95

2. Pre-writing was categorized as Salty, Sweet, Acid, Bitter.
Words were salt, vinagar, stock, peanut, sugar cinnomen, apple, vinagar, cinnomen, paprika, coffee, lemon.

Text One: Description

COFFEE
Coffee is the comfortable smell of the farmhouse kitchen at breakfast. Coffee is the taste of the tassels of my leather bookmark. Coffee has a thick, rich, dark taste, a little like my ruler's taste. Coffee's smell and taste always wake Mum up in the morning.

Text Two: Advertisement

YARN'S NEW BABY FOOD!
NEW!! Mmmmm! Apple and Cinnamon! Soft! In Banana or Apple and Cinnamon! Terrific!
A DELICIOUS DISTANT SWEET SPICE TASTE THAT YOUR BABY WILL LOVE!
No added sugar or preservatives.
(This text was accompanied by drawings).

3. Pre-writing - fine sand, sugar, sweet, fruity, pineapple, tropical, melting, soft, powder, sticky, fake, packed, sweet-shop, pocket money, ratting the pantry, lolly section, flowers, friesures, fruit shop - restraunt in Bali, party, Royal Show, beach, gardening, cold, jellyfish, porridge, cold
cooked noodles, staining, slippery, harder to squish, sticky, smooth.

Text: A Complaint - Written for Performance

"I hate being thrown through the air. It's awful being stuffed up in a child's warm hand and suddenly feeling a huge lurch in your stomach. By then you know your flying for sure! And then halfway before you even think of falling to the ground you hit someone or something that is certainly not the ground because if it were the ground, all the other sand-grains would chair-lift you to the hospital. You might even hit something slimy, and then the person whom you hit would say "Mummy, Mummy, please help me to get this nasty little sand-grain out of my eye!" Nasty little sand-grain indeed! And sometimes those people actually eat you! Not to mention getting sat on! And trod on! It is an insult to a respectable sand-grain like me! I might as well stay with my distant cousin, underwater!"

(Sniff and walk off in a huff)

4. Pre-writing - cool, duty, dry, liquid, grainy, soft, rough, smooth, strong, hard, tough, mould, squashy cake dough, sticky, bakery, sea salt, strechy, doughnut, sausage.

Text: Narrative - Written for Performance

FROM THE PLAYDOUGH'S POINT OF VIEW

"Oi! Quit ya' squashin' kid! I'm tryin' to talk 'ere! Ha! she's finally left me alone! We can get going! It's a miracle! Now, you wouldn't like it much if OOOOOF! you were OUCH! pinched and tweaked and smashed and pummeled all day! It wouldn't be nice for you and it is certainly not for Hupf me! Phew! She's left me alone and - I don't believe it! She's writing a story about me! Modest, kind, precious me! How kind! But it's still not very nice sticking pencils into me and eating me! Augh! One tenth of me has gone down the vacuum cleaner and another one tenth of me has suddenly vogaged off down into the digestive system!

5. Pre-writing - deep rich dark smooth, salty, sweet, crunchy, crumbly, cold, fake filling, snap, rice, lemon, fizzy orange, sour coconut, fruity, meaty, tangy, weak, oranges.
Text One: Acrostic Poem

Presents
Awesome fun
Radical
Tiring games
I love them
Exciting stuff
Super food

Text Two: Poem

Licorice allsorts, on blue china plates,
Sausage rolls piling high,
About the best food I ever ate,
With lollies almost to the sky.

Salty, corrugated, crunchy chips,
Cold, fizzy orange drink,
Tables with leftover orange pips,
It's absolutely the best, I think.

It is asserted that the exploration of the content and form of texts demonstrated an exploration of thought. The changes which occurred in writing such as this could not have occurred without a simultaneous positive change in the children's perception of responsibility towards the writing task.

5. Process Five - Writing Phase

The process of writing independently as an extension of the sensory manipulation, focussed discussion, and pre-writing, drew out new skills in every child. Writing samples and interview transcripts confirmed overwhelmingly that, from week to week, the children improved in attitude and writing confidence. There were significant changes in all five programme outcomes. Analysis of the patterns of behaviour during the writing time showed that the children were
remaining on task for longer periods, concentrating more on their work, industriously writing, confidently "having a go" at innovative writing techniques and were increasingly resentful of the writing time limit. Many of them refused to go out at afternoon recess, because they were so enthusiastic about continuing with their work.

The teacher confirmed that the quality of work in the writing samples corresponded to the behaviour that was witnessed in the classroom. The children's ideas were imaginative - some expressed personal feelings - and, with each new writing session, the children went from strength to strength in their ability to express themselves creatively. They began to use literary devices such as diagrams, drawings and effective punctuation, for example, ***!BANG!!***. Most of the children gave titles to their writing. The most significant changes, however, were in the exploration of genre and perspective. The children, from each ability group, wrote recounts, narratives, plays, speeches, poems, letters, songs, advertisements, descriptions, reports and procedures, from a variety of viewpoints. A few children also drew charts. The children did not seem to know why they chose specific forms, other than to try something they had never done. For example, from interview data - "I've never written a song before, so I thought I'd give it a try." Kress (1982, p.131) confirms that exercising different choices points to "differences of cognitive mode and process. Differences of form facilitate qualitatively distinctive modes of thinking." A few children consulted a chart in the
classroom, which listed a variety of formats which had been covered by the teacher. It is asserted that, in this study, the children's ideas for the content of their writing prompted their experimentation with genre. The researcher's insights are that the ideas for the content of their texts came first. The following examples, presented here in the body of text, are from children in each ability group, and represent approximately five percent of the total number of completed texts. The texts were chosen for legibility, ease of reproduction and demonstration of a variety of genres. Exemplars are located in the Appendix (K).

Female - Above Average (Attitude 87, Benchmark Score 92)

This poem came from a session on taste. One of the ideas in her pre-writing was "an apple - reminds me of picking fruit."

AN APPLE

Notice on the bulletin board
"Fruit picking - help wanted."
Applied,
Got it.
Early morning, getting out of bed,
Going down to breakfast, dressed,
Getting in the truck,
Booming out into the darkness,
Sun rising as we arrive,
Getting out
Meeting the other fruit pickers,
Starting work.
Shinnying up the tree with a basket,
Picking and picking,
The basket filling up,
Full at last!
Climbing down
Taking the basket in,
Rewarded with an apple.
Sinking my teeth into it,
CRUNCH!
Female - Average Ability (Attitude 78, Benchmark Score 58)

This description came from a session in which the children smelled, felt and tasted jelly. In her pre-writing, she had "JELLY mud at the swamp. JELLY Colder, harder."

WINTER

The cold hard wind stings my cheeks as I walk on. My eyes wince as they follow the puddles ahead of me. I reach the grass and see earthworms swimming and playing under leaves waiting for a drop of water to trickle down their long thin backs. Umbrellas everywhere with pretty patterns and designs on them. I walk over to a tree and see the remains of a bird's nest blown away with the breeze. I take off my boots and let my cold toes sink into the warm mud. I love winter!

Male - Below Average Ability (Attitude 46, Benchmark Score 25)

This narrative came from a session on making playdough. In his pre-writing, he had "sand, silk, playdo, playdo strechey, smoth." It should be noted that this child normally wrote only a few words or one sentence.

One day I went to the seaside to listen to the playdow waves. They feel like silk and taste like ice cream. The sand is flour the sea has the salt and when it rains it makes playdow. When the humans step in it it mixes it all together. When it hasn't rained for one week the humans bring down buckets of water to make the playdow. Some pople say that they should take the flour away and replace it with sand except more pople want the flour so that there beach is the only playdow beach.
Female, Above Average Ability - (Attitude 91, Benchmark Score 92) - Poem written after a session on Touch.

ART

Lightly, smoothly, deftly,
He swiftly strokes the blank, untouched canvas.
He quickly engraves a sharp, bright, colourful image.
The still, silent, green landscape is dim
For the pale, feeble light of the setting sun cannot carry its heavy weight,
No-one admires, they are full of hard criticism.
Years go by; the artist leaves,
We start to see the pureness,
The colours are faded, the outlines have become soft
And the slim figure is shadowy and faint,
But, it is whole, complete and beautiful.

Male, Average Ability - (Attitude 70, Benchmark Score 65) - Description written after a session on Touch.

Every Thursday we go to the beach and have a swim.
It was Thursday afternoon at about two o'clock and I was thinking about going to the beach with the spickey little crabs crawling on the sand, the rough rocks on your feet, as you walk down to the wet stretchy sea, and as I swim throgh the curly, floppy, soft seaweed floating on the water. as I swim I feel the hard, round, rough rocks lie on the bottom of the sea. The spunge lies on the sand for crabs to hide in and its cardboardy feel makes me shiver.
I can't wait to go to the beach.

Female, Average Ability - (Attitude 94, Benchmark Score 50) - Poem written after a session on Touch and Taste.

Running down the field,
Way ahead at the finish line the sweet grass awaits you,
Ouch! There are hard, smooth pebbles in the way.
The race a long one,
but you can make it,
sweat is running down your face and
dripping down on to the grass below.
it is very hot.
the criss crossy fence beside you,
a crumbly old tree is crumbling up beside
you as you run down the last lane on the left.
the bumpy palm trees to the right of you.
a red fizz in the distance barracking for you.
you have to go faster.
a soggy ball has just been throwen for a
dog near by.
there's real convasion now,
everyones barracking like made now,
I'm nearing the finish line,
Yes I'm throw first,
I'VE WON!

Male, Below Average Ability - (Attitude 72, Benchmark Score 34) - Advertisement written after a session on Taste.

Well if you havent herd about the tast mishen your going to hear about it now.
Just tipe what tast you want and in ten secons flat the tast you want will
sprinkle down from the top into the boul underneth. Ring now but do not send any
mony I reapet DO NOT SEND ANY MONEY.
(Child then drew a picture of the Taste Machine).

Female, Low Average Ability - (Attitude 83, Benchmark Score 45) - Narrative written after a session on Touch.

THE DREADED SHADOWS

One day I lay in bed watching the
different shadows on the cieling and I
saw a shadow that I had never seen before. It was different. Small but
moving rapidly. It was almost to small
to see. It was closing in on me. I lay
as if tied down to my bed. Then my
shoulders started to tingel and then my
arms and my legs and my feet. Soon all
of my body was tickling and tingling. I
sudderred. I had caught the dreaded TICKLE DISEASE. So if you ever catch sight of a small group of marching shadows at night BEWARE IT'S PROBUBLY THEM!!!!!!

(Text accompanied by a drawing of the shadows).

Male, Average Ability - (Attitude 83, Benchmark Score 62) -

Procedure written after a session on Touch

HOW TO MAKE A PLAYDO BOMB (for the Army)

Step 1: first you get 300 cups of flour (to make a big one)
50 cups of salt 100 big size bucets of water (made to be slimey).
Method: first you get the bigest Dumpers handy mans bin. Get a fork lift to pour the flour in. 2. find a helicopter to pour the salt in (check your salinary chart, it must be right). 3. Now you need a army plane to pour in the water. 4. Get two cranes to stir it then get 20 cooks to make it flat (need to be good people to roll it). second last thing - now get 50 helicop[ters to lift it up and drop it on the other country (might need lots of them).

Female, High Average Ability - (Attitude 63 Benchmark Score 70) - Narrative written after a session on Taste.

THE MEDICINE ATTACK

A little girl could Alex court the runaway flew. So she went too the doctor where she didn't like going. The doctor gave her the most dusuting medicine for her discription. That day when she got home she looked at the package when sudenly the bag burst open and out came the tufest medicine. He started atacking Alex. He pulled his sord out from undeneth his belt and stuck it in Alexes thinger. HELP the medcines atacking me screemed Alex. Don't be silly called her mum who was now in the kittien And she ran to Alex. She
I was eating popcorn, trying not to choke.
When a magician appeared in a puff of smoke,
I stared at him, he ignored me,
He just hummed "diddle dee dee!"
He was bending over an enormous pot,
Stirring something very hot,
I wondered and wondered what it was,
I was soon to find out because,
As soon as he stopped he looked up at me,
And started pouring it into my tea!
He made me drink it and - oh dear!
I started shrinking (top to rear!)
Until my butt was upon the ground,
And none of my legs were to be found!
Oh my gosh! I can't proceed!
I've turned into a popcorn seed!
Well, I suppose I should, I might as well,
(Although there's not much else to tell)
I'm stuffed in plastic, with a pack o' punks,
That are nothing more than the usual junk,
I'm pretty bored, and in a mess,
But it's only a dream, as you might guess!
worse except the curry that is. Why can't you be like normal kids, eating CREAMY chocolate cake sweet lollypops that would be the life! excuse me I'm trying to make an official complaint here HEY HEY WHAT ARE YOU DOING Oh no not the brussel sprout sandwiches HELP!

It can be seen in these texts, that the children have effectively painted vivid mind pictures in their writing. In each case, the idea is creative and is expressed in a range of genres and the writing is clear and interesting.

Outcomes of The Writing Phase:

* Changes in Perceptions of Writing
* Changes in Personal and Social Development
* Changes in Writing Characteristics
* Changes in Writing Responsibility
* Changes in Attitudes

Analysis of observation notes and writing samples which were compared each week over the term, confirmed changes in all of the programme outcomes. These changes are evidenced by a discussion of the aspects of the children's writing which were determined by the research questions, as follows:

Form and Style

There was an enormous amount of both factual and narrative genre exploration. The only reference to genre was a chart on the wall. It listed many of the genres which the children had been taught explicitly, or had experienced implicitly. Some children were seen to consult the chart before they began writing. However, although some children
drew on familiar genre forms, they did not always adhere to conventional generic frameworks. Perhaps they were not well versed in generic frameworks, or perhaps, they were struggling with a process of total control, during which they were unable to address all of the problems associated with the craft of writing. Certainly, they were organizing their own knowledge, and making connections with in-head information. In short, they were taking part in a process of genuine learning. The children creatively experimented with style by playing with perspective, using visual effects, and practising metaphor and alliteration. They used dialogue and colloquial language in their writing, which gave it a sense of reality. (See examples earlier in this Chapter). Several children seized the opportunity to inject humour into their texts; others successfully produced texts which illustrated introspective thinking by the use of emotive language and expression of opinions.

**Longer Sentences, More Details, Descriptive Vocabulary and Greater Organization of Ideas**

Compared to the texts which the children wrote in their initial benchmark data samples, and in the first two sensory sessions, many of their writing samples increased in length each week. These early writing attempts contained an average of six sentences, with an average of ten words per sentence. By the end of the programme, the average number of sentences was eleven, with an average of twelve words per sentence. A few children made an enormous leap. For others, there was
little or no increase. Overall, it could be said that the increase in quantity was largely dependent upon the form they chose. The sentence and word counts could only be fairly carried out on the children's narratives and reports because other genres sometimes restricted sentence length. For example, the structure of acrostic and metered poems, advertisements, songs, etc. impose certain language restrictions. However, it is important to note that, despite a lack of quantity for some children, when each child's texts were compared to those completed the previous week, the diversity of ideas, the number of details and descriptive vocabulary improved, which suggests reflective thinking. The children were not writing erratic texts, as many of them had done for the benchmark samples. Instead, the children's texts were more cohesive, organized, focussed, and contained appropriate descriptive vocabulary. For example, the following texts were written by a boy with an attitude score of 67 and a benchmark score of 57 - average in both cases. The first text was a result of session one (taste) and the second text was a result of session 7 (touch).

**Text One**

**THE HILLS**  
Bumpy hills miles away

**Text Two**

**THURSDAY 25 DECEMBER 1988 THE WEST AUSTRALIAN - WANTED!**

Shocking news on Christmas Day. A woman called Mrs. Johnson was found dead on her apartment floor. Police believe that she was tickled to death. A man was seen and has darkish-blonde hair, dark brown eyes, freckles around his nose and rosey
cheeks. Today she would have been going for a holiday to Mandurah for Christmas, but as you know, she could not do that because she is dead. Next week, her lovely family and relatives are having a funeral. Just remember, if you see this man, ring this number as soon as possible 881-40-527.

(This text was accompanied by drawings of the wanted murderer, the body marking, the family and the weapon - namely, the feather).

The children did not improve in spelling or grammar. Instead, they struggled to gain mastery over a variety of forms, writing techniques and personal topic choices. For most children, this was an enormous cognitive load, and it appears writing mechanics were sacrificed for writing quality, in terms of content, expression and form.

Process Six - Sharing with Others

In the early sessions of the sensory programme, due to a variety of factors, the children experienced difficulty in their writing, and hence, they were reluctant to share their work. Prior to session three, the researcher selected three or four examples of writing from the each of the first two sessions and read them out to the class. The researcher pointed out that the examples demonstrated interesting vocabulary, innovative ideas, emotions, opinions, clever use of format, etc.. Modelling in this way encouraged the children to want to write something which could be read to the class. Perhaps one of the factors which initially hindered the children's writing was their restricted audience. At this point in the programme, as was reported
earlier in this document, the children asked if they could share their work by reading it aloud to classmates at the end of the session. Further audience expansion came about when the teacher suggested that a folder of their work should be compiled for their parents to read. Observation notes and interviews with the teacher and target children record the mounting enthusiasm towards sharing with others. The children began reading their texts to partners who had finished, to the researcher and to the teacher. Sharing is a component of the writing process which is endorsed by supporters of both process and genrist methodologies. However, in process methodology in particular, sharing occurs at two specific stages, that is, at conferencing and publication stages. It must be pointed out that, in this particular study, the process of sharing the writing, was not a time for conferencing, although peers did make suggestions which prompted some changes in the children's work. The researcher shares the view of Clare Painter (1986) that teachers should provide explicit instruction and modelling during a conference. However, in this case, for analysis purposes, the children's efforts had to stand alone. It must be remembered that, in each sensory session, the children were sharing from the beginning. Sensory reactions, and ideas and formats for writing were discussed - the "aloneness" of writing just did not happen.

Sharing their work at the end of the sessions provided opportunities for the children to practise dramatisation and public speaking, and exposed them to a wide variety of
different viewpoints, ideas and forms. Many of their dramatic renditions were dictated by the forms which the children had chosen. For example, children who wrote speeches imitated authoritative adults, others sang songs, small groups performed plays, whilst others adopted a teaching role by explaining diagrams or charts. More time than originally anticipated was needed for sharing the work because the children's eagerness to participate was overwhelming. The sessions were tightly run, and the only way in which children could be accommodated was to continue beyond the home bell time. All of the children were happy to proceed in this way, and many of the sessions ran 10 or 15 minutes over time. At the end of the sensory programme, the teacher decided to allow the children to refine and revise their work for publication. The finished texts were displayed in the classroom.

The work which the children had done in the sensory programme culminated in a class performance at a school assembly - "ultimate" sharing. The teacher and children wrote a song, which the children performed, about the sensory sessions and writing, and several children were selected to read their work to the whole school. The teacher would confirm how difficult it was to choose four or five children's writing from a wide variety of excellent texts.

Outcomes of Sharing with Others:

* Changes in Perceptions of Writing
* Changes in Personal and Social Development
* Changes in Attitudes

Evidence from field notes shows that sharing with others contributed greatly to confidence building in the children. They began to perceive writing as fun and entertainment, rather than a series of correctly spelled, well-punctuated sentences. Children commented "I didn't know we could have so much fun with our writing!" For some children, the opportunity to introduce drama into their work was most welcome. One particular child, who thrived on drama, sought to improve her writing because she wished to entertain the children and see their nods of approval. The atmosphere was so enthusiastic (confirmed by the teacher in interviews) that even quiet children who usually held back their oral performances were participating. In short, many children discovered new personal skills, both in their writing and in public speaking. Therefore, the process of sharing with others brought about changes in the children's perceptions of themselves and their writing, and certainly reinforced the strong positive attitude which had unfolded towards writing and the entire sensory programme.

Sense Preferences

Observation notes and interview transcripts confirm that the children developed personal sense preferences which influenced their writing. For example, one child resented the session on personal touch so much that he could not write at all. Several of the sensory sessions included materials
which appealed to all three target senses. With practice, the children were able to prioritize their sense preferences and determine the sensations which helped them to create images which could be turned into writing. In her book, A Natural History of the Senses, Diane Ackerman (1991) suggests that sense preferences are linked to personality. That notion was not addressed in this research. However, in this study, interview data and writing samples provide evidence which suggests that sense preferences can have an impact on writing. The implications for teaching then are that teachers might consider the inclusion of sensory activation in their programmes, whether it be in Science, Art or Writing, in order to establish sense preferences which could be harnessed and explored in a variety of ways to promote learning, and provide opportunities for individuals to hook into and use the sense which appeals most effectively.

Gender Differences

According to Gilbert (1990c, p.13) writing can be conceptualised as "a social activity" which is determined by "social and cultural practices." The writing which emerged from this study reflected similar social and cultural practices in boys and girls. Both sexes wrote about food, parents, pets, monsters, robberies, parties, illnesses, holidays, sport etc. On the surface, there did not seem to be any distinction which could confirm apparent gender differences in the children's writing. However, an analysis of the number of times girls and boys wrote in a specific
form, and chose specific topics, particularly in the area of "fantasy", do indicate gender differences. Therefore, this study supports, to some extent, the findings of others which relate to gender differences and performance at school (Walkerdine, 1985; Davies, 1989; and Gilbert, 1990b). Tables 6.4 and 6.5 conceptualize the differences in boys' and girls' choices of genres and topics, over a period of eight weeks.
<table>
<thead>
<tr>
<th>GENRES</th>
<th>WEEKS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Narratives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Boys</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Descriptions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Boys</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Recounts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Boys</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Poems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Boys</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Boys</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Letters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Boys</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>T.V./News Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Boys</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Advertisement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Boys</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Songs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Boys</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Plays</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Boys</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Poster/Chart</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Boys</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Recipes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Boys</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
It is important to note that the number of texts written each week varied. In the early stages, some children did not write at all, and as the programme progressed, others wrote more than one text in one writing session.

Table 6.4 confirms that, in the first writing session, the children chose five genres to frame their texts. In Week Two, two different genres were used, however the variety remained at five. The figures in the Table demonstrate the impact of the sensory programme on genre choice in Week Three, when the variety of genres used increased to nine. This confirms earlier statements in this document, that, at this point in the programme, the children made significant leaps in their use of many aspects of language, which were sustained until the end of the programme.

Narratives were the most popular genre choice throughout the programme. The Table indicates that the boys wrote more narratives and reports than did the girls, but considerably fewer descriptions, poems, letters, media reports, and plays. The boys wrote no songs at all. It appears that the girls experimented more with framing of their texts. Perhaps this endorses the research done by Gilbert and Taylor (1991, p.114) that "the world of the classroom is largely a world of stereotypes.....and many of the common written genres endorsed for classroom use rely upon....gender stereotypes." Their study suggests that women are linked to writing letters, secretarial work, diaries, etc., whilst men are linked to "more powerful discourses" (p.105) in the world of
science and technology. Certainly, in this study, the girls' genre choices reflected the historical writing position of women, that is, an orientation towards "less powerful discourses" of writing, such as descriptive texts, letters, poetry and drama.

However, two important points emerged. Firstly, the boys were experimenting with genre. Some boys did choose poems, plays, recipes and letters. Secondly, the girls demonstrated real flexibility in their writing, in terms of its framework. Perhaps a continuation of a programme such as the sensory one, would help children to break down some of the barriers which exist between children's traditional writing patterns and gender.

The following Table 6.5 lists the children's topic choices, and indicates the number of texts written about specific topics.
<table>
<thead>
<tr>
<th>TOPIC</th>
<th>GIRLS</th>
<th>BOYS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pets/Animals</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>School</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Places/Landscape/Trees</td>
<td>7</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Sport</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Friends</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Family</td>
<td>7</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Beach</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Food</td>
<td>35</td>
<td>14</td>
<td>49</td>
</tr>
<tr>
<td>Holidays</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Sensations</td>
<td>21</td>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td>Self</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Toys</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Music</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Seasons</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Birthdays/Parties</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Christmas</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Fantasy</td>
<td>32</td>
<td>42</td>
<td>74</td>
</tr>
</tbody>
</table>
Table 6.5 illustrates that boys and girls wrote texts about similar topics, with the exceptions of Food and Sensations. This could be interpreted as evidence of gender differences. Certainly women are stereotyped to perform home duties, therefore the number of texts which the girls wrote about food possibly reflects the female's domestic orientation. This orientation is confirmed by Gilbert and Taylor (1991, p.21) who state that "powerful gender ideologies held that women's 'proper place' was within the domestic sphere." Likewise, women are stereotypically associated with sensitive behaviour and the expression of emotions. In this study, twenty one of the texts written by girls reflected personal response to sensations, compared to nine texts written by the boys. It appears that the girls were more inclined to write about their reactions to taste, touch and smell.

Table 6.5 also illustrates that a large percentage, that is, approximately one third, of the topic choices, were in the area of Fantasy. Analysis of the content of the fantasy texts reveals that, again, there were examples of gender differences. Because gender differences were a minor focus in this study, these texts were analysed only by topic. Closer analyses of characters, roles, verbs, male/female protagonists, etc. might reveal further evidence of gender differences, but were not carried out in this study. The fantasy topics were Monsters, Machines, Sporting Heroes/Heroines, Outer Space, Bombs, War, Robberies, Death,
Torture and Wizards/Witches. The topics which were exclusive to boys were Machines, Outer Space, Bombs, and War. The boys wrote twelve texts about Monsters compared to the girls' four. Although this suggests that there were some gender differences in the topics the children chose to write about, it is interesting to note that some girls did write about topics which are largely considered masculine, again breaking down traditional writing barriers. An example of a text written by a girl about Torture is located on page 186.

**Attitudes to Writing**

The writing attitude questionnaire indicated a generally positive attitude towards writing prior to the commencement of the sensory programme. However, analysis of benchmark samples and interview transcripts suggested that the children perceived writing as a correctness of mechanics. In this study, data from a variety of sources clearly showed that, whilst the children maintained a competent standard in writing mechanics, they also became aware of the quality of content of their writing and the form in which it was presented. Repeatedly the children toyed with ideas before they selected something which they could write about capably. They sought peer opinions, were able to accept criticism, and willingly changed aspects of their work, based on peer input. Real audience awareness slowly emerged. The interview transcripts quoted in this Chapter illustrate this point.
Weekly comparisons of writing samples indicated that the children kept a mind record of their previous efforts and deliberately sought to diversify and experiment in each new writing session. Observation notes record that the children said things such as: "I've never done this before, I'd like to try..., Maybe I could write a..., I want to think of an interesting way to write this." They consciously became aware of the creativeness of writing, in terms of content and genre. Their desire to be different was emerging. They were enjoying the variety of ways in which similar topics were being treated. This appears to have gone beyond what a lot of teachers found in process classrooms, where children churn out similar accounts of the same topic. The positive attitudes which the children developed towards a high standard of writing quality after sensory exploration is borne out by the ways in which they carefully selected ideas and experimented with genres by playing with and adapting them to suit their purposes in writing. They became confident writers. Their confidence grew with the positive feedback they received from their teacher, other teachers in the school, their parents and peers.

During weeks five and six of the programme, six mothers approached the researcher with information which confirmed changes in their children's attitudes towards writing. Two examples are:

1. "My boy is not a writer - he's better at Maths. But, for the first time since he's been at school, he's talked about nothing but his writing."
2. "I've always known that ..... is creative, but school has knocked it out of him. School wants them all to be the same. It's wonderful to see his enthusiasm for his own ideas emerging. He knows you will accept his ideas - you have no idea how that makes him try to write something clever!"

This awakening of interest in writing could be attributed to researcher effect and/or the newness of the sensory programme. Nevertheless, the children's desire to write after sensory exploration, instead of taking afternoon recess, or finishing at home bell time, certainly reflected a blossoming of interest in the writing task.

Overall, the process of writing independently after sensory exploration brought about positive changes in the children's attitudes towards many aspects of writing. This, in turn, resulted in changes in personal and social development and in the notion of responsibility towards the task.

Summary of Section One - Group Case Study

The data collected and discussed in this section sought to answer the main and subsidiary research questions of the study from the whole group's perspective. Major categories were identified and classified from the data and were discussed in relation to identifiable programme processes. It has been demonstrated that observable changes occurred in the children's perceptions of writing, personal and social
development, writing characteristics, writing responsibility and attitudes towards writing. The most notable changes occurred in each child's desire and ability to experiment with writing, in content, form and style. At the same time, data showed that no changes occurred in writing mechanics, and the length of texts depended largely upon the format used. Data revealed that sense preferences impact on writing. Gender differences in performance and attitude were evident in the children's benchmark scores and, to some extent, in weekly writing samples. Attitudinal changes occurred towards various aspects of the children's writing as they took control of topics and forms, and were released from the burden of just "getting it right." Data analysis and triangulation demonstrated that the components of the sensory programme were highly interdependent and, as a whole, enabled the children to work their way through personal writing struggles.

Taking into account that this was something new to the children, which was observed by an outsider, the factors which independently and collectively appeared to influence the children's writing were: sensory exploration; context building through explicitness of task; teacher input and focussed discussion; time to explore ideas and genres; time to build background knowledge through talk; meaningful audience; and a desire to share.

It is difficult to isolate one aspect and recognize it as more important than another. Sensory exploration by
itself did not change attitudes and influence the children to write more creatively. Yet, without it, the children may not have had the ideas for writing and hence, had nothing on which to build. The teacher's input in the form of control and direction was vital for the children's successful exploration and discussion of ideas and genres. Once that was established, in this particular context, the children took over - and genuinely explored the craft of writing. Extension of audience and a desire to share achievements were contributing, motivating factors.

In this classroom, the children were able to take up the challenge of injecting personal ideas into their writing and making meaning by working through various stages in the writing process. However, it was not only the "personal" aspect, in terms of creativity and ownership, which became important to these children. Two other aspects emerged. Firstly, the children became aware that genres are mechanisms which help writers channel ideas, and secondly, the children demonstrated an awareness of the multiple ways in which the same ideas were treated. They seemed to de-centre. This highlights the importance of writing as a social activity. By creating and constructing their own texts, the children learned about others and the ways in which different texts are constructed.

Connections to Theory
Certainly aspects of three writing theories have emerged which are applicable to the findings of this study. The process model is reflected in the children's desire to select their own topics, control and own the writing through a series of refining stages, and "author" their way to meaningful, personal texts. The genre-based model is reflected in the children's desire to playfully shuffle language and construct texts in a variety of formats, in an effort to improve their writing. The children developed the capacity to recognise and use a range of written genres. Teacher input, in this case, in the form of control, focus and direction, underpins genre-based theory, and was evident in this study. The notion of literacy being a social practice has also emerged. The children developed into choice-makers in the midst of others, and negotiated their way, socially and individually, through learning. By so doing, they learned to recognize and accept different viewpoints and the impact of those viewpoints on writing.

The question might be posed - "What contributed most to the children's ability to creatively play with their writing?" The researcher would argue that no one thing contributed more than another. However, repeatedly, the children gave the answer. Accessing prior knowledge by the power of association from the senses emerged as the most powerful contributing factor. Making connections to ideas for writing overcame the biggest stumbling block for many children, that is, creating a topic. It is therefore difficult to dispute the teachings of scholars such as
Pestalozzi and Montessori who claimed that acuity of the senses is vital for learning. The changes which occurred in this group of children after sensory manipulation certainly contributed to their intellectual, social and literacy development.
CHAPTER SEVEN

ANALYSIS OF INDIVIDUAL CASE STUDIES AND THE SENSORY PROGRAMME

This Chapter is divided into two sections. Section One discusses the individual case studies of the six target children, and Section Two details the strengths and weaknesses of the sensory programme. The intention of a case study is to examine data from a number of perspectives in order to represent different viewpoints fairly. Adelman, Jenkins and Kemmis (1976 p.145) suggest that this examination is paramount and "is at the heart of the intention of the case study worker to respond to the multiplicity of perspectives present in a social situation." By doing so, the researcher is able to provide thick description of patterns in the interpretation of data by establishing links and relationships between facts.

The six children selected for this study were identified by scores in the benchmark data samples and cross checking the teacher's rating scale for reading and writing. The teacher was consulted for advice on the selection of children in order to avoid problems, such as a non-talker, who might have distorted the findings. A male and female in each of three ability groups, that is, above average, average and below average, were targeted for closer observation and interviews. Pseudonyms have been used in all cases to protect the children's identities.

Case Study for Child One - Female, Above Average Ability
Sally is simply not like other children. The Principal described her as a person who "marches to the beat of a different drum." She is an only child, strong-willed and likes being the centre of attention. In class, however, Sally was not treated in any special way, which resulted in her dislike of the teacher. In her five years at school, each of her teachers remembered her best for her writing and reading skills. She was described by the teacher as possessing outstanding writing ability which displayed a great deal of maturity. It seems obvious then that her questionnaire score for writing attitude should be high. Sally scored 87 out of a possible 100. It was interesting to note however, that she was undecided on two questions only in the questionnaire, namely:
1. I would like to spend more time in school working on my writing, and
2. I never get tired of writing.
Perhaps it could be concluded from this, that Sally's attitude towards writing in school was showing signs of flagging in some way.

Sally scored 90 and 95 respectively for her two texts in the initial writing samples, both of which are presented below. She was one of two children (both girls) who scored particularly well. Sally was eight years and nine months old when she completed the writing for the benchmark data. Her reaction to the Storm Boy excerpt reflects this eight-year old's maturity, as follows:
It made me angry at the shooters for shooting Mr. Percival and sad at the same time. It made me feel sympathy for Storm Boy. He lost his best friend. It made Mr. Percival sound like a real hero. It was a very emotional piece, but the story is very captivating. I have read the whole story, and it is all close-knit and intimate. Colin Thiele has woven sadness into the story, as the story and the sadness become entwined. He weaves emotion in all his books - happiness, hard work, sadness, anger. The ability to weave real emotions in with a fictional story is one of the qualities that I sometimes admire in an author.

Text Two - Best Meal I Ever Had

Greek meal at a Greek restaurant. Marinated octopus legs. They taste a little like sausages, but fishier. Dad grabbed a leg that still had suckers on it, stuck it on a fork and waved it at Mum's face, saying in a low voice, "Monster of the Deep!" There weren't (except for Greek coffee - when Dad had a cup of it, I tasted some. It's thick and strong. In fact, so strong that they have to serve it in tiny miniature cups) any Greek drinks, so I had a can of lemonade. For dessert, I had a Greek cake. Greek things are certainly very filling!

According to the teacher, Sally had been a willing writer and an avid reader, throughout the year. In fact, because of her loneliness at home (which Sally mentioned in interviews), she turned to books for comfort and entertainment. She did not confine her reading to stories. Her library books were a mix of expository and narrative texts. Because of her extensive reading, she was equipped with a wide vocabulary.

Despite her skills in writing, Sally was one of many children who experienced difficulty in the first sensory writing session. Perhaps this indicated that, given the
newness of the situation and task, confusion over what was required, and a complete change of direction in her role in the writing, she, like most of the other children, floundered. In Session One, Sally wrote words which described texture, and listed connected ideas, but she did not write a text - her work seemed to be a reflection of random thoughts. In a subsequent interview she commented that the hardest part of writing was "in school at writing time and you have to get ideas." Therefore, imagery and the formulation of topics were difficult even for one of the most capable writers in the class. Sally's inability to formulate and select ideas for writing in the first session prevented her from participation in the group discussion. She withdrew, and, at the end of the writing component of the session, she had not written anything at all.

The second sensory session was important for this child in writing terms, because she discovered that she possessed an acute sense of smell, and the sensations which she experienced provided her with a wealth of imagery for writing. As the teacher began to direct the children's concentration, Sally excitedly talked to her peers about the sensations and the connected images. Her pre-writing consisted mainly of descriptive vocabulary, and two connected ideas. Sally used one of the topics, that is, rotten tomato, which she derived from the words awful, gross, putrid, and proceeded to write an imaginative poem, as follows:
From that point, Sally went from strength to strength in each weekly writing session. She keenly participated in all discussions, and often helped her peers. The discussion, focussed by the teacher, provided such a rich context for imagery that Sally was flooded with ideas for writing. She was heard to say "I just don't know which one to choose to write about. I have so much I want to say." She began to
experiment with genre and perspective and used visual effects, such as different letter sizes and drawings, in setting out her work. Over the term, she wrote two poems, one narrative, a scientific report, two television news reports, a song, and two advertisements. She referred to taste, touch and smell sensations in many of her texts. Her descriptive vocabulary, imagery, and quality of ideas were excellent, and her writing was well organized. She adhered to generic frameworks quite well, although many of the genres she attempted had never been taught explicitly to her. This confirms that certain genres are implicitly learned through social practices. Sally wrote appropriate conclusions, used dialogue, maintained tenses, self-corrected her work, built imagery through interesting vocabulary and referred to personal feelings. Examples of her work follow:

Sally wrote this song after a session in which the children felt, smelled and ate popcorn. She sang it to the class as a duet with the teacher, to a well-known tune.

POPCORN GAMES

Popcorn popping, having fun,
Always jumping, never run,
Up and down the pan they go,
Jumping, jumping, ho ho ho!

Round and round, all joining hands,
Ring-a-rosie up the pan,
Making slip-slides out of oil,
Hiding behind kernals
They try to foil.

Hide and seek they gladly play,
Counting and turning the other way,
Joyful cries of "Ho, ho! You're HERE!"
Are perhaps the pops you hear.
Chasey's what they really like,
Or perhaps going on a hike.
I have an announcement for everyone -
When you hear the pops, they're having
FUN!

Sally wrote the following television news report after a
session on touch}:

"I'm reporting from the Bulwarks Prison. It
appears that torture specialists have invented a
new torture. It was officialised at the Board of
Torture Headquarters yesterday. It involves a
special, electrically charged air-bed which, as
the patient is bounced up and down on it, sends
out tiny, tingly electrical charges which hit the
patient, and it stings wildly. To add to the
torture, a person is suspended on a harness above
the bed and tickles the patient. This not only
adds more tingles, and so makes the torture more
painful, but the tickle is intensified and it
tickles terribly. Because of this, the patient
wears a painful and funny kind of expression
because he does not know whether to laugh or cry.
So he does both, and both expressions are used,
and therefore get mixed up. This is why the
patient has a funny expression. Also, the laugh
and cry get tangled up in his throat and he
chokes. Normally a choke would only last a short
time, but in this case, it is prolonged and the
effect usually lasts for about ten minutes,
during which time the patient cannot breathe very
well, and so goes bright purple, sometimes with
green or pink spots, or both. It is most
exciting to watch, but with all these tortures
combined, for the patient it can be extremely
painful. So it is a very good torture. More
about it tomorrow in my next report. But until
then, Goodbye."

By the middle of the sensory programme, Sally began to
recognise the impact her senses were having on her ability to
image, connect ideas and shape them for writing. During an
interview, she commented thus:

Researcher (R) - Describe for me what the activity on popcorn
making was like for you.
Sally (S) - Yummy - that taste! It also helped me to get all sorts of pictures in my head - I was pretty pleased with that.

R - What kinds of pictures?
S - I could see all those seeds spinning and exploding in the hot oil. I could see supermarkets full of boxes of popcorn, shaking and rattling all over the place.

R - What is it, do you think, that we are trying to achieve with all of the sensory activities?
S - To wake up my senses, and actually make us aware that we do have other senses and that we should use them for really learning about things - especially ourselves.

R - Have you learned anything about yourself?
S - Oh yes. I get much better pictures in my head when I think about smells and tastes now. It's good for me.

This child went on to say that she was inspired by the activities and, when asked to explain "inspiration" she said: "It means you get a bolt of an idea - it's like magic."
She was clearly aware of genre play and stated: "I wanted to try my hand at things I've never done before - I felt challenged."

The final interview, part of which is detailed here, was most revealing, and seems to sum up Sally's development throughout the sensory programme.

R - What have you learned from this programme?
S - How to write much better stories, and how to get a bit of inspiration from my senses.
R - What do you think about the idea of children being responsible for thinking of their own topics for writing?
S - I think it's a good policy. They should be allowed to do that. I think it would expand their range. If they are restricted, they don't write as well. If you have a range, it's easier.
R - A range of topics, or a range of formats?
S - Both, definitely both.
R - Do you feel confident about writing when you are asked to think of your own topic?
S - Yes I do, as long as I get a good idea. ....
R - How is your writing affected if you, not the teacher, select the topic?
S - It would be changed from the normal stuff. Like, if I chose to do an advertisement or a story, it would be good because I chose to do it myself.
R - How does it make it good, just because you chose it yourself?
S - Because anything you make your own mind up about, you usually put more into.

Sally excelled during the sensory programme, and expanded her established solid foundation of writing skills and knowledge by discovering that exploration of her senses could trigger vivid mind pictures which could be turned into ideas for writing. Through subsequent focussed discussion and cognitive planning, Sally took advantage of the freedom to create her own pieces of writing and to play around with language in a variety of ways. Overall, for this child, the
most significant outcome of the sensory programme was that, through the rich sensory and language context, which was the fore-runner for the writing, Sally had the chance to experiment, and, by so doing, learn about herself. Thus, she developed both socially and in writing terms.

Case Study for Child Two - Male, Above Average Ability

Mark is a hard working boy who is liked by all of his past teachers. He is unassuming, does the right thing, and consistently achieves moderately high levels in all of his school work. However, his personality seems to have had little impact on past teachers - none of them remembered too much about him, other than being impressed with his quiet ways.

It must be pointed out however, that, although Mark was identified as above average for this study, his score of 67 in the benchmark writing samples was considerably less than that of his female counterpart. He is not, it seems, a child of above average ability, but he was targetted because he was the highest scoring male, and, based on that fact, he was deemed above average for this study. His score in the attitude questionnaire was 80. Mark's benchmark writing samples follow:

Text One

When Stormboy nursed the pelicans, it seems such a shame for one of them to die. It made me want
to do something about the shooters. I felt it was a really good story. I liked the story because I like pelicans.

Text Two

The Best Meal I Ever Had

"What are we having for dinner"?
"It's a suprise".
"Please Mum I'll give you five cents."
"O.K."
"We're going to Sizzler with grandma."
"COOL"

and M..... started dancing around the room saying "we're going to Sizzler, we're going to Sizzler.
At last the time came and we were in the ordering cue, and we were third from the front, second from the front, and we were ordering Mum said I could have as much ice-cream as I wanted.
"Thanks Mum. I had a small hawaiian pizza and a large coke. After dinner I went straight to the desert bit. I had three bowls of chocolate with all toppings. That was the best dinner I ever had.

Mark's benchmark samples indicate shortcomings in many aspects of his writing such as tense, punctuation, organization and spelling. However, he did convey feelings of sadness and anger in text one and gave a reason for his response, and, in text two, he provided some details and discussed the topic fairly competently. His scores were cross-checked with the teacher's rating scale which described Mark as average in mechanics and high average in content. The teacher believed that Mark would communicate well in interviews. Therefore, based on his scores, his rating scale assessment, and the teacher's opinion, Mark was chosen as one of the target children for this study.

In his first interview, Mark said the following:
(R - Researcher, M - Mark)

R - What do you have to do to be a good writer?
M - Well, I think you might have to write neatly and you have to know how to write - like the alphabet and that's all.

R - What's the hardest part of writing for you?
M - The hardest part is when you can't think of an idea to write about.

R - What problems are you having with your writing?
M - Sometimes I don't feel like writing because I can't get an idea into my head.

During the early sensory sessions, Mark did not seem to experience problems with ideas for writing. However, his first three attempts were all much the same, that is, a description of a fictitious creature. Some report conventions are evident in his writing. For example:

(Text written after Session on touch. His pre-writing included the word "stretchy").

The Stretchy-Wetchy

The Stretchy-Wetchy is a very Sterchy thing. who lives in swamps. It only comes out at night. It is a snake eater and eats eels as well. Everywhere he goes he bounces. They love gym because they are very flexyble and they are good at it. Their heads are round and their feet are fury. For dinner they have snake stew and for lunch they have eel sandwich.

The following text was written after a session on taste. There was no evidence of his topic idea in his pre-writing, which was: salt (chlorine) peanut (night) brown sugar
(Thiland) maggi powder (moodles) apple (trees) viniger (fish'n'chips) rice (China) cracker (?) cinamon (Mum's herbs) curry powder (shops) coffee (cold morning) lemmion (farm).

**Mustigars**

The "Mustigar" has a very funny way of living, it has: daily chours (like us) eight meals (not like us) and school time is only one hour, lucky them!!! Their body is green but their toes are coloured black and their fingers are black as well. If you want to catch a "Mustigar" you need to look in very, very, very, very, very marsh areas not too dry and not too wet. In Australia they grow rapidly but in most other countries they don't grow too fast.

The third text was written after a session on making playdough. This time, Mark included some of his pre-writing words in his final text and used a catchy title. Pre-writing was: grainy, soft, salty, crumbly, pleasant, hard, nice, smooth, squasy, damp, flexible, chewy, dohy, sloppy, slimy, full of salt, sticky, hard - (crumbs).

**The Saltimar - (Sea Monster)**

The Saltimar lives in the ocean and only groups with its kind. Its got three bills, and two flippers (one at each side), two gills and its body is couloured black, red, blue-yellow, green and turquoise. There nice to eat but they are chewwy like the gumiest gummy shark. In the ocean they live down at the bottom. I like Saltimars.

In interviews, the teacher confirmed that Mark's writing often displayed "sameness." He seemed to be in a rut. However, in his eyes, the writing he was doing in the sensory sessions was exciting and different, and he felt encouraged - as seen in the following interview excerpt. Also, he
demonstrated audience awareness, and he was showing a desire to change direction and make his writing more personal - a challenge which worried him.

R - (referring to the text on Saltimar) How did you decide on this topic?
M - I got it from the salt we felt and tasted.
R - You mentioned that you felt you were putting more into your writing since we have been doing our activities - tell me what you mean by that?
M - I write much more than I used to write. Most things to write about are pretty boring, but now I write things that are more exciting. I used to always write about a person's adventures. Mum and Dad didn't understand my story line. Now, I think they will think this is much better.
R - Have the activities we have done using smell, touch and taste senses created any new feelings in you, or woken up some feelings or ideas?
M - Yes, I would not have got the ideas without doing the activities.
R - Your writing has been about imaginary creatures. Do you ever write about yourself or real things?
M - It's harder to write about real things. I said before, feelings are real. I sometimes wish I could write well about me or my family, but I'm a bit afraid.
R - Afraid of what?
M - That it will sound corny, and will be no good.
R - Have you had any personal ideas and feelings lately that you could write about?
M - Yes, in our last session on touch. I'd like to write a poem - that's what I'd really like to do, but I don't think it would be any good - or maybe a story about my family. Playing round and touching things helps me get ideas and feelings.

R - What would help you to get those feelings and ideas down on paper?

M - Don't know - nothing teachers can do. It's all up to me.

It was interesting to see that his writing did change direction from that point. Perhaps this reflects the power of the rich language context which was created prior to each writing session through manipulation of materials, focussed talk and pre-writing. After the session on jelly, Mark wrote a recount called "The Bouncy Ball", which featured his sister. He managed to write two poems after the session on popcorn. The three texts follow:

THE BOUNCY BALL

During the holidays my sister had two friends from up north near our farm. They came to stay three nights. On our way back we all stopped off at a pipe shop to get some pipes. While dad was in there we decided to go out and play. So we went out and my sister brought out a bouncy ball from her pocket and started to bounce it. Up and down it went till the younger friend received the bouncy ball for sharing he popcorn she made. When she received the ball she bounced it so high that it went on the tin roof.
"Whoops" she said as it came down and she didn't bounce it high again.

Poem One:

"POP POP POP"
Steamy
Poem Two:

LEAVES

Leaves, leaves caught in the trees,
Stuck from the strong breeze,
People walk by,
And what do they see?
Fallen leaves caught in trees
by the very strong breeze.

In interviews, Mark confirmed that he was becoming increasingly aware of form in his writing:

R - What were some of your thoughts when we talked about writing just before we made popcorn?

M - I was thinking what sort of form I would write.

R - Suppose we could start all over again with our Tuesday writing time, what would you do then in your writing?

M - Forms - I'd choose different forms.

R - Like what?

M - Poems, complaints, letters, maybe a proper report.

R - Why would you do that?

M - Because I'm beginning to learn that different forms help make writing better, and you sort of know where you are going.

R - Didn't you know that before?
M - No. I thought forms were something you learned to please the teacher.

R - Did you have lots of thoughts for this piece of writing?
M - The smell and feel of the popcorn was making me think of the taste - my mind was going crazy with all those feelings.

R - You wrote a poem. Some people say that it is difficult to write poems. What would you say to them?
M - It is difficult to write poems. I'm feeling really proud that I managed it all by myself.

Mark's new feeling of success, and the satisfaction and confidence he was experiencing, prompted him to increase his input and experiment with topics, genres and style. It is asserted that this child's perspective changed, and real writing development occurred. He began to understand that knowledge of forms could give him direction and help him play with writing, and he liked that very much. This is certainly in keeping with genrist theory. The researcher's insights suggest that this came to him only after he discovered that he was able to generate his own ideas for writing. His final text (below) was written from a personal viewpoint, about a personal subject, which, for this child, was a breakthrough.

**MY FARM**

When I get out of the car from the long drive, I stretch high then low then high then low and I start running down the steep grassy hill looking out for medium sized rocks. When I see one I jump over it. Bang, I land upon the soft grass. When I jump I feel like I'm sailing through the air in a plane. Once I get down to the bottom of the steep hill at the edge of the dam I stop.
Now I feel I have to face the tiring walk up the hill. Walking through the big tall trees, dodging the stones. I go to bed tired.

The next day it's a new adventure.

Mark benefitted from the sensory programme so much that he found sufficient new confidence in himself to tackle writing tasks which had previously frightened him - and he was pleased with his results. He began to use some freedom in expression. All of the components of the programme were important for Mark because, not only did he learn something about himself and writing, but he also began to appreciate the differences in his peers' treatment of ideas. The final interview with Mark was most revealing:

R - What would you like to see happen in writing time in your classroom?

M - Doing what we do when you come on Tuesday. I like activities like making jelly.

R - Tell me why you like them, other than to eat the products.

M - I like them because they make me think of words and ideas that wouldn't come into my mind otherwise. When the teacher says, close your eyes and think of things, I really can. And it's really interesting hearing what the rest of the kids in the group have got to say - everybody had different ideas. It was exciting.

R - What is your opinion of the sensory programme we've been doing this term?

M - It's been good. I like it quite a lot.
R - How effective do you think the programme is for your writing?

M - I think it's effective for ideas - it has helped me.

R - What have you learned from this programme?

M - Lots of things - like, well, getting to know my senses better and being able to write lots of different things in different ways.

R - What's more important - the content of your writing, or the format you use?

M - Both. If I have something really good to write about, people will like it more if I have chosen a good way to do it.

R - What do you think about the idea of children being responsible for thinking of their own topics for writing?

M - I don't really know - but the teacher should not always give the topics - sometimes the child has to give the idea. Otherwise, how are we going to ever think about things for ourselves?

R - Do you feel confident about writing when you are asked to think of your own topic?

M - No, not really, but I'm getting better at it because of the last activities. If we could always have our writing time like that, I reckon I would start doing really well. I think it's a pity that we have reached the end. Most of my friends think the same. Nearly every kid in the class has done something good eh? It's great to hear all the ideas when the kids read out their stuff.
It is obvious that the changes which occurred in Mark's social and writing development were due to his ability to image and then to share in and contribute to the group's knowledge. The most noticeable change was evidenced when he attempted to control forms which had, to that point, scared him, and write about 'real' things, which he had described as being difficult. In short, he gained a measure of power over his written performance, and thus, raised his self esteem.

Case Study for Child Three - Female, Average Ability

Ellie is a vivacious, happy little girl, who is most expressive orally. Teachers advised that she is particularly good at drama and art. Her attitude questionnaire score was 78 and her benchmark writing score was 58. Her benchmark samples follow:

Storm boy is a very good story because if you think about it and you think, what if one of your friends died you would be really sad and miserable for the rest of your life. Storm also explains how easily somebody can die. I like it because it really touched my feelings.

THE BEST MEAL I EVER HAD

The best meal I ever is lots and lots but Mulecurnay is one. It was a curry-soup licword with rice and chicken in it and is very HOT! It was served with crisp big things but I can't remember their names. Thanks a billion mum! (Don't tell her I was eating fast and slopily!)

Prior to the commencement of the sensory programme, the teacher commented that this child's writing was stereotyped. However, the teacher had given her an above average score in
mechanics and content in the rating scale. When asked for an explanation, the teacher stated that, generally, Ellie's writing was clear and expressive, but it always reflected a book or a television programme which she had read or watched. The teacher wondered if Ellie could write anything without relying on a familiar storyline. She was rated well because, compared to the rest of the class, Ellie's writing, although not original, was good.

Ellie was one of many children who was confused and uneasy about writing in the first sensory session, evidenced in the following conversation taken from observation notes:

Ellie - What are we doing this for? Is this to teach us about shapes? I know my shapes already - I even know octagons and hexagons.
Child 2 - No, this isn't about shapes - it's about writing.
Ellie - Do we have to say if we recognize these things, or not?
Child 3 - No, you have to write down describing words.
Child 4 - No, you have to write down ideas.
Child 2 - What sort of ideas?
Ellie - What if you don't have any ideas?
Child 4 - The teacher will tell us what to write, don't worry.

Ellie could not write in the first session. She was upset and began to cry. The teacher gently encouraged her to think hard about her sensations, and try to write something. In her pre-writing, she wrote shoe polish, duster, fence,
wool, paper, sand, snake, Spanish clicker, slingshot, wire.

Her text was:

**MUM'S MORNING HOUSEWORK**

Polishing dad's shoes ready for work.
Dusting the shelves.
Sweeping leaves from the fence.
Putting away wool.

Ellie's reaction to smelling the material in the second sensory session was more positive. She talked more in the group, smiled, and seemed to be enjoying herself. But, when it came to writing, once again, she encountered difficulty. She began to write:

**THE PINES**

On the way to the Pines at the farm. We got there and climb over the fence. Though

.....and she stopped and burst into tears. She wrote nothing else.

Contrary to her positive attitude questionnaire score and her consistently good efforts throughout the year, Ellie found writing difficult, as evidenced in the following early interview:

R - How do you feel about writing?

E - Sometimes I feel it's good and sometimes it's bad, because, well, sometimes it's difficult to get an idea.

R - What do you have to do to be a good writer?
E - Use good expressions and you have to have ideas running through your head to be a good writer.

R - What's the hardest part of writing for you?
E - Making up ideas I guess.

R - What's the easiest part of writing for you?
E - I haven't got an easy part - it's all quite hard.

From the moment the teacher introduced the structure which has been previously discussed in this document, Ellie changed direction, began to relax, and wrote more. In session three, she began a lengthy recount entitled "My Disaster Cake" but ran out of time before she finished. Still, she appeared to be pleased with her efforts. It was not until session four, which was halfway into the programme, that Ellie was in control and happy to participate. She wrote the description "Winter" quoted earlier in this document on page 155.

During interviews, Ellie expressed her desire to be able to relay her feelings through art, not writing. She stated "It's hard on paper - I could draw it perhaps, but not put words on a piece of paper." She acknowledged that the sensory activities were triggering certain feelings, and helping her to image, but she remained very unsure of herself. She stated "I've just got to learn that my own feelings and ideas are good ones. I always think that people won't think that they are." She conceded that, during the early part of the sensory programme, she had felt "frustrated and unhappy" about her writing.
Session six (popcorn) was the turning point for Ellie. She was observed to relax, converse, and have fun. She said to the teacher "I know just what I want to write today. I feel full of ideas. Touching and smelling the popcorn made me think of lots of things. Now that I know that you are interested in my ideas I don't feel worried. They're not right or wrong, are they? They are just different to everyone else's." She experimented with perspective in this text:

I'M JUST A LITTLE POPCORNY

I'm just a little Popcorny and this is a life saving request. Someone PLEASE help me because I'm about to be fried and frizzled by the biggest bully and that is Junior frying pan! Well, I'll fight him till I go as red as a lobster! Weeeeee! I love doing stunts into a frying pan! Oh no, not the oil PLEASE!!! Ouchhh! Phew this is getting hot! I'd better get popping or I'll get too HOT! WOW! I have just sprouted a white ball gown! This isn't as bad as I thought! Thanks Junior Frying Pan. You aren't as bad as I thought!!! HEY! You big giant bully, you just got butter all over my gown. GULP! ahhh! this is Paradise. Ice-cream and lollies everywhere! I'm HAPPY AT LAST!!!

Ellie continued to write enthusiastically in the last two sessions. She wrote two narratives entitled "The Tickle Robbers" and "A Drip of Water." Her comments in interviews provided valuable insights into her changing attitudes about the sensory programme, and her own capabilities and writing, as follows:
R - Some teachers would say that teaching children to make use of all of their five senses in their writing is a waste of time. What would you say to them?
E - No, it's really worth it.
R - How is it worth it?
E - You can express your feelings more - touch especially is helping me.
R - What was going on inside your head when you wrote this?
E - Popcorn popping in the pan.
R - How did you decide to write this?
E - I thought of popcorn all popping in the pan and then I thought, what would they think if they sprouted big and white and fluffy. It was the best idea I've ever had.
R - Would you still say that you struggle for ideas to write about?
E - Not with this one - I had loads of good ideas.
R - Describe to me how you felt when you finished this piece of writing.
E - Proud. I felt proud.
In a later interview...
R - Can your senses help you to make pictures in your mind?
E - Yes! Sometimes the pictures are great. I could see red jelly castles at the beach - orange palms, all sorts of things when we made jelly.
R - Tell me how you turn those pictures into writing.
E - I'm just starting to be able to do that - but, because I can't always think of the words I need, I can't put in too much detail - not like in my drawing. If I could draw some of the things I've thought of - WOW!
R - Does talking with the children in your group help you with your writing?
E - Oh yes. When you hear all of their ideas, you realise that everyone's got something different to say. Your friends help you work out your ideas. Talking is good.

It is evident from the data that this child needed something to help her make the leap into being responsible for her writing. Ellie felt she could express herself artistically, but not in writing. The sensory manipulation, group talk and pre-writing provided Ellie with the means and encouragement to take control of her writing by imaging, arranging her thoughts, experimenting with genre and style and working independently. She began to understand that her ideas were just different, not wrong, and it was precisely the difference that made them interesting. The feelings of success which she experienced in her writing because of the sensory programme can be summarised in her statement "I felt proud."

**Case Study for Child Four - Male, Average Ability**

Alan was described by his teacher as "having a chip on his shoulder." He seemed to resent many aspects of school, such as the subject matter and disciplinary measures, and was a bit of a trouble maker. He scored 56 in the attitude questionnaire, which indicates a mediocre attitude towards writing. Yet, some of the answers he gave were contradictory. For example, Alan strongly agreed that he
always wants to do well in writing, would like to be one of the best in writing, and agreed that writing is an enjoyable subject. At the same time, he strongly agreed that he is often anxious when he writes, struggles for ideas to write about and finds it difficult to arrange his thoughts in writing. Alan indicated on the questionnaire that he writes to please his parents and his teacher. Perhaps that provides a clue which could suggest that Alan writes because of real or imagined pressure from parents and/or the teacher. He scored 59 in his benchmark writing samples as follows:

**Text One**

That story made me feel sad in two ways one that the men wer going two shoot ducks 2nd that thay killed mr Percival just because he cwact and the ducks flies away. Also I think that people should not shoot animals.

**Text Two**

*The Best Meal I Ever Had*

On Sunday our famliy went to sisler four dinner and we ate soup pasta fruit and ice cream it was dilishos I had ice cream with chockoiote on top and pasta with white sorce also I had watermelon and pupcin soup. We stade there just over one hour eating scromchios food.

In these samples, Alan scored poorly in writing mechanics, but the teacher and the researcher agreed that he made some attempt to organize the material coherently, gave examples, and the texts reflected a reasonably clear purpose.
It could not be said that, over the term, Alan's work reflected great change. However, some improvements in his writing samples, attitude and classroom behaviour were seen, and, interview data suggest these improvements were a result of the sensory programme. In the first session, he wrote nothing. He handed in a blank page. His behaviour was disruptive, and he did his utmost to distract the others in his group. In the second session, he was heard to say "I think this whole thing is a bit silly. I can't smell things too well. Why should I have to? I like tasting things, not smelling." However, he went on to say "A smell has given me an idea though and I'll use it for my writing, but it won't be much good." He wrote this:

The garlic reminds me of when I am sick and I thro up that's how I feel also it reminds me of when dad gets clorine over his trowses and I smell them and mum ses dont where your best troses because youl get clorine on them dad always does

Unlike his behaviour in the first two sessions, Alan behaved well in session three, remained on task, listed several words and ideas in his pre-writing and seemed to have no difficulty in choosing something to write about. He wrote:

One day we had lunch neer the pool it nice I dived in the pool after I had tased dads cofe it was FAWL!! I dont think I am going taste that again
I wish dad had been dink tea because I would have drank all ov it.
It had been observed that Alan did not do much talking in the discussion time. Perhaps the answer lies in his answers to the following questions:

R - What kinds of response help you most as a writer?

A - I don’t like reading to a partner. I like people to read it themselves. I don’t like people telling me to change things.

He was asked "How do you go about making changes in your writing?" He replied "I don't like making changes. I really think it should be up to me. It's my writing."

Alan stated that the hardest part about writing was thinking of a topic to write about. However, once he was able to image, based on his taste, touch and smell sensations, he was able to write with no apparent difficulty. That, in turn, made him feel better about his writing. The texts entitled "Falling Lemons" and "Popcorn Planet" were direct results of his ability to image, as confirmed in his interviews:

R - Have a look at this piece of writing of yours - the one called "Falling Lemons." Tell me what you think of this.

A - I felt satisfied when I wrote it.

R - Was this a good topic for you?

A - Yes, quite interesting - the topic was a good topic.

R - What did you want to show when you wrote this?

A - I wrote this because when it happens in Summer, it is a nice thing for me to see Dad scooping up the lemons - the
smell and touch of the lemon jelly triggered the idea - it was nice.

The text is as follows:

Falling Lemons

the jelly crystals remind me of a lemon tree dropping lemons into our pool plop .... plop .... plop the lemons fall in to our pool and dad gets the scoop and scoops them up and in summer mum makes lemon ice cream.

R - What were some of your thoughts when we talked about writing when we made popcorn?
A - I was imagining a planet made of popcorn..... all these popcorn things popping everywhere.
R - You told me that you struggle for ideas to write about. How is that going for you now in your writing?
A - I don't find it hard to get ideas any more because I'm getting used to it.

Based on observation notes and interviews, it could be said that Alan was finding writing easier because he had accepted the onus of creating his own topic and was imaging more vividly, based on his smell, touch and taste sensations. Hence, his images triggered ideas for writing, which he was able to use, albeit in simple, short texts. He did feel some measure of success. He was absent from session seven, and in session eight, he attempted to write an acrostic poem, but ran out of time. He was heard to say that he had never tried
writing an acrostic poem before. The fact that he was experimenting with form indicated his desire to take control of his writing. His poem was:

Food so delicious  
Osing out of the (word unknown)  
Orange Juce  
Delecious chocolate cake  
Scrumpshous FOOD  

Are you a food eater?  
Rich chocolate waiting for you to eat  
Encorejing delichous FOOD

Alan began to change his attitude towards writing. He was trying out new forms and feeling good about being able to think of his own topics. He is a child who needs to feel successful if he is to improve. Interviews revealed the need for careful, purposeful conferencing about his writing, which would, hopefully, bring about a personal desire in him to improve his work, and break down the barriers he has towards editing. It is fair to say that, in the beginning, Alan resisted the sensory manipulation and subsequent group interaction. Yet, once he was immersed in the context of sensory exploration and heard others focus on and discuss their sensations and images, Alan was able to do the same. Therefore, the minor changes which were seen in his attitude, behaviour and writing samples should not be underestimated.

Case Study for Child Five - Female, Below Average Ability

Sandra is a quiet girl who is academically less successful at school. According to her mother, several
private tutors and remedial teaching institutions have tried to improve Sandra's standards, but have achieved little success. She was rated as below average by the teacher in both writing mechanics and content. Despite her lack of success at school, she displayed a positive attitude towards writing with a score of 76 in the attitude questionnaire. She agreed that it was easy to express her feelings in writing. She claimed that she did not struggle for ideas to write about and did not find it difficult to arrange her thoughts in writing. As stated previously, the teacher orally read the questions to the class at a steady pace, so it cannot be said that Sandra encountered problems reading the questionnaire. It is possible, however, that she did not understand the format, which prevented her from answering accurately. Certainly the answers she gave did not correspond with the writing she completed in the benchmark and weekly samples. Sandra scored 17 in her benchmark writing samples, which follow:

*Storm boy is a very sad story. and very funny in some was. When I red this book ti made me cri.*

*The Best Meal I Ever Had*

*At my Disco we had Pizza*

During the term, Sandra seemed to follow the pattern of the other children, in that she began to connect sensations to ideas which she could write about, but, she could not see that the images that were being triggered were the basis for
her writing. Insights should not be denied because they cannot be proven, therefore, the researcher conjects that Sandra did not want to change the familiar writing format to which she had become so accustomed. She liked being directed; she liked being given a topic; she liked being helped. Going it alone was not Sandra's idea of learning how to write, and although she seemed to be experiencing a measure of success in the programme, she resisted the idea of becoming responsible for her own work.

Sandra participated well in the manipulation component of session one. She was talkative, and seemed quite happy. However, she wrote nothing at all. She sat, staring at her page, and constantly looked in the teacher's direction, as if to say "help me." One of her peers asked her "What's happening Sandra - can't you get going?" She replied "She hasn't given us a topic yet. How can I write something if I haven't been told what it's about?" Peer - "You have to think of something yourself." Sandra - "You must be joking."

The researcher recorded the following during session two:

This child does not seem confident about writing. She began one thing, rubbed it out - started again. She copied an acrostic poem idea from her partner. I felt she just made words fit the letters - the acrostic idea restricted her - made it difficult. Spells very poorly and has hang ups about that. She asked the teacher how to spell words. Teacher had to remind her that spelling was not important in this exercise. She finally managed to write something, but anguished all the way through it.
The session was on smell, and in her pre-writing, Sandra wrote: ice crem, deodrent, trees, lemonad. The ensuing text was:

Sticky crem
mushy mooes
eooy eooblake
long lie
lavender

Appel
Rasins
Egg

Gooy
Ruff
Air
Tea
Eumu

The researcher had noted that the acrostic format seemed restrictive. Green (1987, p.87) notes that genres are not only vehicles for expressing meaning, but "genre serves to constrain and regulate it (meaning)...." This is an interesting notion. It is possible that some children do feel regulated by the use of certain genres, and therefore, their ideas are restricted. This appeared to be the case with Sandra's poem. On the other hand, the acrostic poem format may have provided enough structure to enable this child to write something, and without it, she may have written nothing at all.

To this point, Sandra had not done too much for herself. She copied from her peers. In an interview, Sandra was asked:
R - What problems are you having with your writing?
S - *Lots of problems - I can't think of words.*

R - You said in the questionnaire that you want very much to do well in writing. Tell me about that.

S - *I just want to be good at it.*

R - What have you learned from the activities we've been doing on smell, touch and taste?

S - *I don't know.*

Sandra laboured over her writing to produce an incomplete acrostic poem again in the third session, but in session four, in which the children touched, smelled and tasted different textures and flavours of jelly, Sandra seemed to experience no problems at all. She listed several nouns in her pre-writing, two of them being "strobery" and "lemons." Then she wrote the following text:

```
I got up oon day and opend the windo I looked at the leman tree and the oringe tree and then looked at the strobeary pach theat I always thort it looked like a monster whith stroberry for its nose and ely and a big patch of stroberrys for its mouth. but today ther was nothing left on any of the trees. It must of been theat spray. theat the sprayman poot on them. I don't want them to go and die. that day I rote to the spray man
Dear Spray Man,
Phles don't poot that spray on the trees the trees are dieing if mum finds out shel fier you yors sin sery
```

Judging by this text, the teacher and the researcher felt that Sandra had begun to image, connect ideas, and cognitively rework them into a piece of writing. Sandra felt pleased, as evidenced in an interview, thus:
R - You said that you are anxious sometimes about writing - how did you feel when you wrote this?

S - I felt happy - not anxious at all.

Sandra wrote another acrostic poem after the next touch session on playdough, but, in the sixth session on popcorn, her direction changed completely. She wrote what she called a "play" from an imaginative perspective. This is her text:

THE POPCORN AND THE TASTE BUDS

Popcorn: "I'm sick and tired of being poot in a boul. And then thes hands come and I get poot stuped littel gob"
Taste buds: Well what do you want from me all I am is a mouth theat gets to eat anything sorry.
Popcorn: What I am trig to tell you is thet I want you to fores the army taste budes to make Sandra say I hate POPCORN
Mouth: Alright taste buds weve got weark to do now. go up to the brain and turn the I love Popcorn into I hate Popcorn and I don't want to see popcorn ever again.

She and her friends performed this at sharing time. This normally reticent, withdrawn child stood up confidently in front of her classmates and shared her work. It appeared that, through her sensations, Sandra was making connections to ideas, which she was able to rework through discussion. However, she still did not see it that way. From interviews:

R - What were some of your thoughts when we talked about writing just before we made popcorn?

S - I didn't have any thoughts.
R - What is it that we are trying to achieve here with all of the sensory activities?
S - Teach us about our senses.
R - Some teachers would say that teaching children to make use of all of their five senses in their writing is a waste of time. What would you say to them?
S - I would say that it is a bit of a waste of time.
R - How did you decide what to write?
S - I got the idea from the popcorn - all of it.

However, in her seventh piece of writing, Sandra did refer to touch and smell sensations as she wrote down a collection of random images, thus:

Soft sand running down your fingers.
the soft wind following you.
the sharp, sore fish looking at you.
the green and blue wavy sea.
the lovely smell of the sheets that have just been washed
my brother that always tickles me.
the smelly socks that my brother wears.

Sandra's final text, a narrative, had an interesting story line, but Sandra did not follow it through enough to produce a complete text. However, her teacher commented that, for this child, this was a long, fairly well organized text. It read:

Once upon a time there was a girl called Emmly. She was doing the dishes. When she had finished she looked in the coted and found her favorite food Grandmas jam. Her mum was on the phon. Emma snuk the jam and ran to her bouncy bed.
After that she felt sick and now she noes that.

The teacher and the researcher felt that Sandra was experiencing writing success due to the sensory programme, in particular, the imagery component. However, Sandra did not associate her writing with the programme at all, as seen in the following interview:

R - What is your opinion of the sensory programme we've been doing this term?
S - I don't know.
R - What have you learned from this programme?
S - I don't know if I have learned anything.
R - What do you think about the idea of children being responsible for thinking of their own topics for writing?
S - I think that's a good idea.
R - Do you feel confident about writing when you are asked to think of your own topic?
S - No.
R - Let me make sure I understand what you are saying. You said that it's a good idea that children should think of their own writing topics, but you also said that you don't feel confident about doing it. Would you explain that to me?
S - I can't very well. I think kids should be allowed to choose, but I'm one of the kids who gets stuck. It's good for some people. Not for me.
R - Can your senses help you to make pictures in your mind?
S - Yes, I get pictures.
R - Tell me then about turning those pictures into writing.
S - I can only do that sometimes - not very often.
R - How could the teacher help you to turn pictures into writing?
S - I don’t know.

Sandra produced two or three imaginative texts during the programme, and did accept the responsibility of creating and organizing her writing. That should not be overlooked. Perhaps, with a continuation of the programme, Sandra would be a child who may come to accept the independent role which she tried to avoid. However, it is possible that Sandra is a child who would benefit from a different approach. For Sandra, a genrist approach might provide the framework to allow her to gain the confidence to write more imaginatively.

Case Study for Child Six - Male, Below Average Ability

Richard is a particularly quiet boy who struggles through his work at school. He enjoys Mathematics and games such as Chess, but he admits he is not “into reading and writing.” He refused to take a major part in any form of public speaking, preferring to be in the background. He scored 46 in the attitude questionnaire, which was the second lowest score, and 25 in his benchmark writing samples, which follow:

It gave me a sad felling and remind me about shooting of elphantis. It gave me a feling that anamals shouldnet be shot.

THE BEST MEAL I EVER HAD
I had my favourte meal at hom and at a Chinies restrant. Prawn carkers is what I ate.
In the first sensory session, Richard seemed to enjoy manipulating the materials, however, he did not talk much to his peers. In the pre-writing, he wrote only two words, "hard, squishy." He sat, for a very long time, during the writing session, unable to begin. The teacher was concerned. "He is one child who will lose confidence if I don't help him," she said. The teacher sat with him and encouraged him to try to write something. She attempted to focus his attention, but he appeared to be worried about writing. The researcher urged the teacher to leave him, and waited to see just what he would do. Finally, he wrote this:

hard reminds me of mount Magnet. We went there two years ago. My Mum Dad and me didn't climb right up but Peter and James climed right up. We took some rocks hom with us.

Richard was asked about his attitude towards writing in an early interview:

R - How do you feel about writing?
Richard - I don't like to write that much, but I do like to write when it's very interesting and when there's a lot of fun in it.

R - Where do your ideas for writing come from?
Richard - Mostly from information that we write down from the blackboard. The teacher mostly tells us to read a book and to get ideas from that.

R - What kinds of response help you most as a writer?
Richard - Mostly the teacher helps - she helps me with ideas in my plan. She tells me. She helps me organize my ideas.
It appeared that, in the first four sensory sessions, Richard waited and hoped that the teacher would intervene and give him help. She gave him encouragement, but resisted giving ideas. He was obviously having trouble. His pre-writing in the second session began with "nothing, nothing, nothing" - but he added to it "lemon sqirting, lavender, smoke." In his pre-writing in sessions three and four he listed vocabulary and connected ideas. The texts which he created from his pre-writing were short and written from a personal viewpoint:

Session Two
lavender reminds me of the two lavender bushes we have in are garden. There is one on each side of the backdoor. Usulley there are bees in them. Under one there usley is a goanna we call him Dunken.

Session Three
I like to eat two minute noodles when ever I can I haven't had them for a long time. I have them in a bowl. We cook them in a pot. I use my hands to eat them when my mum and dad aren't looking.

Session Four
The ice cream at the grove is my favrte place to get an ice cream my favrte ice cream was choc coated but now I like shebert coated ice cream. Then we go to the beech to feel the ruough sand between my toses.

The teacher was delighted with Richard's texts, because she had anticipated that he would not contribute in the sessions at all. He participated in the manipulation stage, and contributed to the group discussion by suggesting descriptive vocabulary. However, during the extended
discussion time when the children were planning their writing, Richard did not participate. He remained quiet, did not disturb others, and seemed to withdraw. Perhaps the answer lies in the fact that he preferred to do his thinking in a quiet, peaceful atmosphere, and for him, the classroom talk was off-putting. He alluded to this in an interview:

R - What problems are you having with your writing?
Richard - Trying to concentrate with people talking around me.

In a later interview:

R - You said that concentration is problem for you when you are writing. How do you think you can overcome that?
Richard - I should tune out - but mostly it's difficult to tune out. I must because there is no other way.

R - What about before you begin to write - when you are jotting down ideas and words - how is your concentration then?
Richard - Very good. It makes me want to write more.

R - Doesn't talking with the others help you with your work?
Richard - Not much. I like to hear what they've got to say but it gets me a bit mixed up.

Richard was obviously trying hard to concentrate on his writing ideas during the discussion time. It seems that he is a child who prefers to work through his plan alone - in fact, talk disturbs him and interrupts his concentration.
Richard's best piece of writing was done in session five, and although it has been quoted earlier in this document, it deserves repeating here:

One day I went to the sea side to listen to the playdow waves. They feel like silk and taste like ice cream. The sand is flour the sea has the salt and when it rains it makes playdow. When the humans step in it it mixes it all together. When it hasn't raind for one week the humans bring down buckets of water to make the playdow. Some pople say that they would take the flour away and replace it with sand except more pople want the flour so that there beach is the only playdow beach.

Richard felt so pleased with this text, he asked if the teacher would read it out to the class. He would not do it himself. His feelings of success were discussed in the interviews:

R - Have a look at this piece of writing of yours - the one about playdough. Tell me what you think of this.
Richard - I think it is very good, the best I've done so far.
R - Was this a good topic for you?
Richard - Yes.
R - What did you want to show when you wrote this?
Richard - I wanted to show the ideas in my head.
R - What gave you this idea for writing?
Richard - When I was feeling the flour and the salt.
R - Have the activities we have done using smell, touch and taste created any new feelings in you, or woken up some feelings or ideas?
Richard - Yes, they have woken up ideas - yes, it's good for me.
Richard was benefitting from the sensory programme by being able to image, which, in turn, gave him the confidence to write more, as confirmed in interviews:

R - What is it that you think we are trying to achieve here with all of the sensory activities?

Richard - To get our feelings out, and some memories.

R - Which activities so far do you have an opinion about?

Richard - Playdough. I liked it best. I haven't done that for a long time and it gave me some really good memories.

R - Suppose we could start all over again with our Tuesday writing time, what would you do in your writing?

Richard - I would probably write longer things - because now I've got more ideas.

R - Some teachers would say that teaching children to make use of all of their five senses in their writing is a waste of time. What would you say to them?

Richard - I say it isn't a waste of time. It's fun. You learn things that you don't know about yourself.

The teacher and the researcher were convinced that the sensory manipulation was having a positive effect on all of the children because they were able to image and draw upon in-head information which was vital for their writing. It was felt that accessing information through the sensations, plus the structure and focussed talk came together as a powerful method. However, the two discovered that, not only is the method powerfully positive, but, it can have negative effects also. Such was the case with Richard. He resented the session on personal touch so much, that he withdrew
completely, and became angry. His anger was evidenced in his writing and his attitude in an interview. His writing, after the personal touch session, was a border of question marks, stars and shapes, with "annoying" written in tiny print. The following interview transcript shows how deeply he was affected:

R - Tell me about how you felt about the activity we did on touch last Tuesday.

Richard - I didn't like it too much.

R - Why was that?

Richard - I don't know. (At this point the child began to be uneasy, and squirm a little).

R - You told me last time that you were getting more ideas for your writing. What ideas did you get on Tuesday after the touch activity?

Richard - I got ideas, that's all.

R - Was it a happy or unhappy time for you?

Richard - Sort of unhappy

R - Tell me about the mood you were in when we began writing.

Richard - No.

R - If we could do it again, do you think your writing would be any different?

Richard - Probably. I might try harder to write something.

R - What sensations did you experience?

Richard - Unpleasant ones.

R - What pictures were inside your head during this activity?

Richard - (no answer).
It can be seen from this that, for some people, physical sensations can, and do, locate and disturb both positive and negative in-head information. Personal touch is strongly related to culture. Generally, in Western society, body touching is rejected and often resented unless the participants are willing. Most of the children treated the personal touch session as fun, and turned many of their tickle sensations into imaginary, innovative texts which conveyed a feeling of happiness. In Richard's case, his personal touch sensations prevented him from writing, and indeed, this incident might alert educators to the enormous power associated with learning through the sensations.

Fortunately, the personal touch session was not the last session in the programme, otherwise Richard may have been left with a bad feeling about learning through the senses, and his efforts could have been wasted. His positive attitude returned in the last two sessions on taste and Richard began to experiment with form and style. After the party in session eight, he wrote his longest text, from a news reporter's perspective, as follows:

A PARIDE WITH FOOD

Here we are for another show this time its the food parade and first we have the chunky chocolate. They think that there so strong - look at them showing off there musule I wish they would melt in the sun. Next we have the fizzy chews. There so fizzy that no one will touch them. I wonder wy the 100s and 1000s are running out of line. of corse the two footers are coming every body is hiding the two footers just walk past. Everybody is out of there hiding spots. Gurds have been sent out of stadium to warn if
any more two footers come. Next we have Generil gerkin and his gerkin army showing there wepons if there is a food fight. (2 howers past) Now that everything has past let's see how wins the gold frite bowl for the best looking and for the best performance. It is looking lollypop. And now for the silver furit bowl it is Gernal gerkin. Well that's all from us so goodby.

Apart from his reaction to the session on personal touch, Richard responded well to the sensory programme and gained a considerable measure of writing confidence. He wrote more than he usually did, and was beginning to experiment with perspective and form. He took on the responsibility of creating his own topics, and, in his own way, cognitively planned his writing. The notion of being responsible for his writing is an important one for Richard. Prior to this study, he was dependent upon the teacher for ideas and formats, and did not have to do too much thinking for himself. Once he was able to image vividly, which is borne out in his texts, he achieved new skills in his writing. For a child who possesses below average ability, he achieved as much as, if not more than, many of his more capable peers.

Summary of Section One - Individual Case Study Data

The data which were analysed and discussed in this section reinforced the findings of the whole group case study, and provided a window into the perspectives of the six target children who represented three ability groups. The findings of the individual case studies are strengthened by the triangulation of sources and methods.
According to the data, the target children all confirmed that sensory manipulation enabled them to image vividly. They were able to use their images as a basis for their writing. All but one recognised that their thoughts were a great source for writing. The discovery of personal topic input, plus a meaningful audience, encouraged and challenged the children to take on the responsibility for all aspects of their writing, at all points of its creation. Once that occurred, the children broke away in new directions and began to genuinely explore the craft of writing. There is sufficient evidence to suggest that the diversity of viewpoints, ideas, and the ways in which the ideas were treated, allowed the children to develop socially, by alerting them to the fact that everyone is different, and it is perfectly acceptable for those differences to influence and be evident in their writing. In fact, the children learned that it makes the writing more interesting. The connections to theory which were made from the whole group's perspective are reinforced by the analysis of data from the target children.

Evidence also suggests that these children wrote more, felt successful, and tried new forms because of the collective processes of manipulation of materials, imaging, connecting ideas, talking, and planning their writing. It is interesting to note that the children seemed to be unaware that they did not always adhere to generic conventions. Indeed, lack of knowledge of conventions did not prevent them
from trying to organize their writing in a variety of ways. They believed that they had written appropriate reports, letters, poems etc., and were eager to continue experimenting with form. Their texts, about which they felt so proud, would be the perfect material to use as a base to teach correct generic conventions and frameworks. The children would relate well to their own work, because it is meaningful.

The sensory programme evoked deep perception and reflection in the children from each ability group. Firstly, it prompted the children in the above average and average ability groups to question the teaching approach to which they were accustomed, where children are spoon-fed writing ideas and formats, and made them aware that they could think for themselves. Secondly, the programme made one child of average ability conscious of the fact that she could translate her ideas and emotions best through the medium of art, and lastly, the sensory manipulation component of the programme caused a child of below average ability to locate both positive and negative memories.

Therefore, it appears that the sensory programme influenced the social and writing development of the six target children by challenging them to look introspectively. This point is best illustrated by quotes from two of the children:
1. "How else would teachers know what a child is really like or what she is thinking if she just writes the same old boring stuff that everyone else writes?"

2. "The child has to give the idea. Otherwise how are we going to ever think about things for ourselves?"

The last case study, that is, the Sensory Programme, is discussed in the next section.

Section Two - Analysis of the Sensory Programme Case Study

At the commencement of this study, the sensory programme, as such, did not exist, other than in broad parameters in the mind of the researcher. However, the children's writing behaviour, in the early sessions, dictated the need for a structured approach, in order to achieve the goals of the study. Hence, the sensory programme was created jointly by the teacher and the researcher, and fine-tuned depending upon the activity. Programme structure and processes which were identified in the data analysis are now discussed and related to writing practices, and the programme is assessed for its effectiveness and suitability as a teaching method.

Programme Structure and Processes

It has been reported earlier in this document, that in the early sensory sessions, most of the children found it difficult to write a text of any kind. This can be
attributed to two things. Firstly, the children were not accustomed to total independence for their writing tasks, and the change of teaching style confused them. Secondly, the early sessions were organized broadly, into four areas, namely:

1. Time for children to manipulate materials.
2. Write down any words which are triggered by sensations
3. Discussion time.
4. Writing time.

It proved unrealistic to expect the children, without guidance, to experiment with the sensory materials, associate their sensations with ideas, talk about them, and ultimately, write them down. In interviews, the teacher expressed fears that the children were losing confidence, and doubted that they were capable of introspective thought. She was concerned also that they did not have the vocabulary to express personal, reflective thinking. It was obvious that, for the sessions to continue, they needed to be focussed, and the children had to understand exactly what was required of them.

The structure which was devised by the class teacher is discussed, in detail, in the Chapter on Data Collection. However, the importance of that structure became apparent in the analysis of the data. There was enormous power in the teacher's modelling the ability to focus on physical sensations and connect them to ideas. Indeed, her direction at this point was critical. Providing the stimulus was not
enough. The teacher constantly directed the children to focus on their sensations, and reminded them to write down any associated ideas and/or vocabulary. Her interaction provided a climate for the generation of ideas, which were the raw material for writing. The next step, was to provide an opportunity for the children to discuss and debate their ideas, and thus, try to shape them into meaningful texts. Observation notes record that, during the discussion time, the children remained on task, and purposefully discussed their plans for translating their ideas into writing.

Because the children had worked through their ideas for writing in the first part of the session, the main writing session was a time for uninterrupted work, to which the children responded well. Again, observation notes record the children's ability to write steadily for approximately 35-45 minutes. Prompted by the children's feelings of success, they requested a sharing time at the end of the writing session. Sharing time proved to be greatly beneficial for the children because it exposed them to a wide variety of viewpoints and ideas for content and forms of writing, and allowed them to practise public speaking and dramatic skills. Hence, the programme evolved into a workable unit, which satisfied both the teacher and the children. The processes which were identified within the structure were: (a) experiencing the sensory materials, (b) connecting physical sensations to ideas, (c) group talk, (d) planning the writing, (e) writing independently, and (f) sharing with others. Data analysis not only highlighted the value of each
separate process for writing, but also the importance of the whole programme. For example, children said such things as "talking was important because it helped me sort out my ideas; feeling/smelling/touching things is important for getting ideas; listening to the way other kids write about things makes me think it's good to be different," and "doing the writing all by myself is a good feeling." As a whole, the programme emphasised "hands-on" learning, teacher interaction and control, child talk and time to build background knowledge, and, together, these features were the key to the children's success.

**Effectiveness and Suitability of the Sensory Programme as a Teaching Method**

The findings of this study confirm that sensory learning is an effective method for teaching. It could be used in various areas of the curriculum. In this case, the sensory programme provided the stimulus and direction for the different stages of children's writing. One of the programme's strengths is that it teaches children that physical sensations, which are common to all human beings, can trigger information which is stored within the memory. Hence the senses are important sources for learning. However, more importantly, as has been demonstrated in this study, the programme was effective because, not only did it provide the opportunity for the children to access and build memorized information, but it catered for the whole writing
cycle, and ultimately, the children produced a variety of creative, meaningful, finished texts.

Some teachers would argue that the programme may be unsuitable as a teaching method because it involves unrealistic time spent planning, collecting and administrating materials. However, the activities which were undertaken in this study were simple, required realistic preparation time, and were easy to administer. To those who were involved, the results far outweighed the efforts of preparation. The class teacher is continuing to use sensory learning for writing with her new class of children this year. In fact, other teachers in the school are doing the same. Simple activities such as bubble blowing, flower pressing, nature walks, paper recycling, herb drying, making pot-pourri, identifying fragrances, working with clay, scientific experiments etc. can be the bases for focussing on the senses, and using them to stimulate language and creative writing. These things quite realistically fit into general curriculum areas. The programme does require thought and time, but the fact that it is being continued by others serves to demonstrate that it is a suitable, realistic method which can be used for teaching writing.
CHAPTER EIGHT

CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS

The purpose of this study was to describe changes which occurred in writing and attitudes to writing in one class of 29 Year Four children after sensory activation. Six target children, both males and females from three ability groups, namely, above average, average and below average, were identified and more closely observed in order to provide rich, in-depth information for clarification and confirmation of the findings. The stimulus for the exploration into this area came from the idea that sensory acuity is an important tool for learning, yet it is neglected in middle and upper primary schools today. That notion was confirmed by observing and interviewing three teachers in middle primary classrooms.

Accordingly, this study was based on the hypothesis that acuity of the senses would influence writing in some way. The study focussed on children in Year Four because no research was located on sensory perception and writing in middle primary grades, and by year Four, children are beginning to infer and think abstractly, and writing conventions are usually well established.

A pilot study was conducted with a small, comparable group of Year Four children, in order to trial the procedures and instruments which had been selected for the main study, and hence increase their reliability.
Conclusions

Data collected over a term, in the forms of responses to a questionnaire, benchmark samples, teacher's rating scale, weekly writing samples, observation notes and transcripts of interviews with the teacher and children, suggest that a number of important positive changes occurred in writing and attitudes to writing in this class of Year Four children after sensory activation. Conclusions are drawn, in terms of the research questions, as follows:

Main Research Question - What changes can be observed in Year Four children's writing after the activation of the senses of smell, touch and taste, over a period of time?

Subsidiary research questions focussed on specific aspects of writing, sense preferences, gender differences and attitudes.

Based on the data analysis, it is evident that the children made important gains as writers during the course of the sensory programme. The children's perceptions of writing changed. Prior to the study, the children accepted a passive role in the classroom and were explicitly helped and guided into writing by the teacher. The children perceived writing as teacher directed, with emphasis on correct mechanics and similarly treated ideas. As the programme progressed, the children began to find writing more challenging and realized
that good writing required a great deal of self-input at all of the stages of the process. They became more involved, and discovered that their personal thoughts were a valuable source for writing ideas. Children began questioning traditional writing procedures, and became assertive about the need for children to give the ideas. At the same time, they asserted that the ideas should be allowed to be different. It became important to them to break away as one child put it "from the same old boring stuff that everyone else writes." The children focussed on their products, as well as on the process of writing.

There was considerable change in the children's writing characteristics, in terms of form and style. It was noted that the choice of form had some influence on the length of texts, which fluctuated weekly. The weekly writing samples convincingly revealed deliberate manipulation of language. Experimenting with language leads to a deeper understanding of the components of language, and supports Gilbert's view (1990a, p.67) that learning to write involves the "traditional, generic, conventional and playful aspects of language." The use of genre, perspective and style indicates real development of more complex ways of thinking - or metacognitive awareness - in these children.

In this study, the children's writing mechanics did not change. This supports Rivalland's (1989) findings that children juggle enormous cognitive loads as they strive to make meaning, and during the process, some aspects of
language competence are sacrificed for others. However, this is a temporary aspect of writing, and with more practice in particular genres, the competency with mechanics will usually be regained.

Certain data indicate a real change in writing responsibility in these children. This seems to have been influenced by a number of factors, the most notable being the self-creation of topics. Most children stated that finding the right topic was the hardest part of writing. Once they discovered ways of accessing and creating topics, they willingly took on the responsibility of constructing their texts in creative ways.

Data analysis suggests that the children did think about, and establish sense preferences which they were able to explore in writing. Many children's writing samples reflected their preferences. It can be concluded that:

1. sense preferences are highly individual and most likely are connected to personality,

2. sense preferences can be used as a motivating force for a variety of creative activities, and

3. sense preferences can have both positive and negative effects on learning.
In this study, there was only one child who experienced negative reactions to sensory activation, but, that child's reaction was powerful. Further researchers in this area would need to be mindful of the fact that negative associations can stem from physical sensations, and can hinder or prevent learning.

In the weekly writing samples, gender differences were apparent, in terms of genre and topic choices, and, to some extent, the findings of others such as Gilbert (1990b), Walkerdine (1985) et al., are supported. However, the girls created genres and topics which entered the male domain, and conversely, the boys demonstrated a willingness to experiment with genres and topics which have traditionally been associated with females. Perhaps this could be attributed to the shared common experience which the children encountered in this study, which may suggest a way to help teachers move boys and girls to shift their thinking about genres and content. However, it cannot be generalised that, in different classrooms, with different children, that gender differences evidenced by genre and topic choices would occur.

The analysis of interview transcripts and observation notes indicates a positive change in the children's attitudes to writing, in terms of writing quality, rather than writing mechanics. The data show the children's increased confidence in writing, and a desire to improve and diversify from week to week. Their eagerness to participate after a shakey start to the programme, was largely due to their attitudinal
changes. They made connections between sensory exploration and writing, and felt a measure of success in being in control. The fact that they remained in the classroom working on and sharing their writing, during afternoon recess and after the home bell time, is strong evidence which confirms their positive attitudes.

An unexpected outcome of the study is that programme structure and classroom context are extremely important components of children's writing success. That is not to say that the researcher did not place importance on context from the outset. However, the "right" context, for this class of children, was not just a supportive, talkative environment. In this case, the context had to be focussed and directed. It has been said many times that the teacher's input was vital. The researcher believes that, in the children's eyes, the teacher was a non-performer because she did not conference, list topic choices, suggest genres or edit the work. For them, her input was implicit - a complete change in direction - and, by implication, she was a driving force in the children's learning.

This study is about increasing perception through the acuity of the senses. It is about reflective thinking and writing. It is also about choices. Through reflective thinking, the children learned to make choices about sensations, ideas, genres, vocabulary, perspective, personal input, responsibility, dramatization, public speaking and audience. The teacher made choices about teaching style and
amount of input. The researcher made choices in sensory activities, target children, areas of focus and data analysis. The choices were made by a conscious reflection on many aspects of language. The capacity to make choices is crucial for one's achievements and development. In Christie's (1990, p. 3) view, learning to exercise choices, that is, "choices in building and ordering different kinds of meaning" lead to "choices in directing the course of one's life."

**Limitations**

The conclusions drawn in this study are limited by the situation, time period, persons and context. The limitations are detailed, as follows:

1. The study was descriptive, hence the researcher's effect must be considered, in terms of biases and competence, and reactions of the children to her presence. As the study was descriptive, it is not possible to generalize that the sensory programme was solely responsible for the writing development and attitudinal changes in these children.

2. The study sample involved 29 children, six of whom were analysed in detail. Because of the amount of data for analysis, it was necessary to restrict the number. However, the richness of data and the depth of analysis should compensate for the limited number of children studied. The findings of this study may be distorted by the selectivity of
the entire sample, or the target children. However, depth of
description of the children under study should allow others
to determine the appropriateness of the sample.

3. The time period, that is, one term, was an adequate time
frame for a large quantity of work to be generated by the
children. However, a longer period would perhaps be more
beneficial in order to ascertain long-term durability of
sensory learning.

4. Despite extensive searching by the researcher, no
writing attitude questionnaire suitable for middle primary
children was located. There seems to be a dearth in this
area. The attitude questionnaire which was adapted to suit
this study may need further fine-tuning to more effectively
assess writing attitudes. The measures which were undertaken
by the researcher, namely, attention to length, format,
questions about slightly different aspects of the same thing,
and trialling the document in a pilot study, were carried out
in an effort to detect and overcome shortcomings in the
document, and hence increase its reliability and validity.
It became evident that attitudes are difficult to assess, as
they never remain static. Triangulation of the questionnaire
with observations and interview transcripts over a ten week
time frame sought to establish a measure of attitude
reliability.

5. Due to the absence of theoretical and methodological
tools for the analysis of young children's writing, two
scoring guides, originally devised for older children, were used and correlated by more than one marker, so that a realistic assessment of the children's writing ability could be gained. The scoring guides and the method of application went a long way towards achieving scores which reflected true writing ability. However, it became apparent that it is difficult to apply the criteria to writing of eight to ten year olds, and clearly, that is a significant limitation in this study. Future research into the assessment of middle primary children's writing would need to address this issue.

6. The analysis of the children's writing samples, in terms of gender differences was confined to genre and topic choices. However, further evidence of gender differences may be apparent if a more sophisticated linguistic analysis was conducted.

7. It is difficult to assess how much of the children's development is attributed to sensory exploration. It has been stated repeatedly that all of the programme processes and the context which was created by the teacher, that is, the whole teaching experience, contributed to the children's development. That context may be difficult to replicate in future studies.

Implications

This study sought to describe changes in children's writing after the influence of sensory activation. Due to
the absence of comparable data from other studies in this area, the findings cannot be compared or contrasted to others. However, the data have theoretical and practical implications, as follows:

Theoretical Implications

Firstly, the findings of this study have demonstrated that sensory learning encourages reflective thinking which, in turn, impacts on children's ability and desire to manipulate and creatively play with language to express meaning. Current writing theories support the view that prior knowledge is a solid base of information for writing, yet sensory acuity is overlooked as a means for triggering and accessing prior knowledge. The implication for writing theory then, is that older children in middle and upper primary grades, can benefit by learning about and from the senses. They can, with appropriate direction, attain levels of introspection which promote an awareness of language and the desire to control it for richer meaning.

Secondly, the findings of this study suggest that the practices used by children as they write reflect a blend of different writing theories. Process writing methodology is practised in many primary classrooms throughout Australia today. The emergence of genreist theory and the funding in New South Wales to modify teaching practices with genre pedagogy indicate that change is on its way. Teachers are also talking about helping children become better readers and
writers by teaching them about reading and writing texts in
different ways, from different viewpoints, taking culture
into consideration. However, there is a need for educators
to evaluate theories of learning, and to detect something
useful in each theoretical position and use it to empower
students. The findings of this study suggest that writing
development occurs when aspects of all three theoretical
perspectives are in play, namely:

1. Recognition of different aspects of the writing process
and the need for writing control and ownership through
personal exploration.

2. Knowledge of a variety of genres and patterns of
language, and an understanding that genre facilitates meaning
making by providing direction.

3. Situations afforded to children wherein they can share
exploration of information from different perspectives. This
is an important point, because teachers cannot rely on
children to always have sufficient in-head information to
write as process pedagogy suggests. Opportunities for
different and shared perceptions to emerge and be accepted,
through social talk.

A common link in all three perspectives is the
importance of audience, which provides a sense of purpose for
writing.
The implication for writing theory is that no one pedagogy need be practised in isolation, with disregard for others. This study has demonstrated that children's writing development reflects a blend of theoretical positions.

**Practical Implications**

The findings of this study suggest that teaching methods which include sensory learning are relevant in the teaching of writing. Certainly, sensory activation needs to be focussed and followed up by explicit instruction. Consistent attention to the development of the senses and the way in which sensory acuity can be used in a variety of creative activities, is perhaps the key to introspective thought, and hence, metacognition.

Wider use of strategies which include sensory learning might be made so that children learn about themselves in relation to others. If classroom resources consist of an abundance of sensory material to stimulate and motivate the senses, it is likely to provide children with greater writing opportunities. Most importantly, teachers need to deliberately arouse a context for sensory learning, so that children's reactions to sensations can be channelled into a variety of focussed directions which may trigger creativity in language, art, music, etc.. One strategy, that is, the programme outlined in this document, can be manipulated and adapted to any classroom situation, in an attempt to provide
a framework for the manipulation and exploration of language. It might also be taken into other curriculum areas.

This study supports the idea that the development of writers rests in their understanding of themselves in relation to others, so that they can become better writers of all kinds of texts and of their culture. Sensory learning which is systematically taught, followed through and practised, may be one way of achieving that status.

**Recommendations for Further Research**

The results of a descriptive study such as this were sufficiently promising to recommend that further investigations into sensory learning and writing are warranted.

Replication of the study, focussing particularly on gifted or weak writers could be undertaken to establish if giftedness and sensory acuity are related, and whether sensory learning is influenced by personality and/or ability.

A combined qualitative/quantitative design with Experimental and Control groups could be carried out, in order to ascertain if there is a significant relationship between sensory learning and writing development. An investigation of this nature may be more credible to a wider population.
Further research could be undertaken with sensory learning in areas other than writing, to determine if sensory awareness influences creativity in a variety of ways.

In extending this particular study, it is suggested that populations from a wide variety of ethnic backgrounds be used to establish whether culture is an important factor in sensory learning.

The problem of a suitable tool for assessing writing ability would need to be tackled; perhaps future researchers may discover more credible methods and rubrics for more accurate writing ability assessment than this study was able to achieve.

Through the study, another area which represents worthwhile consideration for future research has emerged, that is, an investigation of the criteria which teachers use to make decisions about writing theory, and how their theoretical decisions affect their daily teaching practices.

It is believed that this study of sensory learning and writing development is the tip of an ice-berg. The senses and their powerful influence on learning need to be explored in depth by teachers and students alike, if they are to be understood, harnessed and used for the development of higher order thinking skills.
Concluding Statement

The purpose of this study was to describe changes in writing and attitudes to writing in Year Four children, after sensory activation. It is asserted that sensory activation as part of the entire sensory programme, brought about real change in these children's perspectives, attitudes, and writing skills. This held true for children in all ability groups. The evidence reflects a blend of current writing theories.

Sensory learning and its application to normal school tasks such as writing, present a challenge to children. Children need to be encouraged and taught how to meet challenges in order to learn about themselves and the societies in which they live. The most important discovery in this study was that sensory learning promotes the desire and ability for individuals to think introspectively. The worth of this study lies in its value as a preliminary step towards helping children make their own constructive writing strategies conscious to themselves. Conscious reflection on language is not a luxury for a selected few. Indeed, the responsibility is on all schools to provide good educational programmes which develop literacy skills through the exploration of language. The sensory programme outlined in this document appears to have met that requirement.
BIBLIOGRAPHY


Gilbert, P. (1992). The stories not told: Gender, language and the potential for difference. Paper for the Fifth International Conference on Thinking, James Cook University, Queensland.


APPENDIX ITEMS

Item A - Transcripts of Interviews with Three Teachers

B - Letter to School

C - Consent letter from Principal

D - Letter to Parents

E - Material for Grading Writing Ability

F - Diederich's Analytic Scale for Holistic Scoring

G - Tiedt's Holistic Scoring Criteria

H - Writing Attitude Questionnaire

I - Sample of Guidelines for Interviews with Target Children

J - Exemplars of Interviews with Target Children

K - Exemplars of Children's Writing
Appendix Item A
Transcripts of Interviews with Teachers

Teacher A - Year 4

Q. How often do you have creative writing?

A. It's not realistic to have it daily. Real creativity is spontaneous. Often, we capitalize on spontaneous events.

Q. Do children need motivation to write?

A. Some children find it difficult - four or five would need help. I never give them a piece of paper and say "write". I usually kick-start the writing. I don't have a routine - I listen and tune in to the children.

Q. What kinds of motivation do you use?

A. We listened to a tape of bird sounds - lying on the floor. We painted imaginary pictures in our heads. We noticed birds outside. I read the story "How the Kookaburra Got His Laugh". Or I might do a science experiment, read a poem or draw something. I don't tell the children these things are fore-runners for a writing session - a set approach like that would put kids off. The kids don't see the approach as a preliminary.

Q. What do the children do in creative writing?

A. They draft an idea. I let them go. I only help if they need me. I think too much teacher interference would put them off. I ask them if they would like their story to be published. We share it. Some kids will be more creative in three short sentences than others who write pages.

Q. Where do topics for creative writing come from?

A. I feel the kids' rumblings. I ask questions. I make them feel that the topic I've suggested is their own idea.

Q. Do you even use sensory motivation, particularly smell, touch and taste stimulation?

A. That's a good question. Amongst all the strategies I use, primary sensory experience is probably the least. No, we don't do a lot with that. We recently preserved peaches and tasted them - now I suppose there's an opportunity to write, but we haven't - maybe we will. Certainly sensory motivation is not impractical - I do believe it's important. It's probably the most under-used strategy for me.

Q. How would you judge good creative writing?
A. When a kid writes something that strikes a chord inside me - exposes a bit of himself to me - that's what I think elevates mediocre writing to high quality stuff.

**Teacher B - Year 4**

Q. HOW OFTEN DO YOU HAVE CREATIVE WRITING?

A. I think all writing is creative, other than what the children copy from the blackboard. So I suppose you could say we creatively write every day.

Q. DO CHILDREN NEED MOTIVATION TO WRITE?

A. Most of them can just get on with it, but there are always a few who stare at the page for a while and wait for some ideas from someone.

Q. WHAT KINDS OF MOTIVATION DO YOU USE?

A. Books usually. We take ideas from stories and pictures. Whenever we go on an excursion, we follow up with various kinds of writing. Sometimes we brainstorm for ideas and list them on the board.

Q. WHAT DO THE CHILDREN DO IN CREATIVE WRITING?

A. They usually give me recounts of what happened on the weekend or the holidays, or some favourite programme they may have seen on television. They draft their work, and if they think it's good ('cause they are pretty fair judges of their own work, you know) they take it to publication stage.

Q. WHERE DO TOPICS FOR CREATIVE WRITING COME FROM?

A. Well, I've sort of answered that already.

Q. DO YOU EVER USE SENSORY MOTIVATION, PARTICULARLY SMELL, TOUCH AND TASTE STIMULI?

A. No. It takes far 'oo much time to set things up like that. I know the books say you should, but sometimes the books are far removed from the practicalities of teaching kids. There just isn't time for that.

Q. HOW WOULD YOU JUDGE CREATIVE WRITING?

A. When the child looks as though he's put a lot into it. I mean, it's got good ideas (not the same old ones) and the work has been well presented.

**Teacher C - Year 3**

Q. HOW OFTEN DO YOU HAVE CREATIVE WRITING?
A. We write every day of course. But I guess you could say that real creative writing is done once or twice a week.

Q. DO CHILDREN NEED MOTIVATION TO WRITE?

A. Yes. We don't ever write without brainstorming for ideas. That gives some of the children a burning desire to get something down on paper. But there are some children you just can't get to write no matter how hard you try.

Q. WHAT KINDS OF MOTIVATION DO YOU USE?

A. We read lots of stories and take ideas from those. I use pictures and play tapes occasionally. I try to direct the children's thinking to the picture or music so that they can think of things to write about. For example, if the music sounds light and happy, I might say, "this reminds me of fairies in the woods" and then many children can apply that to their writing.

Q. WHAT DO THEY DO IN CREATIVE WRITING?

A. Often they spend as much time illustrating as they do writing. They seem to think that being creative means they have to do some beautiful artwork.

Q. WHERE DO TOPICS FOR CREATIVE WRITING COME FROM?

A. Certainly outings give us good ideas. Sometimes we just go for a nature walk around the school. Visiting entertainers give us a good chance to be creative. We once had an Aboriginal storyteller who really fired the children up. They wrote their own Dreamtime stories, made boomerangs, did all sorts of things after that.

Q. DO YOU EVER USE SENSORY MOTIVATION, PARTICULARLY SMELL, TOUCH AND TASTE STIMULI?

A. Only in science. We have had experiments with spices and herbs. We did make jelly and popcorn for a party earlier in the year, but we didn't write stories about it - I used it to teach procedures. I've never really thought about using the senses as motivation for writing. Perhaps I should. You never know what you might get!

Q. HOW WOULD YOU JUDGE CREATIVE WRITING?

A. I would like to see original ideas. Yes, if the ideas were original and the work was easy to read, I would be pleased. One or two children in this class like writing poems - some of their work is particularly good. Their poetry tells me something about them - lets me look inside a bit. That's creativity, isn't it?
June 15th, 1992

Dear

I am currently undertaking research for my degree at Edith Cowan University. Although I have your verbal approval, I am writing to you to confirm that I will require access to your Year Four class for all of Term 3, in order to complete my research. I have the cooperation of the Year Four teacher, and together we aim to discover what influence, if any, sensory activities have on children’s writing skills.

I am in the process of detailing my intentions and requirements of the research in a letter to the class teacher, and to all parents of Year Four children.

I will need to observe activities for two afternoons per week for each week of Term 3, plus I will be testing the children, administering questionnaires and personally interviewing six target children. The data which I collect will remain confidential to me and my mentors at the University, and your school and class will be described anonymously.

I am extremely grateful to you for your support and approval of the use of the class. I would appreciate it if you could confirm your consent, in writing, for my entry into your school for research.

Yours sincerely,

Zenda Johnson
Dear Zenda

With reference to your request to pursue research in the Year Four class at this school, I wish to indicate the following before commencing:

- the class teacher should be fully informed in writing, of all aspects of the research.

- all parents should also be fully informed and given the choice of exclusion if desired. (Should any abstain, it will not be possible to use this group).

- as indicated in your letter, any information gleaned as a result of the exercise must remain confidential and anonymous to all other than yourself, the teacher and University mentors.

Good luck with the research.

Yours sincerely

Mrs Z. Johnson
Dear Parent,

My name is Zenda Johnson. As part of my University study programme, I will be undertaking research in the Year 4 classroom in Term 3. My specialist area is called Communications Education, which is an umbrella term for teaching and learning all four aspects of language — reading, writing, speaking and listening.

In my current research, I am interested in the development of children's writing in relation to their sensory perception. The class teacher and I will be conducting activities which will activate the five senses — with particular attention to the senses of smell, touch and taste. I will be observing and analysing the children's writing outcomes throughout the sensory programme.

As parents of children who will be my prime data source, I seek your permission to conduct my research. I can assure you that all of my data will be anonymous and confidential. Please also be assured that I truly believe that the activities will challenge your child in terms of his/her writing ability, and be good fun as well.

Please contact me on 3863394 if you have any objections to your child's participation.

I am very grateful for your co-operation.

Yours sincerely,
APPENDIX ITEM E

Read the following passage and write a response to it. Express any thoughts and feelings which you may have had whilst reading.

(Taken from Storm Boy by Colin Thiele)

And so it went on until one terrible morning in February. Storm Boy was standing high on the ridge of a sandhill watching the sun slip up from the sea like a blazing penny. He turned to look inland, and there behind a bending boobyalla bush near the Coorong he saw two shooters crouching. They were very still, waiting for six ducks out on the water to swim a little nearer. Just then Mr. Percival came sweeping by in his ponderous flight. He swung in low over the hiding men, and the ducks gave a sudden cry of alarm, flapped strongly, and flew off very fast and low over the water.

The men shouted with rage. One of them leapt out, swung up his gun, and aimed at Mr. Percival. Storm Boy saw him and gave a great cry.

"Don't shoot! Don't shoot! It's Mr. Perc..."

His voice was drowned by the roar of the gun. Mr. Percival seemed to shudder in flight as if he'd flown into a wall of glass. Then he started to fall heavily and awkwardly to the ground. Storm Boy ran headlong towards the spot, tripping, falling over tussocks, stumbling into hollows, jumping up, racing, panting, crying out, gulping in big sobs, his heart pumping wildly.

"Mr. Percival! They've shot Mr. Percival," he kept screaming. "Mr. Percival! Mr. Percival!"

Poor Mr. Percival! When Storm Boy reached him he was trying to stand up and walk, but he fell forwards helplessly with one wing splayed out. Blood was moistening his white chest-feathers, and he was panting as if he'd just played a hard game.

"Mr. Percival! Oh, Mr. Percival!" It was all Storm Boy could say. He kept on repeating it over and over again as he picked him up slowly and gently and then ran all the way back to the humpy.

Hideaway sprang round, startled, threw down the spoon he was using, and ran out to find the shooters. But they'd already gone. Ashamed and afraid, they'd quickly crossed to the other side of the Coorong, and driven off.

Hideaway came back angrily. Then he took Mr. Percival gently from Storm Boy and examined him - wiped his chest and straightened the shattered feathers of his wing. Mr. Percival snacked his beak weakly and panted rapidly.

"Will he...will Mr. Percival...be all right?" Storm Boy could hardly get the words out.

Hideaway handed the wounded bird back to him silently and looked out through the doorway towards the far trea...
where the shooters had disappeared. He couldn't bring himself to say anything.

All day long Storm Boy held Mr. Percival in his arms. In front of the rough iron stove where long ago he had first nursed the little bruised pelican into life, he now sat motionless and silent. Fingerbone tried to cheer him up, and Hideaway offered him breakfast and dinner, but Storm Boy shook his head and sat on, numb and silent. Now and then he smoothed the feathers where they were matted and stuck together, or straightened the useless wing. But in his heart he knew what was happening. Mr. Percival's breathing was shallow and quick, his body and neck were drooping, and for long stretches at a time his eyes were shut. Then suddenly, they would snap open again, clear and bright, and he would snicker his beak softly in a kind of sad, weak smile, before dozing off again.

"Mr. Percival," Storm Boy whispered, "you're the best, best friend I ever had."

Tea-time came, the sun dipped down, and long shadows began to move up from the hollows. For a while, the tops of the high sandhills glowed golden in the evening light, but then they faded too and it was dark. Hideaway didn't light the lantern. Instead, the three of them stayed on in front of the little fireplace - Hideaway, Storm Boy, and Mr. Percival - while darkness filled the humpy and the stars came out as clear and pure as ice.

And at nine o'clock Mr. Percival died.
### Diederich's Analytic Procedure for Evaluating Writing Samples

<table>
<thead>
<tr>
<th>Category</th>
<th>Scoring</th>
<th>Total</th>
<th>X1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality and development of ideas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization, relevance, movement</td>
<td>5</td>
<td>X 5 =</td>
<td></td>
</tr>
<tr>
<td>Style, flavor, individuality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wording and phrasing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grammar, sentence structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Punctuation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spelling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL GRADE:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Scoring: 1—poor  2—weak  3—average  4—good  5—excellent
TABLE 1. Tiedt's Holistic-Scoring Criteria for Evaluating Writing Samples

<table>
<thead>
<tr>
<th>Score</th>
<th>Characteristics of the Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The writer lacks understanding of the topic.</td>
</tr>
<tr>
<td></td>
<td>a. Little communication with the reader</td>
</tr>
<tr>
<td></td>
<td>b. Confused sense of audience</td>
</tr>
<tr>
<td></td>
<td>c. General lack of coherence or evidence of purpose</td>
</tr>
<tr>
<td></td>
<td>d. Weak grasp of spelling, punctuation, and syntax</td>
</tr>
<tr>
<td>3</td>
<td>The writer understands the topic and writes relatively clearly.</td>
</tr>
<tr>
<td></td>
<td>a. Lacks singleness of purpose</td>
</tr>
<tr>
<td></td>
<td>b. Contains some irrelevancies</td>
</tr>
<tr>
<td></td>
<td>c. Some attempt at organizing the materials coherently</td>
</tr>
<tr>
<td></td>
<td>d. Some knowledge of spelling, punctuation, and syntax</td>
</tr>
<tr>
<td>5</td>
<td>The writer presents a fairly competent discussion of the topic.</td>
</tr>
<tr>
<td></td>
<td>a. Uses examples and/or details</td>
</tr>
<tr>
<td></td>
<td>b. Reasonably clear purpose</td>
</tr>
<tr>
<td></td>
<td>c. Evidence of adequate organization with few irrelevancies</td>
</tr>
<tr>
<td></td>
<td>d. Some attempt at paragraphing</td>
</tr>
<tr>
<td></td>
<td>e. A clear sense of conclusion</td>
</tr>
<tr>
<td>7</td>
<td>The writer presents a full discussion of the topic with well-chosen examples and details for support.</td>
</tr>
<tr>
<td></td>
<td>a. Some elaboration and refinement of ideas</td>
</tr>
<tr>
<td></td>
<td>b. A clear beginning, middle, and end</td>
</tr>
<tr>
<td></td>
<td>c. A clear sense of purpose and audience</td>
</tr>
<tr>
<td></td>
<td>d. Generally competent mechanically</td>
</tr>
<tr>
<td></td>
<td>e. Few run-on sentences or fragments</td>
</tr>
<tr>
<td></td>
<td>f. Some variety in sentence structure</td>
</tr>
<tr>
<td>9</td>
<td>The writer presents unusually complete and/or imaginative development of the topic.</td>
</tr>
<tr>
<td></td>
<td>a. Striking use of evidence, examples, details, or reasoning</td>
</tr>
<tr>
<td></td>
<td>b. Tightly or imaginatively organized with an effective opening and conclusion</td>
</tr>
<tr>
<td></td>
<td>c. Clear sense of writer control of voice, purpose, and audience</td>
</tr>
<tr>
<td></td>
<td>d. Mature sense of sentence structure</td>
</tr>
<tr>
<td></td>
<td>e. Free from mechanical errors</td>
</tr>
</tbody>
</table>
APPENDIX ITEM H

NAME ___________________________ YEAR __________

Each of the statements below expresses a feeling which a particular person has towards writing. You are to express your own feelings to each statement by placing a cross (X) on the letter which best indicates your agreement or disagreement with the statement. The letters are:

SA (Strongly Agree), A (Agree), U (Undecided), D (Disagree), SD (Strongly Disagree).

PRACTICE ITEM

I enjoy writing when I can think of a good topic. SA A U D SD

1. I always want to do well in writing SA A U D SD
2. I find it easy to express my feelings in writing SA A U D SD
3. I think writing is an enjoyable subject SA A U D SD
4. I have always been afraid of writing SA A U D SD
5. Writing thrills me SA A U D SD
6. I like to be one of the best in writing SA A U D SD
7. Writing is no help in getting a job today SA A U D SD
8. Writing is more valuable than most people think SA A U D SD
9. I am often anxious when I write SA A U D SD
10. I would like to spend more time in school working on my writing SA A U D SD
11. I never get tired of writing SA A U D SD
12. I avoid writing because I am not very good at it SA A U D SD
13. I am careful about my writing SA A U D SD
14. I am satisfied with writing which is not my best SA A U D SD
15. I struggle for ideas to write about SA A U D SD
16. I find it difficult to arrange my thoughts in writing SA A U D SD
17. I write to please my teacher

18. writing is something I do only at school

19. writing is a tool for all kinds of activities

20. I write to please my parents
APPENDIX ITEM I

INTERVIEWS WITH TARGET CHILDREN

J - Johnson (Researcher), C - Child.

GUIDELINES FOR INTERVIEW ONE

Q1. How do you feel about writing?
Q2. What do you have to do to be a good writer?
Q3. What's the hardest part of writing for you?
Q4. What's the easiest part of writing for you?
Q5. Where do your ideas for writing come from?
Q6. What problems are you having with your writing?
Q7. How do you go about making changes in your writing?
Q8. What kinds of response help you most as a writer?
Q9. What do you think of this piece of your writing? (Refer to a written text from early session).
Q10. If you wanted to add more or change the information, what would you do?
Q11. What have you learned from the activities we have been doing on smell, touch and taste?
Q12. What have you learned about your sense of ....? 
Q13. You said in your questionnaire that ......... Tell me about that.
APPENDIX ITEM J

INTERVIEW NUMBER FOUR

CHILD NUMBER ONE - (Pseudonym - Sally)

J. If I could be in the classroom at your usual creative writing time on Tuesdays, what would I see you doing?

C. That depends. There could be anything, but mostly finishing off.

J. Finishing off what?

C. Well, we start lots of things and run out of time, for one reason or another, so we use that time to get something finished. It could be anything like a report we were working on, a letter, a newspaper article - anything. The object is to get it finished.

J. What would you like to see happen in the writing time in your classroom?

C. That everyone would write something good, and they could publish it.

J. What is your opinion of the sensory programme we've been doing this term?

C. Good.

J. How effective do you think the programme is?

C. That would depend. Some activities were very good, some were not so good, but I think all the kids' writing has been good.

J. What have you learned from this programme?

C. How to write much better stories, and how to get a bit of inspiration from my senses.

J. What do you think about the idea of children being responsible for thinking of their own topics for writing?

C. I think it's a good policy. They should be allowed to do that. I think it would expand their range. If they are restricted, they don't write as well. If you have a range, it is easier.

J. A range of topics, or a range of formats?

C. Both, definitely both.

J. Do you feel confident about writing when you are asked to think of your own topic?
C. Yes I do, as long as I get a good idea. And when I get that - well, there's no stopping me.

J. How is your writing affected if you (not the teacher) select the topic?

C. It would be changed from the normal stuff. Like, if I chose to do an advertisement or a story, it would be good because I chose to do it myself.

J. How does it make it good, just because you chose it yourself?

C. Because anything you make your own mind up about, you usually put more into. At least I do, anyway.

J. What do you think of the idea that your senses can help you to choose topics for writing?

C. Well, I knew that they probably could, but I didn't do any experiments, but as soon as I did it, it helped my writing.

J. Can your senses help you to make pictures in your mind?

C. Yes pictures in my mind, and words in my mind, I get words and pictures.

J. And can you get those words down on paper easily?

C. Oh yes, I don't have any trouble with that. Once I get the words in my head, the rest is easy.

J. What's your opinion of the activity on touch which we did on Tuesday?

C. Silly and funny. It looked like a funny farm. It was all so much fun.

J. How did you get your idea for this piece of writing?

C. From the tickling feeling.

J. What's your opinion of this piece of writing?

C. Funny. It sounds like a report but the topic is out of this world - the idea is funny. I think the writing is quite good.

J. You told me that you were getting all sorts of pictures in your head in our sensory sessions - what pictures did you get in this session?

C. I thought about the tickling, and I thought of the word 'torture'. The tickling was really like torture. I could see someone being tortured by being tickled. What a crazy idea!
J. How did you decide on the form the writing would take?

C. I like doing that kind of writing, television reporting. I think it's easy and bonus fun.

J. How did you plan your writing?

C. In my mind I could see the way I wanted it to be.

J. But did you write down a plan?

C. No way! There's no need. I KNEW what I was going to do.

J. Do you think planning your work like story maps, flowcharts, etc. help you to organize your writing?

C. No, teachers go on and on about that, and usually you forget the reason you even started it. I like to just play around a bit in my head, and then write.

J. What's it like to play around with different ways of writing?

C. Good, really good. It helps you to get good at it.

J. You said you had good feelings about the popcorn activity - tell me about your feelings in this touch activity.

C. Tickling feelings. Funny, happy feelings. They made me think I could write something funny. Perhaps some of it went into my writing.

J. This question is aimed at getting your perspective about Tuesday writing time. What's it like to be a child in this sensory writing programme?

C. Well, not only is it good fun and interesting, but I think it is really helping to give most kids ideas to write about.

CHILD NUMBER TWO - (Pseudonym - Mark)

J. If I could be in your classroom at your usual creative writing time on Tuesdays, what would I see you doing?

C. You would be doing any piece of writing the teacher tells you to do - you get a choice if you haven't got things finished - you have to finish something in that time.

J. What would you like to see happen in the writing time in your classroom?

C. Doing what we do when you come in on Tuesday. I like activities like making jelly.

J. Tell me why you like them, other than just to eat the product.
C. I like them because they make me think of words and ideas that wouldn't come into my mind otherwise. When the teacher says, close your eyes and think of things, I really can. And it's really interesting hearing what the rest of the kids in the group have got to say, everybody had different ideas. It was exciting.

J. What is your opinion of the sensory programme we've been doing this term?

C. It's been good. I like it quite a lot.

J. How effective do you think the programme is for your writing?

C. I think it's effective for ideas - it has helped me.

J. What have you learned from this programme?

C. Lots of things - like, well, getting to know my senses better, and being able to write lots of different things in different ways.

J. What's more important - the content of your writing, or the format you use?

C. Both. If I have something really good to write about, people will like it more if I have chosen a good way to do it.

J. What do you think about the idea of children being responsible for thinking of their own topics for writing?

C. I don't really know - but the teacher should not always give the topics - sometimes the child has to give the idea. Otherwise, how are we going to ever think about things for ourselves?

J. Do you feel confident about writing when you are asked to think of your own topic?

C. No, not really, but I'm getting better at it because of the last activities. If we could always have our writing time like that, I reckon I would start doing really well. I think it's a pity that we have reached the end. Most of my friends think the same. Nearly every kid in the class has done something good eh? It's great to hear all the ideas when the kids read out their stuff.

J. How is your writing affected if you (not the teacher) select the topic?

C. Well, if I was allowed to write anything, like lately, I can do it quite well. I don't do very well when I have to do one thing that I can't really do.

J. Tell me what you mean.
C. Well, if the teacher says to write about something that I don't really know much about, I write something, but it's not very good. I can't help that - what else can I do? That's the way we usually do it.

J. What do you think of the idea that your senses can help you to choose topics for writing?

C. When we tasted the popcorn, you can get lots of words and sometimes it reminds you of something that has happened that you can write about. I could see things in my mind. So I guess your senses can help you with writing topics.

J. Can your senses help you to make pictures in your mind?

C. Yes

J. Tell me then about turning those pictures into writing.

C. Mostly I can - if I can really see something in my mind, I can write about it. I can find the words without much trouble.

J. What about expressing your feelings?

C. I can do that too - I'm not afraid to do that. Some of my friends are afraid to say how they feel - they just go and sulk, but I don't do that. I say how I feel - saying it sometimes makes me feel better.

J. Are your friends girls or boys, or both?

C. Mostly boys. But girls are the same. They cry a bit more, but none of us really lets our feelings out, unless we are really angry and then we might. I think that most kids think it's a bit weak to talk about your feelings.

J. Do you think that?

C. Yes, a bit. I wouldn't talk to my friends about my feelings, but I could talk to my parents, or I could write about my feelings.

J. Can you always find the words to describe your feelings?

C. Usually.

J. What's your opinion about the activity on touch which we did on Tuesday?

C. I liked other ones better, but it was quite good.

J. What's your opinion of this piece of writing ("My Farm")?

C. I like it and it's about the first real writing piece I've done. The others have been about things that are not real.
J. How did you decide on this idea?

C. Dad told me when I was doing a folk story that I should write something about the farm, and then the relaxing touch feelings that I had made me think of that, so I did the writing now.

J. What pictures were in your mind when you wrote this?

C. I could see the hills - I could see the big hill that our farm is on.

J. What feelings were you trying to get across to me in this piece of writing?

C. I suppose I wanted to show my happiness feeling.

J. How is it going for you when you are asked to come up with your own ideas for your writing?

C. Quite good now. If I can see things in my mind, I can do it.

J. This question is important because it will tell me about your perspective. What's it like being a child in this sensory writing programme?

C. I think it has been fun and I have really liked it.

CHILD NUMBER THREE - (Pseudonym - Ellie)

J. If I could be in the classroom at your usual creative writing time on Tuesdays, what would I see you doing?

C. You'd probably see us finishing off things and writing stories, letters and things.

J. Would the children have thought of those things for writing themselves?

C. NO WAY! Miss .... would have put down a list - you would have to choose one of those things to do.

J. What would you like to see happen in the writing time in your classroom?

C. I would like to see people writing creative stories and using the senses you taught us about because they are a good idea.

J. What is your opinion of the sensory programme we've been doing this term?

C. I think it's been helping everyone - I can tell. If you look at Term 1 and Term 2 writing, it just wouldn't be the same. This way, it gives you much more ideas.
J. How effective do you think the programme is?
C. Very effective.

J. What have you learned from this programme?
C. I've learned that you can have lots more ideas from this kind of method from the senses, and you can imagine things a lot better.

J. How do you do that?
C. Oh, you can see pictures in your mind and, if you close your eyes, you think of lots of things to say and write about.

J. What do you think about the idea of children being responsible for thinking of their own topics for writing?
C. I think they should have their own ideas a lot more. How else would teachers know what the child is really like, or what she is thinking if she just writes the same old boring stuff that everyone else writes?

J. Do you feel confident about writing when you are asked to think of your own topics?
C. Yes, I really do. I didn't at first, but now I think I can write something funny or descriptive. It's like in a competition, when you have to think of something yourself to win. It's like when I wrote that really good book. I'm really proud of that because it was all my own work - my ideas.

J. How is your writing affected if you (not the teacher) select the topic?
C. Well one thing - you've got your own ideas and you can write about them - it's easier. And besides, you shouldn't have to write about things you don't know much about, or you don't want to write about - not in creative writing anyway.

J. What do you think of the idea that your senses can help you to choose topics for writing?
C. I reckon it's a fantastic idea, it helps you and you can just think of things because you are feeling something.

J. Can your senses help you to make pictures in your mind?
C. Yes! Sometimes the pictures are great. I could see red jelly castles at the beach - orange palms, all sorts of things when we made jelly.

J. Tell me about how you turn those pictures into writing.
C. I'm just starting to be able to do that - but, because I can't always think of the words I need, I can't put in too much detail - not like in my drawing. If I could draw some of the things I've thought of - WOW!

J. Does talking with the children in your group help you with your writing?

C. Oh yes. When you hear all of their ideas, you realise that everyone's got something different to say. Your friends help you work out your ideas. Talking is good.

J. What is your opinion of the activity on touch which we did on Tuesday?

C. I thought it was really funny - they kept tickling me.

J. If I had been a child in your group, what would I have been asked to do?

C. You would be asked to softly touch your partner's palm, draw a circle and then it would get a lot worse!

J. What is your opinion of this piece of writing? (entitled "The Tickle Robbers")

C. Well, the tickling reminded me of a T.V. show about robbers, so I thought, this could be fun, so I wrote it down. I'm happy with it.

J. You told me that the touch sensation was really helping you. How did it work for you on Tuesday?

C. Well, I liked it better when I was doing the touching, instead of someone touching me. I didn't like someone touching me, not that I don't like to touching - I do like it when Mum or Dad cuddle me - but it was nothing new. The feeling was nothing new.

J. What sort of mind pictures were you able to make?

C. My mind was racing. The touch was distracting me from making mind pictures.

J. How are you going for ideas in these writing sessions?

C. A lot better. I think that, if you put everything together, you know, your taste, smell and touch feelings, it gives you a really good base for ideas.

J. This question is aimed at getting YOUR perspective about Tuesday writing time - what's it like to be a child in this sensory writing programme?

C. It's really good fun, and my writing is getting better.

CHILD NUMBER FOUR - (Pseudonym - Alan)
J. If I could be in the classroom at your usual creative writing time on Tuesdays, what would I see you doing?

C. Writing what the teacher says to write, and doing what the teacher says to do.

J. How does the teacher guide you?

C. Sometimes we do an activity and the teacher tells us what we should write about that activity.

J. What do you mean, what you should write?

C. Well, I mean, she might say, you have to write a newspaper article, and she lists lots of words down on a list, and kids make suggestions, and then we just get on with it.

J. What would you like to see happen in the writing time on Tuesdays in your classroom?

C. I don't know.

J. What is your opinion of the sensory programme we've been doing this term?

C. Well, I think it's really interesting and you learn a lot.

J. What sort of things have you learned?

C. About your senses, because that's what you are trying to teach us to learn about so you can write a report for the University about how children write.

J. How effective do you think the programme is?

C. It's very good.

J. Tell me more? How is it good?

C. Because it's interesting, and you learn more than you expected to learn. Yes, you learn about senses and about writing about the senses.

J. What have you learned from this programme?

C. Quite a few things, like how to write about something that has just happened that you are not making up.

J. What do you think about the idea of children being responsible for thinking of their own topics for writing?

C. Well, I think it's quite hard because, if you say you can write about anything, kids write mostly about where they've been.
J. Then, how is it hard?
C. I don't know, it just is.
J. Do you feel confident about writing when you are asked to think of your own topic?
C. Yes.
J. How is your writing affected if you (not the teacher) select the topic?
C. It makes me write more.
J. What do you think of the idea that your senses can help you to choose topics for writing?
C. I think it's a good idea - yes, it's a good idea, because it helps to get something personal in there.
J. Can your senses help you to make pictures in your mind?
C. Yes, I see lots of pictures when I taste and smell things, but not too many from touch.
J. Tell me then about how you turn those pictures into writing.
C. I think of words and see pictures - I just sort of mix them together and create a story.
J. You told me that you were getting better ideas for writing because of our sensory activities - tell me more about that.
C. Because we've done it more times - I'm getting used to it - it's becoming easier.
J. How did you decide on this idea (last piece of writing entitled "The Stink Doctor")?
C. I just imagined it. When Michael was drawing something on my foot, it reminded me of being at the doctor's and him checking out my feet.
J. What is your opinion of this piece of writing?
C. I think it's quite good - it's a good idea. For me, it's good writing too. I finished it.
J. How did you arrive at the title for this writing?
C. I wrote the story first, then it seemed like a good title for it.
J. What's your opinion of the activity on touch which we did on Tuesday?
C. I thought it was fun, but touch isn't too good for me. I don't get much out of it.

J. If I had been a child in your group, what would I have been asked to do?

C. Probably the same as I was - you had to draw on your partner's back, feet and hands. You had to guess what number or letter it was. You had to find your sensitive spot. It made us laugh.

J. This was a touch activity. Tell me why you wrote about the sense of smell in your writing?

C. Smell? Oh, the smell of feet without shoes and socks stuck in my mind. I remember that more than the touch.

J. Tell me what senses are important to you, out of smell, touch and taste.

C. Smell and taste. Not touch.

J. This question is aimed at getting your perspective about Tuesday writing time. What's it like to be a child in this sensory writing programme?

C. It's good fun. I get the feeling it is helping lots of kids write more things.

CHILD NUMBER FIVE - (Pseudonym - Sandra)

J. If I could be in the classroom at your usual creative writing time on Tuesdays, what would I see you doing?

C. Writing. Story writing about whatever the teacher said to write about.

J. What would you like to see happen in the writing time in your classroom?

C. The same.

J. What is your opinion of the sensory programme we've been doing this term?

C. I don't know.

J. What have you learned from this programme?

C. I don't know if I have learned anything.

J. What do you think about the idea of children being responsible for thinking of their own topics for writing?

C. I think that's a good idea?
J. Do you feel confident about writing when you are asked to think of your own topic?

C. No.

J. Let me make sure I understand what you are saying. You said that it's a good idea that children should think of their own writing topics, but you also said that you don't feel confident about doing it. Would you explain that to me?

C. I can't very well. I think kids should be allowed to choose, but I'm one of the kids who gets stuck. It's good for some people. Not for me.

J. How is your writing affected if you (not the teacher) select the topic?

C. If I have thought of an idea (which I can't do very well) and I write about it, I'm very happy — that happy feeling shows in my writing.

J. How does the happy feeling show?

C. I don't know, it just does.

J. What do you think of the idea that your senses can help you to choose topics for writing?

C. I don't know. I just don't know.

J. Can your senses help you to make pictures in your mind?

C. Yes, I get pictures.

J. Tell me then about turning those pictures into writing.

C. I can only do that sometimes — not very often.

J. How could the teacher help you to turn pictures into writing?

C. I don't know.

J. What's your opinion of the activity on touch which we did on Tuesday?

C. It was fun.

J. How did you decide on this idea for your writing?

C. I don't know.

J. What's your opinion of this piece of writing?

C. I don't know — but I suppose it's quite good for me.

J. The activity was about touching. Did you think about any other senses during the activity?
C. Smell

J. Why was that?

C. There were funny smells when the kids took off their shoes. I thought more about that than the touching.

J. This question is important because it will help me to understand YOUR perspective. What's it like being a child in this sensory writing programme?

C. Interesting. Sometimes fun.

CHILD NUMBER SIX - (Pseudonym - Richard)

J. If I could be in the classroom at your usual creative writing time, what would I see you doing?

C. Writing. Mostly about stories that we've read. We don't get ideas from anywhere else.

J. What would you like to see happen in the writing time in your classroom?

C. Well, I'd like to see people get stories finished because that usually takes a few days. We are always finishing things off. I'd like to finish it off there and then, not put it off until another day. It doesn't seem important then.

J. What is your opinion of the sensory programme we've been doing this term?

C. It's very good. It helps me write better.

J. What have you learned from this programme?

C. Quite a lot, about my senses.

J. What do you think about the idea of children being responsible for thinking of their own topics for writing?

C. I think it's a good idea. We're not allowed usually to just write what we like.

J. Do you feel confident about writing when you are asked to think of your own topic?

C. I feel better about writing about my own topic.

J. How is your writing affected if you (not the teacher) select the topic?

C. It still might be good - I think it might be better.
J. What do you think of the idea that your senses can help you to choose topics for writing?

C. I think it is true.

J. Can your senses help you to make pictures in your mind?

C. Yes.

J. Tell me about how you turn those pictures into writing.

C. I can't.

J. Tell me how you felt about the activity we did on touch last Tuesday.

C. I didn't like it too much.

J. Why was that?

C. I don't know.

(N.B. At this point, the child began to be uneasy, and squirm a little. It was obvious that he was uncomfortable talking about it).

J. You told me last time that you were getting more ideas for your writing. What ideas did you get on Tuesday after the touch activity?

C. I got ideas, that's all.

J. Was it a happy or unhappy time for you?

C. (shrugs) Sort of unhappy.

J. Tell me about the mood you were in when we began writing.

C. No.

J. If we could do it again, do you think your writing would be any different?

C. Probably. I might try harder to write something.

J. What sensations did you experience?

C. Unpleasant ones.

J. What pictures were inside your head during this activity?

C. (No answer)

J. Give me some advice - what could I do to help you with your writing?

C. (no answer)
,,


carrots, sweet, flowery, rotten, mushrooms, bran, clean, fine o'clock, hospitals, fruit, basket, sickly, bitte ant room, garden, fumes, rich, farm, rat, spicy, tills, shed, unripe fruit, restaurant, rubbish bins, feather, pan plane, roasted peanuts, rubbery, home, washing up, custard, Miss Woodside classroom, pool, chemicals sterilized, pets, birds, fr hand-aids.

It's Fresh!
It's Great!
It's Rich!
It's New, Purr-fume!

Van Deek's New Purr-fume!

It's smell of flowers, fruit, and the sweet flow Only $8.95!
SALTY REMINDS ME OF PICKING FRESH... BITE...
curry powder, lemon juice, mustard, white wine vinegar, curry powder...
Maggie's apple chutney... of picking fruit, of picking fruit...

Remind me of picking coffee.
chipotle lemon jam.

An apple.

Notice on the bulletin board:
"fruit picking help wanted."
Appled.

Got it.
Early morning, getting out of bed,
getting in the truck;
getting out into the darkness,
getting out;
meeting the other fruit pickers,
working, shoving the leaves, the tree with a basket,
with an apple basket;
climbing down,
leaving the basket in,
leaving the apple.

Crunch.

Leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
leaving the apple in,
leaving the basket in,
Feel
sighed

Smell

Taste

Icy Pops

Ice

mut. II

Like nothing

JELLY Mud
at the swamp

1 JELLY golden-

2 JELLY golden-

Winter

The cold hard wind

rattles my cheeks as I

walk on. My eyes wince as

they follow the puddles ahead

of me. I reach the grass and

see earthworms swimming and tinder

leaves waiting for a drop of water

to trickle down their long, thin backs.

Umbrellas everywhere with pretty

patterns and designs on them. I walk

over to a tree and see the remains of

a bird's nest blow away with the breeze.

I take off my boots and let my cold toes

sink into the mud. I love winter!
sandy silk, play do, play do, the do stretchy, smooth.

One day I went to the seaside to listen to the play do wave. They feel like silk and taste like ice cream. The sand is flour, the sea has the salt, and when it rains it makes play do. When the humans step in it mixes it all together. When it hasn't rained for one week the humans bring down buckets of water to make some play do. People say that they should take the flour away and replace it with sand except more people want the flour so that there beach is the only beach, play do, beach.
ART
lightly, smoothly, deftly,
He swiftly strokes the blank, untouched paper,
The swiftly engraves a sharp, bright, colorful image.
The artist, silent, green landsape,
In dim light, the pale, sickly light of the setting sun cannot carry its heavy weight,
No one admires, they are full of hard critizes?
Years go by, the artist leaves,
We start to see the presence,
The colors are faded, the outlines become soft, and the slim figure is shadowy and faint,
But, it is whole, completed and beautiful.
Every Thursday we go to the beach and have a swim.

It was Thursday afternoon at about two o'clock and I was thinking about going to the beach with the Spicy fish. Little crabs crawling on the sand, the rough rocks on your feet, as you walk down to the wet stretchy, and as you swim, I feel the hard, round, rough rocks lie on the bottom of the sea.

The disgusting sponge lies on the sand for crabs to hide in and its card boardy feel makes me shiver. I can't wait to go to the beach.
Salty, sweet, acid, sour

salt
apple
Sugar
vinegar

Well if you haven't heard about the Tastemash, you're going to hear about it now. Just type what taste you want and in ten seconds flat, the tastemash will sprinkle down from the top into the bowl underneath. Ring now but do not send any money. I repeat, do not send any money.

Here is a pitcher of it
Ticklish   Tingly   Soft

The Dreaded Shadows

One day I lay in bed watching the different shadows on the ceiling and I saw a shadow that I had never seen before. It was different. Small but moving rapidly. It was almost too small to see. It was closing in on me. I lay as if tied down to my bed. Then my shoulders started to ting and then my arms and my legs and my feet all of my body was tickling and tingling. I said I had caught the dreaded TICKLE DESEA. So if you ever catch sight of a small group of marching shadows at night BEWARE IT'S PROBABLY THEM888888.
Salty sweet acid hour
salt apple vinegar biscuit
sea water the shops medicine after noontea
chicken rice
chickens will going out
Sugar
sugar doughnuts
The Medicine attack
A little girl called Alex
court the runaway flew
so she went to the doctor
where she didn't like going.
The doctor gave her the most
digesting medicine for her
disagreement.
That day when she got
home she looked at the
package when suddenly the bag
burst open and out came the
tutest medicine. Alex
He started attacking he pulled
his sord out from under neth his
belt and stuck it in Alexes
thinner
HELP the medicines attacking
me) screamed Alex.
Don't be silly called her
mum who was how in the
kitten and she ran to Alex
She said saw my flesh and she
opened the lid of the
medicine carefully. Then Alex
had to drink it up after
doing that the medicine
was dead.
Alex and the flew ses
separated and she never
saw the few again.
Salty salt chicken stock salty paprica sugar
Sweet biscuit cinnamon(ourpantry) spicy
Acid vinegar apple lemon
Sour coffee lemon

THE TASTE BUDS ARE COMPLAINING!
Now listen to me. I don't want ANY more good food for intense that curry last week it was absolutely REVOLTING!! I can still taste it now SPICY HOT and OOH that smell! Hey you don't seem to be listening and another thing that broccoli yesterday was DISGUSTING I can't think of any thing worse except the curry that is why can't you be like normal kids eating GREMY chocolate cake sweet lollypops that would be the life!

excuse me I'm trying to make an official complaint here HEY HEY WHAT ARE YOU DOING Oh no not the brussel sprout sandwiches

HELP!
odd. stinky, tickley, pleseast, sleepy, annoying. soft / smooth, my
dad at night when he tickles my feet, tingly
unpleasant

THURSDAY
25, DECEMBER 1998

THE WEST AUSTRALIAN

WANTED

Shocking news on
Christmas day. A woman
called Mrs Johnson was found
dead on her apartment
floor. Police believe
that she was
ticked to death. A
man with darkish-blond hair
dark brown eyes, freckles around
his nose and rosey cheeks. Today she
was going for a holiday in Mandarrah for
Christmas, but as you know, she could not do that because she is dead. Next week, her lovely family and relatives are having a funeral. Just remember, if you see this man, ring this number as soon as possible.
salty sweet and spicy:
salt, sugar, vinegar, spices,
chili, garlic, ginger, coriander

When I swallowed some se
water at the beach with Jo
Bella, and the black pepper, Banana
Babercorn, at the farm. to
Smoothies, and

YARN'S NEW BABY TGF

New

66 Mmmmm! Apple &
Cinnamon
Soft!

Yarns made of Quality

In Banana or Apple
& Cinnamon!

Terrific!

RELIGIOUS, distant SWE
SPICE taste that your Baby will
LOVE!

No added sugar or preserv
The "Mustigots" has a very funny way of living, it has daily chores (like us) eight me (not like us) and school time is only one hour, lucky them! Their body is green but their toes are coloured black and their fingers are black as well. If you want to catch a Mustigo you need to look in very very, very, very marshy areas not too dry, and not too wet. In Australia they grow rapidly but in most other countries they don't grow too fast.

Mustigos