COMMUNICATION DIFFICULTIES
IN THE CLASSROOM

THESIS FOR PRESENTATION OF DOCTOR OF PHILOSOPHY

THE UNIVERSITY OF LEICESTER

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ABSTRACT
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The National Curriculum assigns oracy as a benchmark of academic success alongside literacy, focussing on primary[spoken] and secondary[written] language components for learning.

It has generally been assumed that children acquire speaking/listening skills naturally through opportunities to talk. However, a number of children are deprived of chances to communicate because of social, emotional, physical and cognitive difficulties. This highlights oracy as a competence and a subject area like literacy, that needs a framework for teaching. It also brings into question the relationship between speaking/listening and reading/writing and how it is successfully facilitated. Collaborative frameworks for professionals involved in communication development [teachers/therapists/carers] need to be developed and implemented.

With these perspectives in mind, research was conducted to clarify the nature of communication difficulty and examine frameworks for teaching. Four main aspects are located:

PERSONAL ISSUES - achieved through comparative studies of 'normal' and 'communication impaired' children [4-8 years] using a profile to detect conversational and cognitive differences.

PARENTAL ISSUES - assessed from a questionnaire looking at attitudes towards communication management.

PROFESSIONAL ISSUES - evaluated through a comparison of different management styles.

POLICY ISSUES - highlighted from quantitative and qualitative information from the studies.

Data collected suggests specific differences in performance between 'normal' and 'communication impaired' children. Management adopted either an INDIVIDUAL approach, concentrating on specific language components in weekly clinic sessions, or an INTERACTIVE method, based on a support strategy within school. The school-based approach was significantly more successful in achieving academic success for children.

Thus policy has to address the type of oracy-literacy management offered to all school children as well as those requiring specific support. It must target responsibilities of teachers and therapists working together to implement the language curriculum as well as resolve their different education and health service training/working models.

Learning is acquired through the medium of spoken and written language and standards of attainment can only be evaluated if both components are evaluated. Unfortunately the traditional separation of oracy-literacy activity has worked against full understanding of its relationship in learning. The National Curriculum gives a new context to consider both aspects in education. This research clarifies personal and social issues in communication and describes a framework that can achieve academic success for the considerable number of children who fail to learn satisfactorily

R.J.W.B. SAGE, Central School of Speech & Drama: 1993
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Defining the Area of Inquiry

Educational standards are constantly debated and traditionally measured in terms of written communication. When National Curriculum Standard Assessment Tests suggest that 28% of seven year olds may have inadequate achievements, teaching methods are blamed.

However, literacy maps onto existing knowledge of oracy so it seems logical to investigate speaking and listening behaviour when evaluating reading and writing, especially as the National Curriculum considers these four components together for teaching and assessment.

This perspective is used in studies that consider why children fail to learn. Forty 4-9 year olds, diagnosed as having communication difficulties and not making adequate school progress are compared with the same number of others considered normal in attainment. A framework [C-Profile] examines 'within' and 'without' the child factors in individual and interactive formats.

It is hypothesized that there are significant learning differences between the groups and problems underpinning oracy (speaking & listening) will transfer to literacy (reading and writing).

Locating differences in performance may help to define problems in communication but in order to effect change it is necessary to examine issues of management. Parents have the main responsibility for their child's upbringing so it is relevant to document their views of professional practice. The culture of home may differ from school so evaluation of alternative attitudes provides the basis for effective styles of operation and pinpoints future developments. Therefore, the research concentrates on personal, parental, professional and policy aspects and locates:

1. PERSONAL ISSUES: The Nature of Language and Communication Difficulty

This is achieved through studies comparing performance of children described as normal [N] with those identified as having language and communication difficulty [LCD]. A Communication Profile [C-Profile1 & 2] is used to locate differences in conversation and cognition so providing data for discussion.

2. PARENTAL ISSUES: The Attitudes of Carers

This is assessed by questionnaire investigating carer views of language and communication
3. PROFESSIONAL ISSUES: The Type of Management

This is clarified by means of single and group case investigations of LCD children from the core study. There are four single studies of children in two different schools receiving individual [measuring & remediating deficits] or interactive [locating needs in context] management. In addition, two larger groups are presented, comprising fifteen children in two different schools. One group receives individual help working on specific deficits by means of a once weekly session in a Health Centre. The other group has interactive management involving support in the school learning context. All case study children are assessed before and after one year of intervention and differences in performance are discussed.

4. POLICY ISSUES: The Question of Future Developments

This brings together the main points of the studies and evaluates them in the context of future policy directions.

Structure Of The Report

The report begins with issues that are important for understanding language and communication in education of children. These pinpoint changes in theory and practice and illustrate the dilemmas apparent. The background discussion continues with a review of learning management giving historical perspectives and illustrating trends in work methods. Current models of language and communication are described providing the base for developing frameworks for the experimental studies. As an introduction to these, a profile of a child with language and communication difficulty is provided, in order to summarise and clarify issues for management provision.

The Research Method

The Inquiry targets a group of primary school children with language and communication difficulties who fail to make adequate school progress. Management of learning difficulties is a dynamic
situation involving the nature of the problem, personal characteristics, knowledge, experience, attitudes and skills of parents and professionals as well as the availability of appropriate support.

Therefore, interest is not in physical entities but in the investigation of psychological phenomena such as learning, personality, attitudes, values and beliefs. The difficulty lies in identifying or measuring such ill-defined occurrences. Application of scientific methods means that situations would have to be compromised and altered to meet the demands of classification and control of variables. No allowance for the importance of context or creativity could be taken into account.

Thus, it has been decided to include input from natural settings to provide ethnographic validity. It is anticipated that a mixture of "grounded" (Glaser & Strauss, 1967) and scientific methods, providing qualitative as well as quantitative measures, will add credibility to the data and contribute insights into the communicative and social norms of the wider community in which children with language and communication difficulties function.

The research is presented as follows:

Section 1
Studies comparing normal (N) and language and communication difficulty (LCD) groups on conversational and cognitive communication profile analyses.

Section 2
A study of parents' views on the management of LCD children.

Section 3
Case studies of children with LCD comparing different management styles.

Section 4
The report concludes with a discussion of data from the main study areas and evaluates this for future policy and practice.
INTRODUCTION: THE CONTEXT OF THE STUDY

It is down tools for mid-morning break in a primary class for children with communication difficulties. Twelve pupils are seated around a large table. The teacher offers a beaker saying: “What would you like to drink, Mark” (choices: milk / orange / ribena). He responds: “It’s a red cup. It has a handle and round top. You drink ribena, orange and milk from it.”

Here is a seven year old boy with correct form and content of communication but inappropriate use in this interactive context. One may speculate on Mark’s problems:

- does he have difficulty processing communication?
- does his response follow the pattern of previous activity? (he had just been practicing a show and tell activity with a beaker).
- does he have problems in attending? (If the teacher had alerted Mark by name before rather than after the question - would this have given a different response?)
- does he have difficulty responding to talk because the context and people are not familiar?
- does he have problems with social conventions of talk?

Reasons for inappropriate responses are complex because of the dynamics of communication exchanges involving different people, purposes, places and events. The problem, just described, is often dismissed as inattention, laziness or poor ability. Only if a child displays noticeable difficulties with speech clarity is a communication difficulty generally acknowledged. It is easy to disregard a child who does not ask questions, initiate talk or participate in conversation. To be seen and not heard may be welcome in a talkative group.

Mark’s support work took place in twice-weekly individual sessions, outside the classroom, with a visiting speech and language therapist. Formal tests had shown that language information, sound and syntax skills were two years below his chronological age. Targets were to improve language form (sound and syntax) and content (information processing and knowledge) assuming that once these areas were well established correct use would follow spontaneously. This is known as an individual approach to language support focusing on component parts that are weak in a context away from normal interaction. It is generally described as the ‘medical model’.

However, this thesis stems from the fact that children, like Mark, who show difficulties learning to talk demonstrate problems talking to learn in school situations that demand a high level of decontextualized language with unfamiliar people.

Silliman (1985) discusses this, pointing out that when children enter school the rules of the game change for how social interaction takes place. The normal one to one exchanges of home are different from school group talk where teachers commonly instruct large numbers of pupils. Therefore, difficulty may reside in the interaction rather than the child’s head.

Formal school consists of a series of “verbal encounters” (Cook-Gumpertz,1985).
Development will depend on whether students can participate in these and follow the language of instruction or group discourse. This begins with simple dialogue (conversing with others) as the means by which knowledge is mainly acquired and shared. Using a variety of question and answer moves, topics are initiated and continued through talk developing ideas and skills in narrative (sequenced thinking). The ability to deal with subjects in order is the frame for processing and producing information.

School language develops from dialogue to monologue (speaking alone as in show and tell activities) and then through various narrative stages until a full story with setting, characters, events, attempts, results, reactions and conclusions is produced so enabling oracy to move into literacy (Westby, 1984). The growing interest in narrative abilities is seen as providing the foundations for literacy and the comprehension of written texts (Olson 1982; Snow, 1983; Cameron, Hunt & Linton, 1988).

In the example, Mark shows skills of monologue (show and tell sequences about the beaker) but not dialogue (exchange of ideas: in this context - question & answer). Establishment of joint focus and development of topic across speaking turns is essential for literate thinking and will be further explored in the section on the oral - literate continuum. First, there is an attempt to define oracy as a new area for consideration in education.

A Definition of Oracy:

Oracy is a fledgling field of study without a common definition. It is the term coined by analogy with literacy and refers to the capacity to communicate effectively in spoken as opposed to written words. Oral skills can be defined as the practical abilities in talking and listening.

Several fundamental assumptions can be made about the nature of oracy which have implications for its development. When considering the functional and communicative role of spoken language, talk may be regarded as purposeful. It is used as a means of doing things and getting things done in collaboration with others.

Many functions are served by talk, involving different skills, and language organisation of great variety and complexity. A wide range of competence is involved in being a successful communicator, embracing knowledge and skills of language form, content and use. For example, spoken language is sensitive to context. Speakers are always influenced by situational factors such as who they are talking to, where the interaction takes place, how they interpret the nature of the task, and translate motivations and intentions of their conversational partners or audience. When I chair the local Magistrates’ Bench I am referred to as “Ma’am”, whereas in the retiring room other justices will call me “Rosie” or if court staff are present “Mrs Sage”. These ‘social’ issues affect the way we use language form and content.

Slasberg Anderson (1992) summarises work in this area and clarifies the meaning
of communicative competence as appropriate use. In its broadest sense communication encompasses the totality of knowledge and skill that is involved in giving and receiving spoken and written messages. Spoken communication involves speaker and listener/s whilst the written form entails a writer and reader/s. The sound and symbol forms can be extended into other message systems such as art, music and drama and in modern society we have evolved many sophisticated modes. Obviously breakdown can occur in any part of the communicative system. The example shows that Mark has problems of language use within the dynamics of the instructional context. This poses the question: How can individual language support sessions help pupils with oral communication problems? Section 3 reports management studies that seek to answer this.

In developing oracy, speaking and listening must be considered as integrated aspects of communication behaviour. It is usual to listen in order to speak next or at some point and to respond with other listeners in mind.

Partly resulting from the recent surge in educational interest and advocacy of the notion that "oracy matters" (National Oracy Project, 1987; National Curriculum, 1989), there are generally accepted guidelines on what constitutes oral skills (DES 1984; DES 1986). According to the composite of objectives, success in oracy is equated not only with the ability to be courteous, accurate and factual (DES 1984 6-7) but "to engage in cooperative discussion in order to clarify, explore a matter, or produce an agreed outcome", as well as "listen with concentration to extensive exposition or discussion noting the salient points (DES 1984 9-10); put a point of view and sustain it in discussion and follow a speaker's line of argument" (DES 1984 6-7).

Although this definition gives us a particular perception of success it does not tell us what children DO in classroom talk. This will be explored below.

1. Oracy for Learning

One current strand in work on oracy places "talk" at the centre of the learning process. There has been a strong movement in schools to replace the traditional 'learning by listening' with a model of 'learning through talk'. In this active approach children are invited to engage with their own learning through collaborative exploration of ideas; to research facts, knowledge and opinions and relate these to their own experience. Talk with others encourages them to analyse, criticise, challenge and speculate rather than simply listen and absorb.

In 1993, there is a backlash against what is seen as 'progressive' methods as the Government seeks to raise learning standards. It wants a return to whole class teaching and traditional methods of instruction. However, unsatisfactory literacy standards are partly dependent on social factors affecting oracy and the development of ideas. These may include 'working mothers' who have little time to spend talking with their children, resulting in them watching television rather than reading and consulting with others. Thus, children gain information more by looking [TV; video] rather than
listening, talking, and reading as we shift to a visually mediated culture. Betty Root (1991), the former director of the Reading Centre at Reading University, states that we are no longer a literate society. Children do not see their parents reading regularly. Her research shows that primary level children, who watch television for more than six hours a day, obtain significantly lower reading scores than those who view between two and five hours.

There has been no official attention to standards of oracy at school entry as a means of evaluating levels of development to support literacy. This is in spite of anecdotal evidence suggesting children now have problems with talking in group contexts as a result of less attention to these skills in early years (Wallach & Miller, 1988).

The importance of talk is well documented. Wells and Chang (1988) in their study of active education argue that the learning potential of talk is centrally linked with children's 'ownership' of the task in which they are engaged. Phillips (1988) suggests that successful small group conversation occurs when children 'appropriate' the topic and become genuinely involved in shaping and creating knowledge for their own ends. Halligan (1988) reminds us that children may 'own' the task in different ways, depending on the relationships that are established and negotiated amongst group members and their individual perceptions of what is required of them.

Also, attention should be given to what might be called 'informal' talk - the language of stories, anecdotes and chat. Rosen (1982) emphasises the centrality of oral narratives of all kinds, as powerful devices for reflecting, shaping and bringing together aspects of experience in order to make sense of it. "Informal" talk can be used productively as a method of developing and sustaining argument by building collaboratively towards generalisations in group discussions.

2. Oracy as Competence

The second strand recurring in contemporary work is the idea of oracy as a further area of communicative competence which schools have an obligation to promote. In the past, teachers have shouldered the main responsibility for teaching children to read and write. They are now held to have a major part to play in teaching them to speak and listen, as oracy has parity with literacy in the new National Curriculum assessments.

This situation is complicated by the fact that children have been expected to acquire naturally adequate levels of speaking and listening skills to cope with verbal demands of school. These include abilities to ask and answer questions, listen and understand a sequence of information or instruction, request help or clarification and participate in developing ideas in group activities. In addition, the work of the Assessment of Performance Unit (APU, 1984) defines a range of communicative functions such as narrating, describing and reporting to a variety of audiences.

New emphasis on oracy has served to raise awareness and clarify its importance. With the advent of functional and interactional theories [communication in context] over the past two decades (...
Searle, 1969; Labov, 1972; Halliday, 1975; Sinclair & Coulthard, 1975; Labov & Fanshel, 1977; ), it has been recognised that children have to learn to use language in all sorts of situations, for different purposes with many people. Interactionists claim a much more central function for others, especially parents, as critical figures in children's progress as communicators. The role of oracy as a medium for learning and assessing knowledge, holding equal validity with reading and writing, highlights a new responsibility for teachers.

Oracy into Literacy

It has long been recognised that reading includes mapping graphic symbols on to existing speaking and thinking processes and that understanding words demands awareness of sound, sentence and meaning patterns (Bryant & Bradley, 1985). The recognition of oracy as central to all learning has moved us beyond viewing spoken-to-written language connections as simply auditory-to-visual transfers.

We are now beginning to understand the implications of oral and literate style differences for assessment and intervention. These are argued in cumulative terms by Marilyn Jager Adams in “Beginning to Read” (1990). They are also recognised in the National Curriculum. Oracy is put first in the English assessment tasks. However, some confusion over ‘standard English’ appears in documentation relating to proposed changes (National Curriculum English: The Case for revising the order, 1992). Notions of correct grammar are intermingled with those of language register.

Westby (1984) discusses the issue in detail, pointing out that oral styles are participant and situation orientated [contextualised]. Talk is accompanied by gestures and facial expressions with sequences joined by conjunctions such as ‘and’ ‘or’ ‘then’. It tends to be more redundant than written text. Writing is devoid of non-verbal cues, and meaning made clear in more careful, explicit and structurally complex language, such as embeddedness and subordination (Collins and Michael, 1980). Examples of oral and written styles are given below.

**Oral Style:** Can you see that tree over there? Yes, well, there was this man sitting there and he decided to, you know, pick some pears. Anyway, he had been sitting for some time, and he got up and wandered over to the tree. He stared at it and after checking no-one was around - his hand shot out, you know, and before you could say “Jack Robinson” the pears were in his pocket.

**Written Style:** There was a man who decided to pick some pears after he had been sitting down for a while.

The stages of abstractness children progress through from spoken to written communication have been detailed by Westby (1984). At the concrete level communication is about the immediate
Meaning is carried through intonation and gesture. Responses are equal in turn-taking and length. As children become more literate in their communication they use less common words which are more explicit in their meaning. Syntax becomes precise and complex. Events are able to be discussed outside the immediate context and an abstract topic maintained over many communicative turns. Much of the meaning comes from inference, and topic coherence is based on markers (moreover / on the other hand). Therefore, as the child shifts from spoken to written language he/she is able to engage in the manipulation of language content, form and use necessary for dealing with unfamiliar or imaginative ideas.

Westby (1984) has focused on the narrative form of discourse as falling midway along the oral-literate continuum. It arises out of the oral tradition yet has an explaining function which is used to ease the transition from oral to literate language mode.

There are two major conceptualisations of this. One stems from Bruner's model (1975) of narrative and paradigmatic thinking. Narrative thought is a reflection of a primary mode of thinking characterising stories and drama and concerned with metaphor and credibility (Sutton-Smith, 1986). This is contrasted with paradigmatic thinking, typified by maths and logic, involving experiments and validity. Van Dongen & Westby (1986) carry this view further, arguing that narrative thinking requires an understanding of social cognition and arises from interactions which develop more specialised kinds of discourse. They suggest that cognitive development is governed more by narrative scripts than abstract processes. Narrative knowledge is viewed as an unfolding process observed in children's play, show and tell, story telling and drama. It is encouraged through dialogue, as collaborative talk involves topic development and problem solving which underpin narrative structure.

The second major view of narrative discourse, is that it exists in a variety of forms as in fiction/non-fiction - poetry, drama, fable, myth, jokes and sermons (Heath, 1986). There are four universal types: recounts [relations of past experience]; evencasts [explanations of on-going activity]; accounts [spontaneous sharing of experience]; and stories [shaped narrative scripts].

Narratives have been studied according to common characteristics. Stein & Glenn (1980) observe an hierarchical structure with setting, beginning action, goal, actions towards goal, result and ending. Kemper & Edwards (1986) describe an event chain whereby story incidents are organised into actions and physical/mental states linked through specific operations and processes. These characteristics are also present in dialogue, so that opportunities to participate actively in conversation are essential requisites for the development of narrative processes.

Comment

Fundamental to developmental or structural views about children's narrative knowledge is the idea that its form and content are facilitated through opportunities to use it for a variety of different purposes. This brings us back full circle to issues involved in the management of Mark's
The recent revolution regarding 'oracy matters' has helped us move away from just considering teaching of form and content areas of language outside natural communicative contexts. Study of the oral-literate transition emphasises adjustments that children have to make in content and form when telling and writing stories. This depends on awareness of language and thinking developed through talk.

Analyses of speaking and listening behaviour highlight the centrality of concerns such as problem-solving, ownership, challenge and mutual understanding. Intrinsic to them are the attributes of language use such as explicitness, connectivity, justification and relevance which Chafe (1985) outlines as characteristics of both spoken and written discourse. These are the facets of thinking processes that are considered to develop as a consequence of becoming literate (Cole and Bruner, 1971; Goody, 1977).

As a result of recent comparisons of oracy-literacy a different picture emerges. People engaged in conversation about a topic are using literate thinking skills. Chang & Wells (1988) state that "thinking is literate when it exploits the symbolic potential of language to enable the thought processes themselves to become the object of thought". This can occur in speech or writing.

The centrality of talk in learning becomes obvious when considering the need to make one's intentions and understanding of the topic intelligible to others and oneself. The tasks in relation to which conversation occurs make demands for planning and execution which also become the subject matter of talk and raise the level of conscious attention allowing critical reflectiveness, selection and evaluation. These happen more readily when activities are carried out with children consulting together as they are encouraged to turn thinking back on itself, to achieve intersubjectivity of understanding about their intentions, essential to productive efforts. The commitment to collaborate through talk obliges participants to recognise the relevance of each other's expertise and, where necessary, realign their own knowledge.

The growing awareness of the part played by oracy in learning helps us to broaden our views regarding children who experience communication difficulties. They do not only need help and support in learning to talk but also in talking to learn. Others have to be vigilant, ensuring that such children have equal opportunity to participate taking control of conversation and learning the conventions involved in topic development. This encourages readjustment of individual language models to consider the interactive context and the way children use communication in real situations. Our quest for the perfect test and programme is outgrown as we focus on core principles to help children become:

- active participants in learning,
- aware of strengths and weaknesses and how to manage these effectively.
Summary

This section has reviewed oracy-literacy issues with the purpose of understanding why children with problems learning to talk before entering school continue experiencing difficulties talking to learn in the classroom. Westby (1984) and others suggest that narrative abilities are the base for literacy confirming the importance of oral development in learning. This has consequences for the child with language and communication difficulties as the three reasons below suggest:

1. Communication disorders persist through school years into adulthood and thus need continuous, consistent and cooperative management (Snyder, 1982; Maxwell and Wallach, 1984; Bashir, 1986).

2. Difficulties become more covert as children get older reminding us that "the problems of the language disordered preschooler may go underground, even disappear for a while, only to resurface in a different form, perhaps as a problem with classroom discourse" (Bashir, 1986).

3. Language disordered children are often relabelled learning / reading disabled, dyslexic or a variety of other terms as they move through school (Wallach and Liebergott, 1984). Bashir (1983) asks: "Are we speaking about a group of children, who by virtue of time and learning context, are called different names, but in reality evidence a continuum of deficits in language learning?"

Now that speaking, listening, reading and writing are interrelated components in the National Curriculum we have a better chance of closing the knowledge gap between oracy and literacy. This research aims to contribute to this by clarifying issues for children who have difficulty in making the shift between spoken and written communication. The next section will outline theories and practice of learning management as a prelude to describing the rationale for the present inquiry.
A REVIEW OF MANAGEMENT ISSUES IN RELATION TO COMMUNICATION DIFFICULTY

Introduction

This section looks at issues regarding learning with particular reference to communication difficulty. The theoretical basis of language intervention is considered in the context of its acquisition. Existing management procedures are discussed and evaluated.

General Issues: Children with Learning Difficulty

In a management review of schools for children with severe learning difficulty, Mittler (1988) suggests that out of every 100 pupils, aged 5-18 years, 25 do not use single words and 50 are unintelligible to teachers. These figures are based on work conducted by Leeming et al (1979) and Mittler & Preddy (1981) on several thousand children.

However, there are no national surveys of the prevalence of language and communication difficulties. The Quirk Report on Speech Therapy Services (1972) quotes a series of estimates ranging from 1.7 - 37.4 %, conducted on a variety of bases and covering different populations. Enderby & Phillipp (1986, 1989) produce studies from the literature to suggest a higher incidence in Britain than suggested by Quirk (2.5 as against 0.3 million).

These statistics cover sound and syntax difficulties but not problems in the use of language for learning and socialising. Some estimate is possible from a review of studies in the learning difficulty field. Ingalls (1978) in his work on retardation, states that deficit in language “is the single most important characteristic that distinguishes the retarded from the non-retarded”. The Warnock Report (1978) estimates 1 in 5 children requiring learning support at some time during their school careers. Newton (1990) suggests that 40% of children have some degree of difficulty in using language for learning and socialising.

Thus, it would appear we are talking about a significant number of the population if criteria are extended to consider a wide range of communication abilities and a variety of language uses. This view is reinforced by comments from the Institute of Directors (1989) suggesting that 45% of school leavers have insufficient spoken and written communication skills to cope with workplace demands. Mittler (1988) suggests the problems of impaired communication are growing with the move from segregated to integrated contexts following the Warnock Report. In practice, this often means less support available to special needs children in mainstream settings. Also, the National Curriculum’s emphasis on oracy as well as literacy, as a benchmark of academic success, brings new responsibilities for educational management but no increase in resourcing to meet the challenges.
The estimates of communication difficulty vary because they are conducted on a wide variety of populations and sample different abilities using a range of norm/criterion rated assessments. Sounds and syntax are referred to as linguistic skills and usually tested in formal ways giving norm referenced data. The use of language interactively, in a range of contexts, is known as communication and may be assessed in group formats known as discourse analysis.

None of the incidence surveys include the latter type of data. However, the Institute of Directors’ estimate of 45% of school leavers, with insufficient communication skills for workplace needs, refers to interactive use of language in a range of contexts. It includes the strategies needed for this participation in line with the National Vocational Qualification [NVQ] audit. If language and communication are both considered, the incidence of difficulty is probably higher than generally recognised.

**Language Intervention**

In language intervention work there has been a dominance of the theories of the 1960s and 1970s based on Skinner’s Behaviourist approaches (1957) and Chomsky’s Grammarian ideas (1965). These marked a shift from viewing language acquisition as habit to conceiving it in terms of a set of abstract rules that are internalised and unconscious. An important distinction was made between external behaviour, which is infinite in variety [performance] and the internal finite set of rules residing in our unconscious which we know but cannot explicitly describe [competence]. Building on Chomsky’s distinction, Corder (1967) proposed that only some of what a learner actually produces can be examined for evidence of possession. Other aspects of presentation may be classified as random mistakes that are not rule governed and may not lead to generalisations about language acquisition.

To capture this distinction, Corder proposed that we examine systematic errors produced by language learners and not random mistakes. This gave rise to the new field of error analysis including the contrastive evaluation of structuralist grammarians and insights from transformational-generative theory. This emphasis on structure has led to concentration on form and content of language using programmed methods.

However, in the 1970s, child language research broadened its scope to include:

2. Early vocalisations and gestures (Bates, Camaioni & Volterra, 1975; Bruner, 1975).
3. Different approaches to categorisation of first words and phrases (Bloom & Lahey, 1978; Benedict, 1979).
4. Differences among individuals in their routes to language learning (Lieven, 1978).
5. Language socialisation processes (Schieffelin & Ochs, 1986; Cazden, 1988; Ochs, 1988)

Therefore, this work can be logically unified into two theoretical procedures embracing 'within' and 'without' the child factors locating personal and environmental features.

A. The psycholinguistic approach - a semantic-cognitive theory.
B. The sociolinguistic approach - a socio-cultural theory.

Principles of the Major Theoretical Approaches

A. The Psycholinguistic Approach

This theory has three major principles:

1. The first words or protowords children produce express things to do with meaning and content. Bloom & Lahey (1978) propose the following:

   * EXISTENCE - commenting on the presence of something (e.g. what's that?; this shoe)
   * NON-EXISTENCE - commenting on absence of something (e.g. sock gone? - with rising)
   * DISAPPEARANCE - commenting on/ requesting disappearance of something (e.g. all gone)
   * RECURRENCE - commenting on/ requesting reappearance of something (e.g. again)

2. Expressions of meaning and content encode a child's existing knowledge of the world (Greenfield & Smith, 1976). Palermo (1982) points out that meanings do not exist out in the world, but are imposed on events and object relations by the child.

3. Language development depends, in part, on cognitive development - a child's knowledge about things and their relationships (Bruner, 1975). Although there is controversy about the connection between language and thought, it soon becomes a two-way relationship in spoken and written communication [see earlier discussion on narrative thinking].

Extensive neuropsychological and electrophysiological techniques have developed to establish the association between language and the brain. Issues of interest are hemispheric
differences (Broca's & Wernicke's aphasia - Kolb & Whishaw, 1980); language specific effects (phonetic versus ideographic - Carroll, 1980; and sensitive period hypothesis - Walsh & Diller, 1981). However, these studies of language representation, processing and learning are as yet incomplete and limited for present practical implications.

Nevertheless, recent approaches would appear to suggest certain intervention strategies, such as the child's experience of things and events, gained through interaction with people, objects and play. Although the theory may explain how language develops it does not account for why it happens. For clarification it is necessary to consider the second procedure.

B. The Sociolinguistic Approach [social psychological & social linguistic]

This theory emphasises the child in a social setting. It has three fundamental principles:

1. Language is acquired only if the child has social or material reasons to communicate. Therefore, the purposes of language are deemed important (Halliday, 1975).

2. Language structure is initially acquired through understanding incoming linguistic stimuli (Moore & Meltzoff, 1978). This highlights the importance of interactions between the language learner and more mature users. Psychologists, such as Vygotsky (1978), Feuerstein (1992) and Lipman (1992) have emphasised the role of adult as mediator and facilitator in learning how to communicate.

3. Language depends on a set of social and cognitive skills which the learner must have acquired to benefit from facilitating opportunities (McLean & Snyder-McLean, 1978).

These stem from five traditions. The first depended on Labov's (1970) paradigm of social patterning to interlanguage variation. Out of this evolved Bickerton's (1975) dynamic theory which aimed to explain style shifting in learners by means of the gradual diffusion model - a product of two phases, acquisition and replacement. The third proposal describes communication competence (Hymes, 1972) encompassing speech acts, tone & emotion, conversational features / management and topic selection. The last two approaches include Lambert's (1979) attitude and motivation model and Gile's (1980) speech accommodation theory. These paradigms emphasize the systematic nature of interlanguage and that high attention to speech may lead to low accuracy in natural communication. Motivation and attitude are potent forces in any exchanges between people and one accommodates style of speaking to audience needs. This has implication for the present study as traditional management of language difficulty has demonstrated strong focus on linguistic form with less interest in social aspects of communication.

Theories provide two clues which may be used in devising intervention strategies. The first is the importance of the child as an active participant in learning language and communication which has
prompted the use of Piaget’s (1952) account of development in the sensori-motor period. Perceptual and thinking skills are necessary, but not sufficient, for the development of language and communication. The second issue is the importance of giving the language learner real opportunities to communicate in a variety of contexts serving many different purposes. This allows the social experience necessary to develop appropriate form and content of language and is the message of the Kingman & Cox Reports (1988) regarding the teaching of spoken and written English. It supports ‘remedial teachers’ and ‘therapists’ working in classrooms instead of withdrawing children for specific help.

Comment

These two theories are not mutually exclusive. They reflect a shift from structuralism [emphasizing structure/form/composition] to functionalism [stressing function/use/adaptation]. Valsiner (1988) has explained this in terms of co-constructualist theory, the search for relationships between child learning processes and interactional events. There is some overlap in approaches particularly with ideas of social and cognitive experiences as necessary prerequisites to language development. There seems no reason why they can not be used in complementary ways. Although McLean & Synder-McLean (1978) recognise risks in applying research findings from normal developing children to those with language difficulty [social experiences are not comparable] - there is no strong evidence to the contrary.

Schieffelin & Ochs (1986) and Ochs (1988) argue for a socialisation framework, drawing on Leontiev’s theory of Activity (Cazden, 1988). It is through participation in structured social activities that language learners acquire linguistic and sociocultural knowledge. Wertsch (1985) sees this as an active process in which knowledge is created and recreated while participating with others. It is in the social context that children learn the appropriate way to use language and understand how to vary discourse to suit a particular purpose.

In order to evaluate the efficacy of these ideas about teaching and learning it is useful to consider the characteristics of the population investigated in the present research.

The Study Population

The children described in this study are those pupils who, although physical and mental development may be relatively normal in comparison with their peers, and vision and hearing apparently adequate, do not acquire sufficient language and communication skills for social and learning needs.

The significance of this group increases as the education of pupils with learning difficulties evolves. Methods of education, which have been successful with other pupils, are dependent on the ability to follow word instruction and model such verbal input in the acquisition of speech, or respond to spoken language as part of an activity-based curriculum. Children with communication
difficulties have problems reacting to these methods. Behaviour modification techniques have had greater success, almost certainly because they rely less on word comprehension (Klaman, 1984). In order to appreciate such communicative problems it is useful to review briefly the historical development of work on language acquisition.

A Review of Work on Language Acquisition

Early studies of normal language development concentrated on vocabulary acquisition and are summarised by McKeown & Curtis (1987). This approach was replaced by Chomsky’s (1957, 1965) work focusing on achievement of syntactic rules, which were inbuilt and unfolded as the child interacted with adult language. Chomsky argued that syntax is the key to language learning. However, Slobin et al (1971) have disputed this, stating that the acquisition of semantics and meanings, through cognitive development, precedes syntax. Bransford & Franks (1971) and later Ackerman’s (1986) research on inference and cohesion show how background knowledge, experience and understanding of real world relations are important to being able to ‘read between the lines’. For example, “Rosie was at Pat’s house. They sat on the lawn”. [inference - they were outside and were doing something such as having a picnic; cohesion - ‘they’ refers to Rosie and Pat, thus connecting both sentences].

Views on language form have relegated the role of social interaction and teaching to a secondary position in communication development. In the mid 1970s, Bruner and others developed an alternative approach, drawing the distinction between language as a system through which reality is encoded and communication as the ability to affect social environment through words, gestures, facial expressions and voice (verbal and non-verbal communication).

This approach defines differences between language and communication. The normal child is able to communicate through non-verbal means (pushing/pulling/eye-pointing/looking/cries/shouts etc.) before language, in the sense of inner representation of reality, emerges. Therefore, speech is not a prerequisite to communication although its prime mode in normal social exchange.

However, Mehrabian (1969) reminds us that only 7% of communicative meaning comes through the word, whereas 38% is available from the tone of voice and 55% by means of gesture, so highlighting the importance of non-verbal channels. Figures are gained from experimental work with American college students who were asked to assess a message through different modes. Although results pertain to a limited population and data needs to be considered with caution, our everyday experience verifies general findings. For example, it is more difficult to establish meaning clearly over the telephone when deprived of gesture and facial expression to support the message. In addition, we may hear a foreigner talking and although unable to give the words meaning are capable of getting the gist of the message through gestures and tone of voice accompanying utterances.

Bruner (1983) also argues that the motive for language is that it allows the child to interact
socially, to control the acquisition of goods, services and attention. Syntax is acquired because it helps to express increasingly complex modes of interaction. Seliger (1983) has put forward the view that hypothesis testing is the basic learning strategy that allows us to communicate appropriately. Rubin (1981) and Beebe (1983) attribute differences in language learning abilities in normal subjects to affective characteristics - strong drive to communicate, willingness to take risks and appear foolish. It may be that high risk takers will chance more encounters with language and develop other areas of ability not necessarily related to linguistic accuracy but to skills of social interaction and communication. Schumann (1975) considers factors in the affective domain to be so important that he sees them as the initiator and controller of the process. His reviews of research indicate that attitude, motivation and the personality trait of empathy are primary factors. Krashen's (1982) attempts to embed affective variables into a comprehensive model of language acquisition called monitor theory, deals with paradoxes that exist in a formal/class context or natural circumstances. He postulates the distinction between learning and acquisition. What is learned formally is different from what is acquired naturally. According to the input hypothesis we move from what is known into new stages of development by being exposed to input that goes a little beyond existing knowledge. Beebe (1988) has questioned the idea of two forms of knowledge being different versions of the same thing. For example, can knowledge of a rule [past tense formation] be equivalent to knowing how to use it. It is possible that learners know correct forms but are not concerned with using them because they have decided syntax or other conventions are secondary to fluent communication. The degree of error tolerance may be unconsciously negotiated between learner and interlocutor. Although these ideas have been applied to teaching of second languages they stem from general learning constructs.

The theories reviewed, give parents, teachers and other professionals a very different role in education. Instead of instructing, the 'teacher' needs to:

- identify and foster needs and interests
- facilitate social responsiveness in a variety of interactive situations
- understand the purposes of the communicative situation
- ensure the pupil wants to communicate with others in order to meet particular goals.

This would take place within a context in which the pupil is motivated to express evolving cognitive structures and the mapping of syntactic skills on to these. Therefore, the psycholinguistic approach entwines with social-cultural theory as outlined at the beginning of the section. Bruner (1974-5, 1983) argues for two types of interaction:

- those involving the child controlling adults to satisfy needs and deliver services
- those of a social nature in which the child controls adult attention for its own sake

Atkinson (1982) subdivides these broad groups. The child learns how to request but also say 'no'; to protect and hold attention through various strategies. For example, he/she may do this...
by complying (as in naming tasks); calling attention to intriguing things or, at a more advanced level, reporting interesting events.

This type of analysis has important features, as different communicative acts are realised through varying levels of cognitive and syntactic complexity. The request for a biscuit may be realised by pointing and vocalising. The same act may be encoded ‘biscuit’; ‘give me a biscuit now’; ‘stop what you’re doing and give me a biscuit immediately’. Similarly, increasing cognitive sophistication may be reflected, expressed as: ‘give me the round chocolate biscuit with the hole in it which is next to the oval-shaped shortbread’.

The central point is that analyses of communicative acts cut across syntactic and semantic skills. The implication is that the child needs wide experience in order to learn these abilities. However, a review of the practice of teaching language and communication skills suggests they do not reflect theoretical developments in significant ways.

A Review of the Management of Language & Communication Skills

This section will characterise teaching/therapy intervention in a broad way. Inevitably this will do injustice to the efforts of some people/places but what is intended is to give a fair summary of the general situation.

In the main, teaching/therapy appears to stress acquisition of comprehension rather than expressive skills. At a basic level, strategies derived from behaviour modification involve the pupil being taught to follow oral or signed instructions: ‘come here’, ‘hands down’ etc. with a spoken/material reward. He/she may be taught simple discriminations: ‘show me the cup’, ‘give me the teddy’ - again with verbal/material reward.

At a more complex level, this type of comprehension tutoring may be geared to cognitive training or symbolic play. For example, the Derbyshire Language Scheme (Knowles & Masidlover, 1982) relies heavily on the teaching of comprehension skills within a curriculum which reflects semantic and syntactic concepts (Kiernan, Reid & Goldbart, 1987). These tasks reflect two broad ideas:

- simple instruction following is the way behavioural control is established
- vocabulary and comprehension precede expression in language acquisition

However, listener and speaker skills are essentially independent and involve different elements that demand alternative forms of teaching. The coaching of expressive skills takes a variety of forms. The non/minimally verbal pupil could be taught to imitate sounds or actions. The teacher/therapist may say: “Look, Luke, do this” (raise hands). Luke matches the model and is rewarded with: “good boy”. The overall objective is to develop generalised imitative skills which can be used in a range of situations. It is not clear how often this is realised.

‘Imitation’ is often employed in building vocabulary and sometimes accompanied by ‘enlargement’ of the word or concept. The pupil may be shown pictures and asked to name them: “Look,
Kate, what's this? "Brush" - "Yes, it's a hair brush". The assumptions are that it is developmentally relevant and that once the pupil has the vocabulary he/she will use it appropriately.

These views may be questioned. Developmental studies [Coupe & Goldbart, 1988] indicate that although naming is an early function, the socially relevant request of goods and services may be more critical in language acquisition. Also the possession of a word does not necessarily mean it will be used. Naming, in response to a teacher’s/therapist’s question, is a specific type of communicative act. If an important aspect of learning to communicate is the acquisition of a range of different acts (requesting, negating etc.) the teaching of one type will not automatically lead to the learning of others. Indeed, a typical response from teachers is that a child has not transferred learned skills in therapy to spontaneous class use (Sage, 1989) reinforcing the notion that support should be available in real contexts.

Other techniques are more clearly derived from theoretical propositions, such as the teaching of syntax. A pupil may be shown a variety of pictures which are examples of particular syntactic structures: ‘Tom has a car’, ‘Tom has two cars’ or ‘Dad’s old mower’, ‘Jane’s broken bike’. At the teaching level these tasks tend to be restricted to the act of describing, in response to adult questions, and again the syntactic structures taught may not generalise to the normal situation at home or school.

Comment

In general, the strategies described can be characterised in two ways:

First, they tend to teach a restricted set of communicative acts - naming/describing. Pupils are expected to generalise content to other acts and these may not be taught. Maybe if they were facilitated to give voice to ‘feelings’ rather than ‘facts’ in a drama teaching mode this might help generalisation by tapping in directly to the expressive ‘centre’. 

Secondly, the strategies are teacher/therapist directed. It is often hard to see where ‘communication’ can come in. The adult knows the answer to the question asked and the pupil is generally aware of this. In this context, these strategies may simply teach that saying/signing words is a trick that teachers/therapists require. The power of words/signs to influence what other people do may escape the pupil.

Some strategies break through this adult-directed format. The role reversal manoeuvre used in the Derbyshire Language Scheme involves a shift in control of situations from teacher to pupil direction once the child has learnt the relevant structures. However, this ‘transfer of power’ to do what they want is easier with more able students and many are commonly viewed as only responsive to directive techniques.

Such methods concern themselves with the ‘what’ rather than the ‘how’ of teaching communication skills. Coupe & Goldbart (1988) review currently available approaches to language intervention. The majority of commercially available kits and programmes, as well as language studies
published in the last twenty years, are based on the grammatical theories of Chomsky, the behaviourist approaches of Skinner or a combination of the two ideas. Coupe & Goldbart claim that such methods have not proved very successful. The next section examines this contention.

An Evaluation of Language Intervention

In the 1960s and 1970s a large number of papers were published describing a range of communication difficulties. These covered children with hearing loss (Bennett, 1973); language delay (Leonard, 1974; Hedge & Gierut, 1979); language disorder (Gray & Fygetakis, 1968; Zvirman & Souderman, 1979); autism (Carr, Schreibman & Lovaas, 1975; Hargrave & Swisher, 1975) and severe mental handicap (Bricker & Bricker, 1974; Halle, Marshals & Spradlin, 1979). Despite great differences in the behaviourist and grammatical approaches to language acquisition, the majority of intervention studies based on these have features in common:

1. The focus of interest is what happens in the immediate teaching context. This can be seen by looking at the extent to which studies look for generalisation to spontaneous use.

<table>
<thead>
<tr>
<th>Population</th>
<th>No: of Studies</th>
<th>% Monitored</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autism</td>
<td>39</td>
<td>59.8</td>
</tr>
<tr>
<td>Language Disorder</td>
<td>12</td>
<td>58.3</td>
</tr>
<tr>
<td>Language Delay</td>
<td>12</td>
<td>58.3</td>
</tr>
<tr>
<td>Hearing Loss</td>
<td>12</td>
<td>58.3</td>
</tr>
<tr>
<td>Mental Handicap</td>
<td>55</td>
<td>36.4</td>
</tr>
</tbody>
</table>

40-65% of studies were not evaluated for general improvement but only for increased test performance.

2. Teaching methods are drawn mainly from behaviour modification - even in studies influenced by the grammatical perspective. Included are: shaping, modelling, imitation, prompting, fading, forward and backward chaining, training and the use of reinforcers. Whilst such techniques are applicable to special education the way they have been used in language teaching tends to limit opportunities for conversational interchange and true communication (Porter, 1986). For example, the teacher/therapist presents a verbal/visual stimulus (picture or object) and the learner is required to produce a predetermined response: "What's this?" "Drink", "Good boy". Obviously the options are limited for conversation. Indeed, what would be the appropriate 'next turn'?
3. There is excessive concern with teaching labels, again as a result of the approach rather than a deliberate choice. Indeed, behavioural techniques concentrate on observable conduct and the teaching method will produce the format for this to happen. Mittler & Berry (1977) suggest this negatively affects language learning by focusing attention on a limited aspect of conversation.

4. Target behaviours are determined by the perspective of language acquisition adopted by the researcher. In the Skinnerian approach this is usually task-analysing a word. For example, ‘cat’ is taught by focusing on the sounds c, a & t and chaining them together. Therefore, it is difficult for the learner to connect this string of sounds with the actual animal.

Since English is notoriously irregular, attempts to highlight grammatical categories create major difficulties. For example: This is the cleaner. Today he cleans. Yesterday he cleaned. This is the flier. Today he flies. Yesterday he flew! (flew)

Guess, Keogh & Sailor (1976) and Rutter (1980) have pointed out that although operant treatments have improved speech production on specific learned tasks - there has been no successful route to increasing spontaneous language and communication.

Responding to these views there have been attempts in the 1980s to approach language intervention in a more ecologically valid way (e.g: Locke, 1982; Martin, McConkey & Martin, 1984; Campbell & Stremel-Campbell, 1986). These studies have been concerned with making more use of the language learner's social environment and drawing on what is known about communicative interactions and fall into three categories:

- studies of parents and children (Rondal, 1976)
- studies of teachers and students in class (Beveridge & Hurrell, 1980; Goldbart, 1985)
- studies of staff and mentally handicapped people in residential settings (Pratt, Blumstead, 1976)

Comment

In general, children with communication difficulties appear to imitate less frequently and successfully than normal peers. There is high chance of imitations being ignored. The only real facilitatory response is the expanding of the child’s content. For example: "Look, Kate, what’s this?". "Brush" - “Yes, it’s a hair brush" [as detailed in a previous section].

All studies suggest that if we want to promote the kind of interactions which facilitate language development in normal children we need to think about ways of restructuring the interactions between those with impaired communication and their teachers and carers. This necessitates two planning areas:

- firstly, target behaviours and contexts for teaching must reflect the real purposes for which language is used
- secondly, more opportunities for children to experience a range of communicative acts need to be
## ASSESSMENTS ON 40 CHILDREN WITH LANGUAGE DIFFICULTIES.

<table>
<thead>
<tr>
<th>TESTS</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTELLECTUAL</strong></td>
<td></td>
</tr>
<tr>
<td>Wechsler Scales</td>
<td>11%</td>
</tr>
<tr>
<td>English Picture Vocabulary Test (EPVT)</td>
<td>7%</td>
</tr>
<tr>
<td><strong>PHONOLOGICAL</strong></td>
<td></td>
</tr>
<tr>
<td>Edinburgh Articulation Test (EAT)</td>
<td>47%</td>
</tr>
<tr>
<td>Other (personal test)</td>
<td>5%</td>
</tr>
<tr>
<td><strong>GRAMMATICAL</strong></td>
<td></td>
</tr>
<tr>
<td>Carrow Comprehension Test</td>
<td>3%</td>
</tr>
<tr>
<td>Crystal Language, Assessment, Remediation &amp; Screening Procedure</td>
<td>1%</td>
</tr>
<tr>
<td><strong>PSYCHOLINGUISTIC</strong></td>
<td></td>
</tr>
<tr>
<td>Reynell Comprehension/Expression Scales</td>
<td>49%</td>
</tr>
<tr>
<td>Illinois Test of Psycholinguistic Ability (ITPA)</td>
<td>2%</td>
</tr>
<tr>
<td>Test</td>
<td>Years</td>
</tr>
<tr>
<td>------</td>
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</tr>
<tr>
<td>1</td>
<td>6</td>
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<tr>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

Notes:
- Verbal: Verbal comprehension
- Pair Formation: Pair formation task
- Total: Total score
Implications of Research for this Study

The review of research and management approaches, used with children experiencing communication difficulties, suggests a strong traditional base in grammarian and behaviourist theory. This has led to adult directed, target based methods concentrating on language form and content, assuming appropriate use will occur spontaneously once these areas have improved. Studies imply this does not happen generally, as children do not have the chance to learn normal communication patterns in restricted, structured teaching formats where they have little control over learning.

Recent socio-linguistic ideas have focused on the nature and quality of daily interaction between adults and children. These view children as needing opportunities to use language in a variety of different contexts. From these social experiences appropriate form and content is developed for a wide range of communicative functions. A contextualised approach is implied, arising from the child's real environment, rather than the decontextualised procedures of various kits and programmes currently used in schools and clinics. However, school learning has been 'child-centred' with a focus on intrapsychological processes. Research, focusing on social processes, concentrates attention on interpsychological resources for children.

An evaluation of management of the 40 children forming the main study suggests that a traditional approach has been followed. Table 2 summarises tests that were used on this population, locating the percentages of children receiving each type of measurement. Some of these assessments are selected for grid analysis (Table 3). These investigations:

- ASSUME different theories
- OBTAIN different information
- GIVE different results
- MEASURE different skills
- USE different tasks, materials & contexts

Confusion, bias and difficulty in data interpretation arise. Tests adhere to a grammarian and behaviourist base resulting in management which targets linguistic deficits. This clarifies the general situation, although researchers (eg: Locke, 1982) have considered the context in which a linguistic framework works as the basis for facilitating improvements in pupil performance.

Therefore, the direction of this research is indicated. The aim is to develop a model of theory and practice that integrates cognitive, linguistic, social and physical dimensions of language behaviour. Previously, there has been a theoretical distinction between acquisition and learning. This binary opposition has led to inappropriate contrasts in teaching. There is a need for research that 'unpacks' the dynamic system that takes place in learning and this research report will describe activities that have this as an objective. The next section presents the background for the research rationale based on this review of current literature.
INTRODUCING A MODEL FOR MANAGEMENT

Introduction

This chapter extends the review of communication management providing the background for the integrated approach outlined as the model for this study. Previous sections have set the context and historical perspective. It has been suggested that supervision of children with communication difficulties has generally followed an individual, conventional approach based on measuring and remediating deficits within the child.

Teachers/therapists have to work in an organisational structure with rules and procedures so that formal support is often seen as the only practical possibility. Unfortunately, this leads to focus on the child, his/her failings, shortcomings and deficiencies. Management is aimed at improving 'weak' skills or using stronger abilities to overcome them. Researchers, such as Coles (1978), see this as leading to a position where biological basis gives rise to educational problems, so shifting responsibility for failure to learn from clinics, schools, communities and other institutions.

Therefore, we are focused away from the general educational process, the need to change institutions, rectify social conditions affecting the child, towards the remedy of what is seen as a medical/educational problem. It is a classic instance of what Ryan (1972) has called 'blaming the victim'. In other words, the explanation is a social problem that attributes its cause to the weaknesses of the individual.

However, as previous sections have indicated, recent sources have moved away from within the child factors (Leudar & Antaki, 1988; Leudar & Browning, 1988; Westwood, 1988). Generally management has continued to be individual (measuring & remediating deficits) rather than interactive (locating needs in context). Individual styles of management use programmed approaches to teach specific target skills. This may produce an improvement in relation to testing but does not promote the functional use of language. However, interactive management styles involve creating opportunities for talk and aim to increase the child's functional language use by providing a reason for communicating.

This position gives rise to two possible hypotheses:
1. Difficulties within the child preventing normal learning.
2. Difficulties within the context preventing normal learning.

Difficulties within the Child

The first standpoint has considerable support. Weiss, Weisz & Bromfield (1986) report the findings of research from 1960-83 comparing retarded and non-retarded children on information processing. Performance of the retarded was significantly deficient in areas of word, picture and object
discrimination; serial and non-serial memory; association and integration tasks within and across modality. This questions whether deficient structures or processes define retardation. Those who adhere to the structural position attempt to find innate features that characterise retarded children’s cognitive systems and claim these are relatively intractable.

In contrast, those who support a process position believe that mental skills are acquired, easily modified, and interact with higher and lower order components. An example of this was seen in the work of Mark & Hardy (1959) suggesting a disturbance of the orienting reflex [OR] which inhibited the establishment of meaning and could be remedied using educative techniques. Therefore, structural opinion is consistent with the difference position whilst the process view accords with the developmental belief.

Beimont & Butterfield (1971), Brown (1974), Taylor & Turnure (1979), Borkowski & Turner (1986) have all focused on the role that strategies play in retarded people’s learning difficulties. They have found that such persons often do not use rehearsal to increase recall.

Deficient procedures have also been found in pair-associate learning (Taylor, Spitz & Borys, 1977). Many investigators report success in training strategies to enhance performance on tasks. Butterfield, Wambold & Belmont (1973) improved the performance of retarded individuals to the level of untrained college students following extensive teaching of rehearsal and retrieval. Others note this difficulty (Butterfield & Belmont, 1977; Casby & Ruder, 1983; Rice & Kemper, 1984; Borkowski, Reid & Kurtz, 1984 and Borkowski & Turner, 1986).

Difficulties within the Context

With regard to problems in the child’s context, Wallach & Miller (1988) summarise investigations in the following areas:

- mismatches between teacher/therapist and student learning styles
- mismatches between teacher talk and student language level
- mismatches between curriculum and student
- mismatches between resources and student need

Their review stresses the importance of addressing a student’s needs in real situations and adjusting the context to facilitate learning. Reiterating the notion of relevance versus validity, Blank (1985) says that just because a behaviour exists does not mean we should focus assessment and intervention on it. She reminds us that colour-naming difficulties are pervasive in children with spoken and written language problems but not the cause of them. Consequently, it would be erroneous to conclude that teaching colour-naming would help children speak or read better. Understanding how to arrange the context to address a child’s spoken or written needs has greater relevance and economy.
Comment

From the foregoing discussion it would appear that it is necessary to give credence to both within and without the child factors when planning management. This suggests a model of communication that fuses information-processing principles with descriptions of the social and non-social uses of language. An integrated model contains significantly more refined analyses of the situation surrounding children and adolescents with communication difficulties.

Since this research stems from academic success and failure, the context of greatest concern is that of school where formal language is very different from the informal styles operating at home, so creating a possible mismatch.

Traditional models of language and learning that encourage the splintering of skills, children and professionals, do not consider the most critical factors in development, by failing to address the contexts in which students must survive. Models of language and learning represent abstract and incomplete descriptions of complex behaviours, suggesting that the greatest failure lies not within the theories themselves, but within the professionals who interpret them literally. The next section briefly reviews existing definitions and models of communication before describing the framework used for the research study.

Communicative Competence

The term competence was first applied technically in linguistics by Chomsky (1965). He used it to mean the unconscious knowledge that speakers have of the grammatical features of language. Hymes (1972) and Campbell & Wales (1970) challenged this restriction of the term. Hymes believed that speakers have a systematic knowledge about how to use grammar to produce communication appropriate for a particular situation (e.g. knowledge of pragmatic rules). They are sensitive to the social status of the speaker and hearer, and produce utterances which are finely tailored to the degree of politeness or informativeness required by the context. He argued that the definition of competence should be extended to include these kinds of facts about the speaker’s knowledge, coining the term communicative competence. Hymes (1972): “the goal of a broad theory of competence can be said to show the ways in which the systematically possible, the feasible, and the appropriate are linked to produce and interpret actually occurring cultural behaviour”.

Slosberg Andersen (1992) prefers Schiefelbusch & Pickar’s (1984) definition of communicative competence as “the totality of knowledge and skill that enables a speaker to communicate effectively and appropriately in social contexts”. She considers that phonology, the lexicon, semantics, morphology, syntax and pragmatics all combine in the area of communicative competence. There is a suggestion of complete interaction between:

a) the components of communicative competence to be learned
b) innate linguistic and non-linguistic knowledge; passively and actively received input.
The concept of ‘communicative competence’ allows us to view the total communication system as made up of many different proficiencies from the various areas of language study. “An individual’s communicative effectiveness does not depend solely on his linguistic competence [knowledge of phonology, syntax and vocabulary]. It depends also on his communicative competence - his knowledge of how to use the language he has” (Sebsay, 1983). There is a parallel here with ‘production deficiency’ [e.g.: inability to verbalise internally] and ‘mediation deficiency’ [i.e.: child can produce internal verbalisations but does not use them as a strategy unless told to]. Instructions leading to improved performance suggest that the latter is common.

Using this idea, it is possible to consider:

- which strategies or conversational moves a child demonstrates:
- how he uses them in the conversational context to get the message across

By measuring a child’s communicative competence we can identify the processing and production of messages and their relation to development in terms of the oracy to literacy continuum.

The Measurement of Communicative Competence

Bloom & Lahey (1978) present a model of language which provides a reference for the discussion of language and communication. They define language as the knowledge of a code for representing ideas about the world through a conventional system of arbitrary signals. Three dimensions of communication are identified which come together in processing and producing messages: [Diagram A]

Form - refers to patterns of sound, rhythm and syntax used in an utterance. Elements of sound combine to make units of meaning in words and sentences. It is the mode for connecting sound with meaning and the system of rules for their combination.

Content - refers to information given in messages. It derives from topics and their classification and depends on the interaction of knowledge and context as a result of information processing. The content of language is its meaning - the linguistic representation of what a person knows about the world.

Use - applies to language function and to the influence of linguistic and non-linguistic context that determines how individuals understand and choose among alternative forms of language for reaching the same or different goals.

According to Bloom & Lahey, it is the integration of form, content & use that makes up language competence. They talk of the mutual influence between these behaviours - at the same time children learn language, they use it to understand and produce messages. This model is the
THE INTERSECTION OF FORM, CONTENT & USE IN COMMUNICATION
general framework for facilitating language and communication in therapy and teaching. When clarifying this schema, Kingman and Cox (1988) suggest that children learn form and content of language from varied opportunities to use it. This notion focuses attention on discourse analysis which is the study of how communication - spoken & written - is structured so that it is socially appropriate and linguistically correct. The next section reviews work in this area in order to prepare for the format of this study.

Analysis of Discourse

McTear (1985) defines discourse as "naturally occurring talk involving two or more participants", emphasizing the importance of social and interpersonal aspects of conversation in addition to its function as a means of transmitting information.

Parker (1992) discusses this, saying that "you take your first step into discourse research as you take your first step away from language". Traditional preoccupation with linguistic issues has not allowed us to consider other ways of being. Outside linguistics and psychology, studies of language have shown how gender is constructed and women silenced (Spender, 1981) and how notions of class, knowledge and stupidity are connected in the way we speak (Andersen, 1988).

Discourses both facilitate and limit, enable and constrain what can be said and are underpinned by two dynamic forces:

1) cultural - affecting the way we use conversation
2) subjective - tearing at our sense of self as discourses use us.

Coulthard & Sinclair (1975), Slosberg Andersen (1990) and Hatch (1992) are leading investigators in the sociolinguistic conventions that govern appropriate language use - exploring:

1) the repertoire of speech registers [varieties] possessed by children
2) the linguistic devices they use to mark distinct registers
3) the way their skill in using registers develops

They believe that communication must be described in terms of at least three levels - discourse, syntax and phonology and argue that one cannot consider grammar in isolation from meaning.

In the field of conversational analysis, researchers have often focused on well defined or ritualised events, such as greetings (Schenkien, 1978); chanting (Saville-Troike, 1982); ritual insults (Labov, 1972). Others have looked at factors affecting code or style of conversation (Gumperz, 1972).

In educational contexts there has been interest in questions, turn taking, topic initiation/ change/conflict/coherence, contributory comments and stories (Coulthard, 1977). These communicative strategies are identified within Key Stage 1 of the National Curriculum [participation in
group talk] as being forerunners of narrative thought and literacy. The location and study of these conversation moves allows us to pinpoint possible areas of communicative difficulty and plan intervention in order to remedy problems.

The idea of analyzing aspects of communication in isolation has been rejected by pragmatics (the study of the use of language in context). Leudar (1988) believes that concentration on specific acts of discourse “hinders research and as an approach to communication has failed”. Pragmatic theory can be used to examine principles of communication and conversation as a ‘whole’, rather than considering component parts. Three principles are discussed:

**Intentionality:** Many models of communication are based on the idea that communication is intention driven. The speaker’s dilemma is to express communicative objectives and the hearer’s problem is to attribute these correctly (Grice, 1957). The utterance is considered successful as a communication if the purpose is recognised (Bach, 1987). Of course, ‘lying’ is an exception to this!

**Conventionality:** Communicative intentions are said to be interpretations of utterances using assumed mutual knowledge (Grice, 1978). Most pragmatic approaches consider that audiences infer meanings on the assumption that speakers abide by tacit, but mutually assumed communicative conventions. Grice (1975) proposed the maxims of quality, quantity, manner and relevance. Audiences interpret utterances based on the assumption that these are adhered to. Indirect meanings [implicature] can be conveyed by the reinterpretation of the principles [ie; communicative conventions].

**Face:** Goffman (1955) sees ‘face’ as “the positive social value a person effectively claims for himself in an encounter”. Brown & Levinson (1978) discuss positive and negative face. Positive face is the “need of an individual to be appreciated by his/ her communicative partner”. Negative face represents the individual’s need to be free of arbitrary constraints. Brown & Levinson believe that moves in co-operative conversations are constructed to take into account the participants’ mutual need to preserve their ‘face’. The notion of ‘face’ implies that the self respect and the value which an individual is assigned by other people arises and is maintained in interaction. Power differentiation will effect the measure of ‘positive face’ an individual attributes to a communicative partner. For example, a teacher will not be apologetic when correcting a pupil. In some situations the aim of a move can be to attack the ‘face’ of another, and devalue them.

**Comment**

These pragmatic theories, as well as other components of language and discourse analysis, can be drawn together under the umbrella term communicative competence. Each area of research has contributed knowledge to various aspects of language. These involve language acquisition and
development as well as its components and use.

Communicative competence unifies aspects and refers to an individual's total communication system - both verbal and non-verbal. Central to the notion is the idea of language being suited to purpose and how it is rather than how it ought to be. Absolute and unchanging 'correctness' is not part of the thinking. Thus, a speaker's ability is essentially about using the appropriate form for the context. In the Midland area, where I live, you buy your fruit and vegetables in the 'veggy' but in London, where I work, you purchase them in the 'fruitique'. If I mentioned, at home, that I was off to the fruitique - no one would understand me. Different forms are right for different purposes. It is like clothing. You wear the right thing for the occasion. I would look silly sailing off to the 'fruitique' in my ballgown!

A Model of Communicative Competence

A review of sources suggests that within and without the child factors relate to intervention and assessment in different ways. For example, medically oriented models which focus on etiological and neurological correlates of language reflect a discrete skills orientation. This emphasis on individual components may provide useful information that highlights needs [e.g. below average auditory memory] but an individual approach to remediation may not result in better language for learning. An interactive approach, that takes account of communicative situations and adds dimensions of social and non-social uses of language, is more likely to improve performance by addressing the real needs of the context.

Thus, the intention of this research is to provide a model that integrates both individual and interactive elements. Diagram B represents this. Components are clarified below:

Content - refers to information processed on three main channels - haptic [touch, movement & sense of position in space], auditory & visual. In normal processing the brain integrates information across these channels. For example, in reading we process visual shapes and transfer them into the haptic modality for correct location in space. They are also mapped into the auditory channel, and knowledge of spoken language is used to give meaning to print. Therefore, if spoken competencies are not developed, reading for meaning will be affected. Disturbances in information processing and spoken communication will interfere with normal learning development. In dialogue, content is located in topic initiation and continuation moves.

Clarity - alludes to correct/incorrect use of sound and sentence patterns representing real/imagined experience.

Convention - locates conversation moves - requests, open/closed questions, contributory and maintenance comments. These take place in a turn taking routine using grabbing and passing devices.
INTEGRATION OF CONTENT, CLARITY, CONVENTION & CONDUCT

WITHIN A CONTEXTUAL FRAMEWORK
Conduct - describes self presentational abilities which maintain and transfer social structures in communication. Included are positive/ negative responses and meaning conveyed/ not conveyed in dialogue embodying the appropriate style for the occasion.

The model also takes into account a number of aspects of the communicative environment. The contextual framework of opportunity, personality, intelligence & attitude of any participant in the dialogue is identified. This is important as social considerations have a large role to play in language development and communication proficiency is part of a wider developmental competence.

Therefore, the role of the child's social environment in shaping, encouraging and moulding these skills must not be ignored. Language does not develop in isolation. The child is not only acquiring cognitive abilities and developing intellectually, but is advancing in interaction with other social beings (Valsinar, 1988). The framework attempts to recognise this context of communication.

The Communication Profile

The components of the model have been integrated into a Communication Profile [C-Profil] that collects quantitative and qualitative data from dialogues and an information processing inventory allowing a broad observation of interactive and individual behaviour. This provides a comprehensive pattern of communicative performance that is pertinent when planning learning development in schools. There are two parts:

Part 1 - aims to provide an objective measure of communication use as well as subjective impressions of individual/group conduct. It plots talking performances in group activities using an interactive model that evaluates clarity, content, convention & conduct objectively as well as opportunity, personality, intelligence & attitude subjectively in conversation. This goal is motivated by the desire to avoid making assumptions of children's intentions in communication and focus, instead, on observable behaviour - the actual moves made in conversation.

Stubbs (1983) discusses the notion of affective communication where the adult interprets and places meaning on to the child's responses to the environment. The profile is designed to avoid this reaction. The aim is to evaluate conversational behaviour in the belief that the strategies observed in turn starting/taking/passing/grabbing/stopping are important to the development of narrative structure and the relation of a sequence of events: setting, topic, action, result, reaction.

In addition to location of attributes of surface structure, it is possible to appraise at a deeper level. When people confer thinking has to be turned back on itself to achieve understanding. For example, a teacher strategy is to have a 'conference' with the child, explicitly discussing his/her reading or other progress. Talking about reading helps develop awareness and skills so developing...
The scheme evolves from longitudinal research sponsored by Trent Regional Research Council and continued at the Central School of Speech and Drama (SAGE, 1986, 1992 in press). Data collected enables an oracy-literacy continuum to be described forming the rational for activities at each level of the scheme.

**ORACY>>>LITERACY CONTINUUM**

**Interpersonal Discourse**
- Initiate topic .................................................. TURN START
- Listen and Respond: continue or maintain topic ................................ TURN TAKE
- Request, direct .................................................. TURN PASS
- Contribute to conversation - but not appropriate to discussion .......... TURN GRAB
- Conclude conversation .......... action statement .......................... TURN STOP

**Oral Narrative Discourse**
- Record .................................................. ideas
- Recite .................................................. describe object/situation (here and now event)
- Refer .................................................. make a statement that has inference (joke, riddle, funny story)
- Replay .................................................. recall past experience
- Recount .................................................. explain a sequenced activity
- Report .................................................. summarise, discuss and evaluate
- Relate .................................................. (setting, event, action, result, reaction)

**Written Narrative Discourse**
- Record .................................................. record ideas (short note)
- Recite .................................................. record order of events (short note)
- Refer .................................................. record cause and effect
- Replay .................................................. record personal experience over time (eg: diary)
- Recount .................................................. explain a sequenced activity (eg: list of instructions)
- Report .................................................. summarise, discuss, evaluate
- Relate .................................................. narrate factual or imaginary experience (setting, event, action, result, reaction)

Activities, at each level, aim to facilitate and evaluate the following aspects of communication.

**CONTENT, DELIVERY, APPROPRIATENESS, RECIPROCITY**

These aspects tap into presentation (content), performance (delivery) and personality (intelligence, attitude, belief, character) criteria.
pupil control over learning. Planning and execution are demanded allowing critical reflection, selection and judgment. Therefore, in conversation, aspects of spoken language use, such as explicitness, connectivity, justification and relevance, are established for written discourse. Although these components cannot be measured objectively, the conversational format of the profile allows their appraisal.

Part 2 - can be used to audit a child's information processing on haptic, auditory & visual channels using an individual approach. This provides an objective appraisal of communication content as well as subjective evaluation of opportunity, personality, intelligence & attitude. The knowledge gained contributes an in-depth view of a child's performance in standard tasks that can be compared across the age and ability ranges. This gives insights that are useful when planning learning.

The C-Proﬁle is based on data gained during pilot studies (Sage, 1990). Diagram C describes activities involved in the oracy-literacy continuum. It can be viewed as a continuum of abstract stages. At the oracy terminus are the pragmatic and participant aspects of communication and at the literacy terminus are the deliberative and meditative aspects. At the centre of this continuum are styles of communication which can be 'either-or'. For example, the oral style of a talk/lecture could be considered more analogous to literacy and a personal diary entry could appear more oral than literal. This evolves from work with mixed ability students in a Communication Opportunity Group Scheme (COGS) including those with 'normal' communication as well as some experiencing difficulties.

Since 1988, 200 students of 4-60 years, spanning mainstream, further and higher education bands, have attended weekly sessions with the purpose of extending their communicative abilities. It was soon realised that a goal was needed to provide the motivation for achievement so a teaching framework was devised to develop oracy into literacy skills with assessment at the end of each of twelve levels complementing and extending stages of National Curriculum and Vocational education and training. During 1991-2 the COGS has been piloted with 510 students in schools and colleges throughout England, including the Midlands, West Country and Home Counties. The teaching/assessment framework is available in the appendix and will be part of Central School of Speech & Drama's 1992/3 programme to develop oracy into literacy skills throughout the education system.

This work has provided the background for a planned approach to facilitate communication development. The ability to participate in talk is the first level achievement of Key Stage 1 of the National Curriculum and the basis for learning as well as taking oracy into literacy. The Communication Profile enables one to observe and locate strategies that allow talk to be successful in education.

Summary

This section has concentrated on reviewing the frameworks that have formed the rationale for teaching English, particularly for children who experience difficulties in using language for learning.
Evaluation of research suggests that it is important to consider within and without the child factors indicating an approach that integrates individual and interactive methods. This brings together knowledge of the child and the environment in which he/she functions. Therefore, the model devised for this research has been based on these notions and adopts scientific and ethnographic procedures.

Before introducing the rationale to these studies, a narrative of a child with communication difficulties is presented. This boy is one of the subjects in the research and his story is told in order to highlight the complex issues involved in supporting children with special needs.
The Beale Family

Jacky and Paul Beale have two children- Karen (9 years) and Luke (4 years). They live in their own small house on a large private estate straggling the out skirts of a rural town. The family are happily settled but have a few moans. Paul says: "The garden gives no space to swing a cat let alone a child. The nearest playground is over a mile away as are shops and local schools". Jacky wryly claims that at least the walking keeps her fit!

Walking is certainly the order of the day, as Luke now attends his local infant school and has to be taken and fetched. Karen finds her own way to Junior school, half a mile in the opposite direction. Jacky worries about this, but confesses she cannot be in two places at once.

However, both children are happily settled in their schools and it is now difficult to imagine that the chirpy blond Luke was the focus of unbearable family worries and pressures in his preschool years.

At 2 years Luke suffered recurring middle ear infections. His local Doctor (G.P.) arranged a trip to the Ear, Nose and Throat [ENT] Surgeon in the local hospital. A succession of grommet insertions were made to drain ears and help hearing. Luke's sleepless nights, from earache, and stressful hospital appointments, caused Jacky to become run down and depressed.

Paul enquired at the Social Services Day Nursery [SSD] (12 miles away) whether there was a possibility of respite care for Luke. He was told there was a waiting list of 150 children and charges for this service. Anyway the Beale family would not meet the strict admissions criteria for either:

2. One parent family.
3. Family wage earner un employed.

A private childminder, registered with Social Services, but charging her own fees, was suggested. However, the five registered childminders in the vicinity of the Beales had full complements of children in their care.

- Apparent lack of co-ordination between the departments on the provision of play spaces and services in housing developments. (eg: Local Authority - County Planning, Land and Buildings departments)
- Children need play space to interact with others and develop communication skills.
- Rising five policies in over half the Local Education Authorities [LEA] mean that children may commence an infant class in the year they become five. Some children at 4+ are not ready for the 5+ curriculum.
- Need of some parents for short / long term respite from family demands.
- Anomalies exist regarding:
  Fees
  There are charges for SSD, whereas LEA nurseries are free.
  Admissions
  SSD policies select "problem" families for their day care, whereas LEAs admit from local catchment areas.
  - However, some LEA units are set up for special needs (eg. speech / hearing impaired) and only accept referrals from developmental assessment teams.
  - Selection criteria prevent equal opportunities for child care.
The family tried to soldier on and Jacky had to rely on lifts from friends, an erratic train/bus service, or Paul getting time off work to keep Luke's numerous professional appointments. On one occasion the train was delayed which meant Luke arrived late at the hospital and had a two hour wait for a hearing test. He was so tired when his time came, that he would not co-operate. The whole journey was a waste of time, effort and money. Paul felt very guilty about all this, but needed the car for work and was trying for promotion which meant that the job had to come first in his life.

Meanwhile a developmental check up at 3 years, by the Health Visitor [HV], indicated that Luke was behind in language and social skills. He was referred to the Child Development Centre [CDC] run by the Local Health Authority [LHA] at the City hospital. This provides a multi-discipline assessment of the "whole child" from a team of experts including a Paediatrician, Clinical Medical Officer, Educational Psychologist, Teacher, Audiologist, Occupational /Physio/ Speech & Language Therapist, Social Worker, Nursing Sister and Nursery Nurse.

Luke visited the Centre daily over a 2 week period. At the end of this a case conference was called and the team invited parents, GP, HV, and the leader of the play group (PGL) where Luke attended for 2 mornings each week.

The team recommended that Luke was placed in a special nursery centre where he would receive teaching and therapy directed to improving social and language skills. The GP, HV and PGL were against this decision. They felt the long taxi journey to another town, and removal from friends would mitigate against possible improvements. Jacky and Paul were torn by differing professional viewpoints, but considerable pressure was brought on them and Luke started the long trek to Nursery School, leaving in a taxi at 8.20am and returning at 4.15pm. He was only 3 years old.

The Nursery Unit, which Luke attended, was attached to a primary school, and catered for 20 children, meeting stringent criteria of special needs. It was staffed by a teacher and two nursery nurses and supported by visiting medical and educational experts. The speech & language therapy that Luke required is a health service and does not guarantee regular help to school bases. During the time of Luke's attendance speech...
and language therapy was rearranged, due to the Health Centre schedules, and the therapist could only manage a trip to school at 4.30 p.m. after clinics, when of course all the children were safely home. If she did pop in the teacher was not necessarily present as she worked the school hours of 9.00 a.m. - 4.00 p.m., whereas the nursery nurse (NN) covered 8.30a.m. - 4.00p.m. to cope with the taxi arrivals and departures. NN’s were also required to come into the unit during school holidays to clean equipment and prepare materials.

Jacky and Paul were not made properly aware of the aims of the Nursery group in relation to Luke. There was no attempt to co-ordinate efforts to help him at home, so the parent/professional partnership was neither explored or developed.

Lack of common purpose in professional management strategies was soon obvious. At school Luke was learning “sounds” on their own without their letter names. At one of the Speech and language therapy sessions he attended every six weeks at the clinic, he was introduced to a different group of sounds linked with letters. Luke and Jacky were confused, but nothing was said and it was not the “done thing” to criticise experts.

As it was, therapy sessions were irregular. This was due to the fact that such a service covers the needs of the 0-90 population which means there can be no special priority for a pre-school child, who in the words of the therapist: “has a minor problem compared to many”.

During a six month period Luke saw three different therapists. One worked on sounds, another on word concepts (big / little etc) and the last on listening skills. There seemed no consistent pattern to the management and Jacky felt bombarded with different ideas. the disruptions caused by visiting a range of professionals (at least 34 seen) forced Jacky to give up her part-time shop assistant’s job two afternoons each week. This was a personal blow as she had lost something important to her confidence. Family treats (which made life worth living) were now curtailed.

After six months teaching and therapy at such distance from home the situation became intolerable for the family. Luke was always tired and irritable. The ear infection continued unabated. No observable progress was made in class, where Dad said “All the children are worse than him and don’t talk anyway”.

Things came to a head one cold December afternoon. The taxi driver appeared a little worse for wear when Luke was returned in an

- Anomalies of hours, holidays and pay between professionals working in the same centre, form a barrier to close co-operation. At salaries half that of teachers, there was a continual feeling of poor justice for nursery nursing staff which brought tension into relationships.

- There must be regular dialogue and explanation between professionals and parents otherwise they feel devalued parts of the relationship.

- Professionals need to co-ordinate management strategies and form common goals for children in order to effect progress.

- Parents require knowledge of child development and the dynamics of human relationships in order to cue into the needs of child and family.

- Quality of staffing arrangements are important for clients needing continuity and consistency of approaches in order to develop skills and relationships.

- Mothers need experiences outside the home and may wish to continue their careers alongside family responsibilities.

- Child’s needs, parents’ wants and professional views sometimes may be in conflict.
The Beales decided enough was enough. They resolved to blow next year's holiday money on a private medical opinion and some home tuition for Luke. After an acrimonious discussion with the Nursery teacher Luke left his special class and returned to play group in his neighbourhood.

The playgroup was happy to welcome Luke back but were worried about his ability to cope with the language difficulty. The PGL said: "We have 12/30 children who have some difficulties in communication, which must surely affect abilities to socialise and learn. It is pie in the sky to expect specialist input into voluntary services".

No co-ordination approach was adopted between playgroup and speech and language therapy. A lack of understanding between the relationship of spoken and written language was evident as different sounds were taught in the playgroup and clinic, and Luke became confused. Moreover, the therapist was only trained in individual approaches to children.

However, the family sought their own solution. They managed to discover a teacher/therapist who visited their home regularly and encouraged Jacky to sit in on each training session and understand the purpose, targets and content of each session with Luke so that ideas could be absorbed into the pattern of daily life. Contacts were established with the PG and later the infant school so that consistent co-operative approaches ensued for all Luke's learning.

A year later the situation was better. Luke's language was appropriate to his above average mental age and he was making pleasing progress in the infant class, where his teacher was willing to adjust approaches to suit his learning needs.

Paul said that it had been a relief to take matters into their own hands and choose arrangements for Luke that were also suitable for the whole family.

Jacky had been able to take up work again helped by informal child care. A friend picked up Luke from school and kept him and Karen until Jacky finished her job at 5.30pm. Jacky returned the favour for her friend's two children on other days. The extra money earned paid for Luke's teaching.

- Children need to extend experiences outside the close relationships of home.

- Voluntary sector provision needs to be brought within the framework of statutory services so that they develop in the same direction.

- Patterns of work that isolate treatment/teaching from a daily context may have little utility. Training of professionals is not always geared to the real life needs of the clients. The therapist was trained in a "medical model" presupposing a deficit in the child rather than the context. This makes it difficult to appreciate the needs of those working in groups.

- Parents need information about all community services and facilities.

- Professionals need opportunities to liaise and work with others built into working systems so that contact between others is not left to chance.

- Parents need choice and control over family decisions to suit everyone as far as possible.

- Even in two parent families wages seldom relate to family commitments, so that mothers often must work. Better tax allowance, child benefits and social security payments for those with low incomes are necessary.
Comment

The Beale study indicates a variety of management provision for children comprising: day nurseries, nursery classes, playgroups, childminders, health surveillance/assessment/treatment services of paediatric development / GP centres and public/private educational arrangements.

Other than voluntary schemes (playgroups and childminders) much provision is either prescriptive (testing problems) or preventative (avoiding children being taken into special care/education) and available only to those meeting a stringent criteria of special need.

Even if families do meet these criteria (eg. Luke’s language/social problems) the arrangement may be so distant rendering it ineffective for children, and inappropriate for overall needs.

The Beale’s case clearly points out that provision does not reflect the varying needs of neighbourhoods, the changing circumstances of young families, age groups, and the many stressful situations that occur requiring different levels of support.

The tendency is for more services to be created by an increasing number of organisations and departments. There is, therefore, a lack of general direction in service development, which is provided “ad hoc” without the real needs of clients in mind. There is a necessity to consider the problems in service implementation resulting from separate capital programming on the part of DES, DHSS, and the voluntary services.

Different interests of various service groups, become clearly staked out (eg. Child Development Team versus Community Team of G.P., H.V., and P.G.I). This makes good quality provision difficult and is made worse by limited opportunities for professionals to train and work together and attain common goals for clients. Therefore, no common core of good practice is revealed. This will not be possible until there is better mutual appreciation and focus on the best of each other’s work, and a monitoring system developed for provision. Structures for training and working together are necessary to achieve this.

The Beale family were able to solve their problems by taking decisions into their own hands and seeking arrangements that suited their needs. Many families do not have this option available to them, and they lurch from crisis to crisis with a widening circle of consequence (Children’s Committee Report, 1986). There is an overall need to clarify the purpose, targets and content of provision as a basis for the future direction of all services.

Issues shown up by the case study, are summarised in the accompanying chart, and are analysed for all the participants in management: -- children, parents, professionals and policy makers. The aim of this is to clarify the situation and understand the complexity, considerations and constraints that operate in any decision-making process.

Therefore, the context is set for an ethnographic/field-based method of research. In order to understand the problems of children with communication difficulties, it is necessary to become immersed as an observer in the natural setting in order to discover the underlying cultural patterns that govern the attitudes and conduct of the persons involved.
CHILDREN
- Needs must be considered in relation to the family
- Need to extend experience outside the close relationship of the home
- Need to have disadvantage/disability identified as early as possible
- Need both care and education which sometimes has to be special/compensatory according to circumstances

PARENTS
- Need preparation for family life
- Mothers need experience and support outside home
- Need facilities giving equal opportunities for work
- Need flexible work patterns to share child responsibilities
- Need extra financial support (tax allowances, child benefits, etc) as wages seldom relate to circumstances
- Need information about community resources
- Need choice, flexibility and co-ordination of services to meet family needs within locality

ISSUES FOR CHILD MANAGEMENT
- Need to clarify purpose, targets and content of provision as a basis for direction
- Need to consider problems of service implementation resulting from separate capital planning of DES, DHSS and voluntary organisations
- Need to resolve the issue of free nursery education alongside charges for day nursery provision
- Need to co-ordinate policy over Departments
- Need to involve voluntary provision within the statutory service plan
- Need to develop a monitoring system for provision
- Need to address the problems of separate training philosophies and move towards core curriculum for child workers

POLICY MAKERS
- Need training geared to real life needs of clients
- Need training to balance different models of child theory
- Need skills to develop partnership with parents and others
- Need training to detect family difficulties so work can be preventive rather than prescriptive
- Need quality in staffing arrangements for a consistent continuous approach to clients
- Need anomalies of pay and conditions of service resolved for smooth work arrangements
- Need opportunities to liaise and work with others built into job schedules and not just left to chance

PROFESSIONALS
THE COMMUNICATION PROFILE: RATIONALE AND DESCRIPTION

Introduction

This section provides a rationale and detailed description of the Communication Profile [C-Profile 1 and 2]

Rationale

Previous sections discuss communication frameworks and Diagram B presents the model for this research extending the traditional tripartite description of language form, content and use into a practical format. Principles underpinning this representation [known as the C-MODEL] are now considered.

General Considerations

The aim of the profile is to appraise communication use so the sequence is:

FUNCTION -> USE -> RECORDING FORMAT -> DATA ANALYSIS

FUNCTION -> USE

This was evaluated by observation in two schools in different county areas with a language unit attachment for twelve pupils with severe communication difficulties. Half the LCD subjects for the study sample attended these establishments. Therefore, it was possible to monitor activities in standard and special education provision. Observation took place over one school week in each setting and consisted of recording all class activities and the communication acts that accompanied these. They were then classified in the format shown in Diagram D. For example, the teacher instructs Mark to complete a jigsaw. Therefore, he has to be involved in the functions of:

Clarification - processing instructions which use skills of recognition, retention, reasoning, relation [to existing knowledge about jigsaws], retrieval and response.

Clarification is achieved through a series of brain functions involved in processing messages. Included are abilities to RECOGNISE and RETAIN information so the mind can think, REASON and RELATE it to previous knowledge stored in memory.
## ANALYSIS OF FUNCTIONS OF COMMUNICATION IN LEARNING

<table>
<thead>
<tr>
<th>- CONTROL</th>
<th>- CLARIFICATION</th>
<th>- CONTEMPLATION</th>
<th>- CONNECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>organize discourse relevant to situation</td>
<td>process and transmit information</td>
<td>produce ideas</td>
<td>establish and maintain relations</td>
</tr>
</tbody>
</table>

- **USES**
  - plan
  - monitor
  - request
  - inform
  - instruct

- **USES**
  - recognise
  - retain
  - reason
  - relate
  - retrieve
  - respond

  - predict
  - empathise
  - imagine
  - problem
  - solve
  - interact
  - self
  - maintain

**ACHIEVED THROUGH:** sounds; words; (spoken / written); facial expression

  - melody - (pitch, pace, pause, power); tone of voice;
  - posture; gesture; movement.
which it RETRIEVES to effect an appropriate RESPONSE.

Control - organising discourses relevant to the activity which use abilities to request, help or clarify information and monitor self throughout the task in order to readjust responses [as a result of feedback from others] and have command over the situation.

Control is important in organising ‘talk’ for getting things done. In order to accomplish a task [eg: making a drink or writing a memo] we have to be able to talk through the activity ‘silently in the mind’ and monitor its progress. It may be necessary to consult others or vice versa so the ability to REQUEST, INFORM & INSTRUCT is essential to the progress of any activity. We have no means to control what happens without the skill to organise talk relevant to different internal [inside the mind] and external situations.

Contemplation - producing ideas necessary to put the jigsaw together which use skills of problem solving and prediction.

Contemplation is the communicative thinking process that produces ideas. We use it to PREDICT outcomes to situations, EMPATHISE with people’s feelings and views, devise ways of SOLVING PROBLEMS and SELECTING SOLUTIONS.

Connection - establishing and maintaining relations with self [to keep going through the task] and others [if help is needed] which use skills of interaction and self maintenance.

Connection is the communicative mode by which we establish and maintain relations with our ‘self’ and others. Through ‘inner language’ we INTERACT with the mind to motivate and MAINTAIN action. ‘Outer language’ enables us to speak and listen to others and involves not only words but voice tone and gestures.

Functions & uses are involved in all activities to a greater or lesser extent depending on the nature of the task. Although the diagram depicts them in linear formation this is only for graphic ease as much communicative activity is simultaneous. After discussion with teachers control is placed first as the vital function for coping in class and an area that needs focus.
1. Approaches tend to be ignored/rejected which lead to difficulties in making relationships.

2. Unresponsiveness to talk results in a judgement of mental backwardness.

3. Inability to give information readily poses a problem in gauging the applicable level of expectation.

4. Inappropriate responses indicate unawareness of what is expected in school.

5. Problems in conveying meaning lead to a poor self image as a communicator which others reinforce by repeating/rephrasing what has been said.

6. Inadequate strategies for talk mean that it is difficult to find the right opportunities for facilitating language for learning.

7. Lack of adequate language poses problems for promoting thinking.

8. Performance speed and standard does not match class norm making it difficult to find opportunities to praise and build esteem.

PROBLEMS MET BY CHILDREN WITH INADEQUATE LANGUAGE

1. Expect others to control conversations giving them little chance to talk.

2. Less aware of routine and often confused by school.

3. Not able to understand indirect requests easily (eg: "Find your reading book") and only tend to respond to direct demands involving own name.

4. Unable to listen to explanations readily or request clarification.

5. Generally do not look for context clues to gain understanding but resort to imitation of others.

6. Normally do not talk with others responding to direct questions only with minimal answers.

7. Attention not held by stories or poems and so are restless and impatient in class.

8. Less imaginative and constructive play/performance than others appearing happier without adult involvement.
RECORning FORMAT -> DATA ANALYSIS

Teachers and parents, involved in the study, were asked to locate the problems encountered with by children experiencing difficulties in communication, in order to produce a recording format that would give useful planning information. Their corporate views are available in Diagram E. The model of clarity, content, convention & conduct covers the language skills, information, design and control features that are recorded in their comments.

C: PROFILE 1 [ PRODUCTION]

Methodology

Discourse analysis is a daunting undertaking but has enormous power to inform us about naturally occurring communicative events. Stubbs(1983) reviews analysis of natural language and describes different approaches:

a) Discourse organisation
This concentrates on principles of linguistic organization above the sentence level. This is known as 'metatext' and enables comprehension of interaction. A simple example is:
A: Yes, I can.
B: Can you see into the future?
This joke depends on two things: the recognition of the question-answer sequence as reversed and the disruption of grammatical cohesion. Analysis of response to metatext is said to reveal discourse competence.

b) Discourse inspection
This attempts to find order from what seems initial 'chaos'. It allows the observer to discover polysystematic mechanisms such as word/phrase repetitions, structural markers, time synchronization and underlying hierarchies relating to discourse acts [eg: shifts in addressee].

c) Discourse observation
This is concerned with ways in which speakers check hearers' understanding and how it is proved, as well as use of feedback mechanisms.

d) Narrative organisation
This looks at overall structure of talk [beginnings/ middles/ ends]. It observes cohesive devices that mark ritual equilibrium.
e) Interactional roles
This locates social roles of speakers in the context of a speech event [interviewer/ interviewee].

f) Discourse analysis & interaction
This concentrates on the way information is selected, formulated and conveyed as negotiation between speakers.

g) Narrative structure
This involves the observation of different syntactic structures, tense selection and function of a shift away from simple narrative syntax. Labov (1978) proposes the following elements: abstract, orientation, evaluations, narrative clauses, result and coda.

h) Natural conversation
This describes spontaneous as opposed to contrived formats and concentrates on elements of talk that are unplanned.

i) Speaker fluency
This looks at issues such as improvisation, maintenance of continuity, time processing and communicative stress.

Comment

The brief review indicates that discourse analysis can be a complex process. Most traditional description neglects intuitive impressions, working on phonological and grammatical variables as well as organisation of speech events. In deciding a methodology, practical considerations have to apply. An hours conversation can take thirty pages of transcript and a minimum of thirty hours to transcribe. Pittenger (1970) claimed to have reduced transcription time from 100 hours per second to less than one hour per second!

Using a framework based on National Curriculum ethos [described below], the research is based on participant observation and transcription recording. As Willie (1981) pointed out, this is not enough to investigate communicative competence as a pupil might be capable but silent. In order to take account of this possibility a child was monitored in several communicative situations in class [single case studies].

Finding patterns in the passing social scene involves practical problems and frequently is a muddled affair. There are continuing problems of description and perception. All methodological procedures are ways of making strange what we normally do not perceive, because, as competent conversationalsits, we take the activity for granted. The basic concept is that of using alienation or estrangement devices, to focus attention on what is usually not noticed. Recording and transcribing
TRANSCRIPT: Tom (LD child - age 7.5 years)

Context: Cookery lesson - making flapjacks.

Participants: Tom(T), Becca(B), Kevin(K) + Teacher(T)

Te: Listen everyone, what do we need to collect for making flapjacks?

B: Oats, butter and sugar... I think.

K: The other group used syrup... you showed them the tin.

Te: Yes, syrup makes flapjacks moist and sticky. Tom, what else do we need?

T: (pause)... er... eggs?

Te: You were meant to say baking tin - Yes?

T: umm m m m m

Te: Now... what else do we need? pause... then...助助助助

Te: Hot out there (over articulated). I know... but we're thinking about cooking now.

B: We need a bowl.

Te: We also want a pan to warm the syrup. Tom get the pan please?

T: (looks out of the window and does not respond)

Te: Tom, you must listen. Get the pan off the shelf. Bring it to the table, please.

T: (looks puzzled - turns to Becca who gets the pan for him)

Te: Now Tom, what goes into the pan?

T: Sun duff (some stuff)

Te: Some stuff... yes, yes, we know but what? (rather impatient)

B: The butter - warmed with syrup and then add oats.

K: Can I do that, Miss?

Te: What must we do first?

K: Weigh ee out. Put me in the bowl.

B: I've got the recipe. I'll read it and Kevin will weigh. Tom can mix...

K: Right, let's get going....

Discussion:

Teacher questions dominate the conversation but Becca and Kevin cope with this and are able to initiate topics (3, 20, 23, 24) and continue them (2, 19, 22). The sample shows the beginnings of collaborative talk (22, 24) when Becca starts to organise roles for Kevin and Tom for the cooking activity.

Tom seemed embarrassed about a pause in conversation (8) and felt obliged to fill it. Although his response was appropriate at the level of turn taking it was irrelevant to context requirements (9). He showed problems with face (13, 15) by refusing to answer/carry out a request. This may have been because he was not paying attention or perhaps he could not deal with the command. The teacher repeated the request (14) but made it more difficult by issuing a double command. Teacher strategies (6, 10, 18) reinforced Tom's poor communicative abilities by re-stating/re-phrasing his responses which no doubt produced an inhibitory effect. However, Tom showed very low level communicating abilities. He was able to turn take but on no occasion demonstrated topic initiation or continuation. He did not display conversational moves (requests, questions, contributory/maintenance comments). Therefore, he violated principles of face, relevance and quantity in this sample. (See chapter 9 for discussion of these issues).
conversational data are, themselves, valuable estrangement techniques. Discourse is generally not examined objectively, in the way made possible by the methodology. On the one hand, such records reify the process. On the other hand, by turning dialogue into a reified product it makes available a type of data which leads to the perception of unnoticed phenomena. The discipline of transcribing forces repeated listening to features which otherwise remain hidden. All procedures have inherent dangers but inadequacies can often be exploited.

Difficulties are irremediably involved in theoretical questions, when the topic of research is how people interpret social behaviour. Outside criticisms may arise from an individual's own theoretical perspective and not be valid in terms of reasons why a particular method is employed. This analysis stems from a need to understand the concept of Key Stage 1 of the National Curriculum, which requires children to participate in conversation. Therefore, the dimensions for analysis primarily reflect this interest.

**Description of Format**

Since the purpose of the C-Profile [production] is to study the interactive situation, samples of conversation are audio-taped as a basis for discussing recording methods. Diagram F documents an example from a transcript. There are three children [including one with communicative difficulties] plus the class teacher. The discussion presents a preliminary analysis. This forms the basis for a recording sheet charting quantitative data, which also provides information for qualitative observations. In the main study only children are audio-taped. The recording method is now described.

**Description of Recording Method**

Analysis sheets are available in the appendix [Diagram G]. They record data taken from a transcript of a three minute audio-taped sample of conversation. Headings are clarified below:

- **Clarity** [Language sound & sentence skills]
  Assessment consists of taking a word sample [eg: one hundred words] and counting the errors [omissions / distortions] in sound and sentence construction within a fixed number of syllables, and recording this on the profile sheet. Syllable count is a standard quantitative procedure in linguistic research.

- **Content** [Language information]
  The sample is analysed to locate incidences of topic initiation and continuation. Topic initiation records all new ideas that are brought up in the course of conversation. Topic continuation refers to information that is added to a previous idea in order to expand it. Qualitative facts regarding topic initiation locate those who control the action. Qualitative evaluation is available from the content and its development [topic continuation].
**Convention**  *Language design*

The transcript of the recorded conversation is examined to locate the following standard moves: requests; open & closed questions; contributory and maintenance comments. **Contributory comments** are those which respond at the turn-taking level to what has been said but do not add appropriate information to the topic under discussion. For example: [Helen]: We went to see a film called "The Blue Boy". [Tom]: I've got blue shoes. Tom's comment 'takes the turn' but does not give appropriate information to the topic [films] that is under general consideration. Therefore, his response is classified as a **contributory comment** rather than **topic continuation**. Tom has latched on to the idea of 'blue', but failed to grasp the metatext organised around the topic 'films'. Pilot studies indicate that it is important to differentiate this feature, as metatext problems appear common in children identified as having language difficulties in the context of this research.

**Conduct**  *Language control*

Responses from the audio-recording are analysed to monitor examples of **positive & negative face**. For example, appropriate replies are recorded as **positive face**. A refusal to respond or an inappropriate answer is noted as **negative face**. In addition, responses where **meaning is conveyed or not conveyed** are logged, as these are indicative of a person's conduct and image within the group. As well as quantitative information it is possible to record qualitative data regarding pitch tone or eye gaze, that are important aspects in conveying meaning but not readily amenable to objective documentation.

**Comment**

Research by Bricker & Carlsom (1980); Jones (1980); Cunningham et al (1981); Weistuch & Lewis (1985) and McConkey & Price (1986) has mentioned the fact that children with developmental delays experience problems with topic initiation and continuation and thus fail to receive feedback from others which is vital for adjusting further responses to make them appropriate. The recording format has taken into account these comments as well as the views of teachers and parents in devising a schedule that can monitor **some** aspects of conversation that are felt to be important for learning and socialising.

**Communicative competence**, as discussed in the review, is a broad area which can be classified into five categories (Beebe,1988):

1. Speech acts
2. Tone or emotion
3. Conversational features
4. Conversational management
5. Topic selection

As indicated, in the review section on discourse analysis, most research concentrates on
speech act realisation and the present study has sought to widen this focus to consider aspects of topic, conversational features and management. However, the profile is a limited analysis of communication. For example, there is no formal monitoring of paralanguage features - inflection, rhythm, cadence of vocalisation, posture, gesture, handling or facial expression [including eye gaze] that are a vital part of establishing meaning and social acceptance in communication (Dimbleby & Burton, 1985).

These attributes are difficult to compare accurately between subjects in interactive exchanges and impossible to log without video recordings which are less discreet than audio tapes. However, there is an attempt to locate these features formally in part 2 of the C-Profile which provides an individual assessment on standard norm-referenced tasks. At an informal level, eye gaze and pitch are observed in the study and will be discussed in detail in the results section.

Other problems refer to the subjective nature of the C-Profile categories and their terminological confusions. To take an example, the term 'request' is often used to refer to utterances which demand a particular response from the listener, such as action or information. This can overlap with terms such as 'directive' or 'question'. Within the category 'request for action' there can be a further overlap between terms such as 'command' and 'imperative'. Often acts such as 'calls for clarification' [repairs] are subsumed under the generic term 'request'. Appeals for clarification are special types of demands, occurring in the context of actual or potential communicative failure, holding up topic progress until the difficulty is solved.

There is a continuing dilemma of levels of analysis and systemic possibilities. These may pose problems for children with language and communication difficulty. For instance, there are different ways of asking for information - "Where's the station?" is not the same as "Excuse me, I wonder if you could tell me where the station is located?" An additional issue involves the tone of voice to convey an opposite meaning - "I suppose you'd like some more", implying "You can't have any!".

Clinical observations confirm that LCD children are likely to respond to simple, direct language only, and have difficulties in monitoring the falling pitch pattern of a statement in contrast to the rising tune of a question. These facts are confirmed in this research data and will be discussed under results.

More seriously, there is the complication of many utterances performing more than one speech act simultaneously. For example, a request for action could be also an admission of one's own inability to do the act. Levinson (1983) criticises simplistic classifications of utterances in isolation from their actual interactional and sequential environments and argues that the speech act may not be an appropriate unit of conversational data.

In spite of obvious shortcomings, the C-Profile 1 [production], because it is based on a sequence of conversation, does supply a broad view that proves useful for further investigations [part 2] and observations that can be tested out in a range of other contexts. It enables interactional [turn taking exchanges] and transactional [relevance, informativeness and accuracy] components to be evaluated. The view is that a more detailed coding of communicative 'acts' provides less additional value than is gained by less complex and laborious assessment. This is well illustrated by
the fact that conversation moves and topic initiation and continuation analyses are sufficient to highlight situations that restrict opportunities for speakers. Moreover, as ground theory research, with active roles of participants, it was necessary to produce frameworks that had meaning and relevance for the people using them.

Therefore, C-Profile1 [production] collects information that monitors child responses in normal talk situations occurring naturally in the interactive daily context. Knowledge of what goes on in these is a key to understanding what are the real problems children experience in communication and which aspects interfere with the development of language for learning and socialising.
Description of the Assessment

An information processing approach is introduced to gauge how children deal with incoming stimuli. This method comes largely from the application of COMPUTER CONCEPTS to PERCEPTION and COGNITION. The growth of this technology suggests it might be applicable to the study of MENTAL PROCESSES.

A computer receives INPUT (in this analogy - SENSORY INPUT) and processes it in various ways to yield OUTPUT (response). Typical of the approach is the flow of information from one stage to another. However, it does not assume the brain is a computer, just that it is profitable to model one (See diagram H)

The section describes tasks for the three areas - haptic, auditory and visual, in the following format:

1. INTRODUCTION. 2. DESCRIPTION OF THE TASKS. 3. RATIONALE.

HAPTIC: INTRODUCTION

The word 'HAPTIC' comes from a Greek term meaning 'able to lay hold of'. The Haptic System is the way in which an individual gains information about the ENVIRONMENT and his BODY. He feels an object relative to the body and body relative to the object. It is the means by which we are literally in touch with the world and relies on FEELING (sense of cutaneous pressure) and KINESTHESIA (awareness of position and movement) including NEURAL PROCESSES which perceive the body in relation to objects and space.

Touch (taction) includes all perceptions of the environment, such as geometric information (size, shape, line and angles), texture, pain and pressure. Kinesthetic perception or proprioception refers to sensations derived from bodily action including dynamic movement patterns, static limb positions/organ postures (as in speech sound production) and sensitivity to direction.

Unlike eyes and ears, the sense elements of the Haptic modality are everywhere in the body. They are embedded in motor organs. Equipment for 'feeling' includes that for 'doing'. Stimulation of greatest importance comes from proprioceptors when they are moving. Therefore, oral and manual form recognition tests are chosen for assessment. These rely on ability to move objects around with tongue, lips and jaw; the radial and ulnar parts of the hands as well as specialised movements of finger pads.

The work of Baker (1967); McDonald and Angst (1967); Moser et al (1967) and Rutherford & McCall (1967) show tests of oral form recognition appear to be related to
speaking ability. Kinura (1973) suggests this relationship may occur with manual ability as analogous disturbances of speech and hand movements were found in patients with left hemisphere damage. Thus, a test of movement sequence is introduced in assessment which ties in with Piaget's (1952) sensori-motor level and Bruner's (1975) enactive representation.

The Haptic channel is neglected in teaching as it is seen as more primitive but has importance for learning to speak and write with mouth and hand having most significance. Therefore, the first section concentrates on oral and manual object appreciation of object and movement space representing a problem of orientation.

Retention - of stimuli sequence and orientation are vital so tests embrace both aspects. Speaking and writing involve linking touch and movement and the

Association - section deals with this. Can a child categorise such experiences? Does he/she recognise the one different in a group where two are the same and others not? If this skill is absent it will be difficult to understand the overall nature of an integrated task.

Integration - is the last section including mouth and hand in a touch and movement task. Natural speech sequences generally incorporate hand gestures and writing often involves subliminal vocalisation. Can the child integrate these in folding a piece of paper, putting it in an envelope and sticking down the flap.

Materials - include plastic geometric shapes and pipe cleaner figures for the movement sequences. Paper and envelope are used for the integration task. Throughout the tests the subject is blind-fold so no visual information is imparted.
Scoring - is standardised for domestic reasons so that each section totals 12 making 48 the maximum for each area. All scored items are preceded by practice examples.

**HAPTIC DESCRIPTION OF TASKS**

**Discussion of Stimuli**

**Plastic Shapes**

A person can detect size, shape, texture, constituency and temperature by mouth and hand. One is assessing not only recognition of shape, as an attribute, but a higher function in which this is associated with a specific object from prior experience. The use of nonsense shapes encourages semi-intellectual processes of identifying and co-ordinating edges and corners by outlining with tongue tip/finger. This tracing mode is not the fundamental exploratory one.

Therefore, stimuli materials are drawn from a pool of twenty plastic geometric forms developed at the National Institute of Dental Research. Nine are subdivided into classes: triangular, rectangular, oval and bi-concave. Pairing of forms allows 'within' and 'between class' comparisons (see appendix).

The shapes are made of 'Trevalon X', a radio opaque polymethcrylate, so they can be traced by X-Ray. Forms are constructed with an attachment to facilitate handling and as precaution against accidental swallowing. Steel orthodontic wire, nylon monofilament or plexiglas strips are used, and La Pointe and Williams (1971) find no significant differences among conditions in response accuracy or time. Monofilament line, inserted through a small hole in the shape, is used in this study for flexible intraoral and manual operation. The shapes are 3mm. thick (other dimensions in appendix) and are of the same plastic substance.

Objects of varying materials have differing temperatures which distort size perceptions (Hoffman, 1885; Markova, 1900).

There is no attempt to vary texture. Temperature and texture are felt to be unimportant dimensions in this context, as form recognition involves sequential tactile examination of exposed edges. Perception of shape is primarily an appreciation of spatial arrangements of parts of the object representing a problem of orientation in microspace. It has long been established from studies in Bosma (1967) that children of three years can be tested for oral and manual form recognition.

**Movement Sequence**

Letters are based on straights and curves. The maximum span in our alphabet is four (W) and the minimum one - (i). Some include straight and curved movements (p,b,d,q,u,)].
Letters are confused because of orientation problems in space (N Z, p b d q, u n, W M, j, f t).
Aspects of movement sequence, span, direction and position are important to letter formation as well as gestures in non-verbal communication. Difficulties in discriminating elements may relate to problems in self perception, or self in relation to objects/forms in space (Bryant 1974).

Stimuli used are pipe cleaner figures stuck on card - each measuring 2" (see appendix). Pre-pilot studies (Sage 1988) show these are more acceptable to fingering than sandpaper or velcro strips. The start is marked by a metal disc, which is smooth and cold in contrast to the warm, woolly feel of the pipe cleaner shape.

**Administration**

The assessment begins with a game to ensure basic knowledge of shapes and concepts of same and different. Three shape pairs are produced separately from logiblocs. 1) circle and square. 2) square and rectangle. 3) large and small triangle. The child is required to find corresponding matching pairs from a group of eight - circle, square, rectangle, and triangle in large and small sizes. Once this is established the oral, manual and movement tests begin.

**Instructions**

"We're going to play a game with shapes today. I'm going to put a mask over your eyes, while I put shapes into your mouth for you to feel with your tongue. Look, here
are two shapes. I'll put them in my mouth and feel them with my tongue for 20 seconds.

Like this. DEMONSTRATION. Now you try. (Blind-fold). Open your mouth. Feel the shapes.
Tell me/show me if the shapes are the same/different. Similar instructions are given for the
manual test.

After testing the shapes are washed in soap and water prior to sterilising in antiseptic
solution. They are rinsed and dried before presentation to the next subject.

Exploration Time

This is set at twenty seconds, based on work by Grong (1973) and Bath (1978) who
both found improved scores after ten seconds exploration time.

Procedure

Recognition

Oral - Stimuli - geometric plastic shapes.

Paired forms (see appendix) are presented simultaneously into the blind-fold
subject's mouth. To prevent visual/manual cues, subjects are not allowed to handle materials.
Forms are retained for twenty seconds, and manipulated in any oral fashion desired, before
indication of same/different.

Manual - Stimuli - geometric plastic shapes.

The blind-fold subject is seated at a table with two shapes (see appendix) placed
which are felt for twenty seconds before indication of same/different.

Movement - Stimuli - pipe cleaner figure on card.

The blind-fold subject is instructed to feel two different patterns for indication of same/different.

1. Show the writing hand fist clenched with index finger pointing straight.
2. Adjust the child's arm so that it is parallel to and 2-3" above the table surface. Take the
   fingers towards the tip - index and second finger either side of the top joint against the thumb.
   Practice a few movements to reduce rigidity.
3. Lay cards (with 2 figures) directly in front of the child but at a comfortable distance for tracing
   lines.
4. Take the child's finger and place it at the start of the first section (on the metal disk). Trace
   the line, say: 'We start here', before tracing the first section, and: 'That's the end', when the
   last section is completed. Trace each section smoothly in one second with a momentary
   pause at each junction. (Think one hundred. Stop. Two hundred. Stop etc.)

Scoring
There are 4 points for each section, 1 for each correct response, with a total = 12. ie.

**Association**

**Oral - Stimuli** - geometric plastic shapes.
- General instructions are as before. Three shapes are introduced and the subject has to indicate the different one in the group (see appendix).

**Manual - Stimuli** - geometric plastic shapes.
- General instructions are as before. Three shapes are introduced and the subject has to indicate the different one in the group (see appendix).

**Movement - Stimuli** - pipe cleaner figures on card.
- General instructions are as before. There are three figures for the subject to indicate the different one in the group (see appendix).

**Scoring**
- There are 4 points for each section, 1 for each correct response with a total = 12 ie. Oral = 4, Manual = 4, Movement = 4.

**Retention**

**Oral - Stimuli** - geometric plastic shapes.
- General instructions are as before. The blind-fold subject is presented orally with two sets of shapes in separate sequence to indicate whether they are in the same/different order (see appendix). Time allowed is twenty seconds.

**Manual - Stimuli** - geometric plastic shapes.
- General instructions are as before. The blind-fold subject is presented manually with two sets of shapes in separate sequence to indicate whether they are in the same/different order. (see appendix). Time allowed is twenty seconds.

**Movement - Stimuli** - pipe cleaner figures on card.
- General instructions are as before. The blind-fold subject has to outline the pipe cleaner figure with the pointing finger and keeping the movements in mind - draw them with a pencil on blank card by the side (see appendix). The assessor then draws the figure, (reproduced by the subject) on to the record sheet for marking.

**Scoring**
- There are 4 points for each section, 1 for each correct response with a total = 12. ie.
Oral = 4, Manual = 4, Movement = 4

Integration

Stimuli Materials - one A4 sheet of paper and matching envelope.

The blindfold subject is instructed to:
1) Fold the paper
2) Put it in the envelope
3) Stick down the edges of the envelope.

Scoring

There are 4 points for each section, as detailed below.

1. Folding paper
   4 points if paper is folded accurately in line.
   3 points if paper is folded but not in line.
   2 points if paper is folded, but does not fit envelope.
   1 point for any attempt at folding.
   0 points for no attempt at folding eg. rolled instead.

2. Putting in envelope
   4 points if slid in easily with no retrials.
   3 points if slid in with one trial and experiences difficulty.
   2 points if slid in with more than one trial but does succeed.
   1 point if slid in with only one attempt but does not succeed.
   0 points if no attempt is made at placing in the envelope.

3. Sticking down the envelope
   4 points if both sides of flap are licked and pressed down correctly.
   3 points if both sides of flap are licked but not pressed down correctly.
   2 points if attempt made to lick part of flap (one side).
   1 point if attempt made to lick and press flap, but not the right part (ungummed bit).
   0 points if attempt to lick flap is unsuccessful, no closure is made or retrial.

Haptic Rationale

Significance of Haptic Skills

Haptic processes contribute to knowledge of self and the world. Movement and touch are basic avenues of early learning occurring in response to stimuli which are initially reflex (eg. sucking) and later integrated into organised
movements. These generate sense stimuli and impressions which are stored in the brain, accumulating and interrelating with those from eyes, ears, nose and taste buds.

There are three significant contributions to speech and language development from the haptic channel.

1. **Tactile and Proprioceptive Feedback in Speech Production**

Speech, like other bodily activity requiring coordination of muscular movements, can be accurately controlled only when the speaker has adequate feedback. Two main circuits are used.

The *exterceptive* includes auditory feedback, reporting on bone and air conduction of sound in the ear, and tactile contacts between different vocal organs. The *proprioceptive* monitors tension of muscles and joint movement. The auditory feedback system is comprehensively described by Békésy (1967) and the tactile and proprioceptive by Hardcastle (1969, 1972, 1985).

Experimental methods indicate oral sensory receptors providing feedback in terms of trains of neural impulses controlling speech production. They can be investigated by applying masking white noise to both ears. Tactile and possibly proprioceptive feedback can be altered by anaesthetic techniques (Guttman, 1954; McCroskey, 1958; Weber, 1961; Ringel & Steer, 1963; Ladefogel, 1967; Ringel et al., 1968, 1970). Ringel & Steer studied four speech variables: articulation, duration, average peak level and fundamental frequency, under six experimental conditions:

1. Control
2. Binaural masking noise
3. Topical anaesthesia (applied to surface of the oral mucosa)
4. Nerve block anaesthesia (injecting anaesthetic into lingual and infra-orbital nerves)
5. Topical anaesthesia and binaural masking noise
6. Nerve block anaesthesia and binaural masking noise

The authors state: "under conditions of nerve block anaesthesia, speech is characterised by significant increments in amplitude of performance, lack of rate variability and articulatory inaccuracy. Data agrees with others (Guttman, 1954; Weber, 1961; Weil, 1969) that bilateral lingual block anaesthesia results in more articulation errors than occurs in normal feedback. Experiments rely on subjective impressions.

Electropalatography (Hardcastle, 1969, 1972, 1985) proves invaluable in providing detailed quantitative information on temporal and spatial aspects of tongue and palate contacts. Studies suggest that tactile and proprioceptive feedback are more important than auditory in control of speech production."
2. Haptic Perception

Not only is spatial awareness necessary to speech accuracy but to building ideas of position and structuring feeling. Perhaps a child fails to learn concepts of soft, hard, rough because he cannot perceive/feel the difference. Kamhi (1981) and Kamhi & Johnston (1982) have produced studies in this area but results are confusing and methodology in question as subjects were tested under different circumstances.

3. Personality, Thinking and Feeling

Awareness of self, and the relationship of movement to personality, thinking and feeling is supported from experiences of artists and scientists rather than experiments. Bernard Leach (1973), the potter, said: 'I make a pot with my whole body'. Einstein (1974) observed his scientific thinking did not occur in words but in optical and kinaesthetic images of movement. 'Verbalisation is only the final and very laborious work of editing'.

The relationship between kinaesthetic awareness, thought and feeling is recognised by the psychoanalyst, Szekely (1973) in the 'creative pause' before finding solutions or making imaginative leaps in Art/Science. 'The operation of thought develops from internalised action, and in many persons thought contents are not verbalised but are realised consciously in actions as the kinaesthetic perception of movement or as the optical perception of the movement of foreign bodies'. In speaking and writing creatively, we are merely giving voice to evolving states of thought and feeling.

This follows Piaget (1957), whose stages of thought and behaviour are initiated by motor actions, from which develops internalised representations and operational thinking. Therefore, Haptic information appears as crucial underpinning for thinking, feeling, understanding and speaking - all important components in primary communication. In the secondary system of written language, its integrity is essential for the interpretation of 2-dimensional letters and recognition of forms that are the same but different in status and name -according to orientation (eg: pqbd).

Significance of Particular Skills

It has been stated that the Haptic system is ubiquitous. This assessment is confined to oral and manual areas for the following reasons:
1. Mouth and hand cooperate in spoken and written language.
2. Studies of these areas show moderately consistent results. (Bosma,1967).

Studies of Oral and Manual Sensory function

Rutherford and McCall (1968) indicate oro-facial sensory deficiencies are independent of sensory defects involving hands. Mouth and hand cooperate in exploration by the infant as well as in speech and writing. Knowledge of the independent use of these is
essential to effective liaison between vision, touch and orientation perception. Difficulty may have consequences for intersensory patterning.

Research into oral and manual processing (Bosma, 1967, 1970) uses differing investigations such as form recognition, 2-point discriminations and tactile sensitivity. Form recognition tests are reported as most reliable, showing significant moderate correlations with articulation and hand movement. Impairment of form recognition in intact sensory channels is indicative of central nervous system pathology (Wechsler, 1947; McDonald & Chusid, 1962; Neilson, 1965; Forster, 1973).

It is hypothesised that information on ability to make judgements of object shape from oral/manual presentation will yield insights of these sensory mechanisms. In clinical settings, form recognition is tested by placing keys, pens or coins in the subject's hand. This is not applicable to the oral region. Modifications of stimulus materials and response modes were initiated by investigators. Some have attempted to assess oral form perception of persons with various forms of nervous system, oral structure and communicative behaviour disturbances, using 2-dimensional geometric plastic shapes in an oral-tactile to visual matching procedure.

Findings of these are reported in symposia on Oral Sensation and Perception (Bosma, 1967, 1968). The relation between tasks modified for the oral region and traditional stereognostic testing has not been specified. Results are not consistent, but support the view that persons with organic pathologies (central nervous system/oral structure) and speech defects experience difficulty in these tasks. Variability reflects different methodologies and stimuli materials. Informants were usually allowed to use vision to match objects.

As Weinburg (1968) noted, experiments have not measured oral sensory capacity itself, but intersensory matching. This restricts the information testing procedures might yield. Criticism compounds if a traditional view of the speech servo system is accepted as visual process interaction with oral system tactile monitoring is not implied.

A test providing information about the tactile modality must be limited primarily to that and not be contaminated by other channels such as vision. This has been achieved by eye masking in the present study. After early enthusiasm for oral stereognosis testing (Bosma, 1967, 1968) a lack of clear cut results led to neglect of the method, although Maculuso-Haynes (1978, 1980) recommends its use in articulation disorders. Studies by Ostreicher and Hawk (1982) and Oliver et al (1985) have revived interest supporting this type of assessment as an aid to management.
Directional Movement

Appreciation of directional movement, memory for sequence, and general form is important for learning spatial concepts as well as the pattern of letter shapes in words. Where visual and auditory retention is poor, a child with better memory for movement may use this to improve letter learning for reading, writing, spelling and speaking. This has consequences for teaching individual sounds in speech, as well as for language in general.

Thus, directional movement forms the third part of assessment. There are no published works on this and its correlation with speaking and writing function. However, the Kimura Study (1973) shows that left hemisphere damage results in difficulty with copying a series of manual movements.

There is further support for the relation between speech and certain manual activities when observing hand movements of people speaking. Speech is usually accompanied by gestures, in which the hands move freely in space without touching anything. These are rarely seen during non-speech vocal activity such as humming and are made primarily by the hand opposite the controlling hemisphere. This is usually the left so the right hand makes them but is reversed if speech is governed by the right brain (Kimura, 1973). Findings suggest overlap between the speaking system and that controlling manual activity. This indicates assessment involving mouth, hands and directional movement.

AUDITORY: INTRODUCTION

Auditory capacity is needed to understand and produce meaningful units from the sound, word and sentence patterns which form language. There are many aspects:

- recognition of sound stimuli
- linking sounds with other experiences
- remembering word sequences & rule systems governing sound/word combinations...
- comprehending overall meaning in an integrated context.

Recognition - of basic vowels and consonants, their combination in syllables and the underlying melody and stress which organise meaning, forms the first test section.

Retention - of sound and word sequences in conventional arrangements is essential for understanding. Tests require imitation of word and sentence patterns.

Association - assessment taps linguistic and cognitive links necessary to create language and express cause and effect. Cloze procedures are demanded in sentence
contexts. Using appropriate language forms relies on connection of word and knowledge.

**Integration** - subtests require verbal reproduction of two short stories allowing study of language use in narrative and report. The skills of recognition, retention, association and integration are essential for following speakers' intention and understanding written text. They are vital for school learning and the demands of daily life. This language processing depends on the more complex skill of following extended discourse (eg. a story) and abstracting meaning from content and form.

**Administration** involves checking knowledge of same/different and the concept of repetition explained in examples.

**Scoring** is adjusted for cosmetic reasons to a total of 12 for each of the four sections and a maximum of 48 for the whole area. All scored items are preceded by examples.

**AUDITORY DESCRIPTION OF TASKS**

**Discussion of Stimuli**

The following materials are used.

**General**

A mouth mask to encourage the subject to listen and not look at the assessor's facial movements.

**Specific**

**Recognition Tasks**

1. Lists of sounds.
2. A buzzer, mounted on a plinth, used for rhythm matching task.

**Association tasks**

Sentence list requiring cloze procedures supplying the correct part of speech.

**Retention Tasks**

Separate lists for imitation of words, nonsense words and sentences for each age group [4/5, 5/6, 6/7, 7/8].

**Integration Tasks**

Two short stories for the subject to retell after the assessor has read them.

**Procedure**

**Recognition**
There are 4 subsections with 12 items for scoring. Details are in the appendix. All items are produced in pairs for the respondent to indicate whether they are the same or different.

1. **Vowel and Consonant Matching**

   Sounds used are representative of commonly used phonemes, pure vowels and diphongs.

2. **Syllable Matching**

   Sound combinations used are: - consonant/vowel (CV); consonant/vowel/consonant (CVC); consonant/consonant/vowel/consonant (CCVC); and consonant/vowel/consonant/consonant (CVCC).

3. **Intonation Matching**

   A standard front closed vowel /i:/ is used in the 7 English tunes.
   1. LOW FALL - voice falls from a medium to low pitch.
   2. HIGH FALL - voice falls from high to low pitch.
   3. RISE FALL - voice rises from low to high pitch and falls to low pitch.
   4. LOW RISE - voice rises from low to medium pitch.
   5. HIGH RISE - voice rises from medium to high pitch.
   6. FALL RISE - voice rises from high to low and rises to medium pitch.
   7. MID LEVEL - voice maintains a level pitch between high and low.

4. **Rhythm Matching**

   A buzzer produces SHORT (1 second) and LONG (2 seconds) sound sequences. Each section is preceded by practice items.

**Administration**

The appendix gives details of each section. The subject is presented with two sound sequences to indicate if they are the same or different/like or not alike. FOR EXAMPLE: In section 1, four sound pairs are articulated: ae/u; a/l; e/l; ae/ae. The correct response is given after each presentation. Four pairs are given for practice. Following sections are introduced with practice items only. There are twelve scored items in each four sections:

1. Vowels and consonants.
2. Syllables.
3. Intonational contours.
4. Rhythm sequences.
**Scoring**
Correct responses score 1 point. The total for each section = 12, and for the total area = 48. This is divided by 4 = 12.

**Association**
Items are in the appendix. There are 12 sentences in the group. The assessor reads each one leaving a gap to be filled with the correct verbal response. This requires understanding and use of a variety of word forms.

**Scoring**
Each correct response scores 1 point. The total maximum = 12.

**Retention**
Lists of words, nonsense words and sentences are in the appendix. Elicited imitation is used for data collection. The assumption is that to reproduce the words/sentences accurately, beyond immediate short term memory, the child will have to process the response indicative of his/her linguistic system. To cover the language range between 4-8 years, four lists of words, nonsense words and sentences are used for each age group (4/5, 5/6, 6/7, 7/8 years). Within each, an increase in phonetic, syntactic and/or semantic complexity between 1-12 has been attempted.

**Administration**
Each age group is given a different list of 12 words, nonsense words and sentences, in three sections. Each is presented for the subject’s immediate imitation.

**Sections 1 and 2** - correct responses are noted in phonetic transcription.

**Section 3** - incorrect sentences are transcribed for analysis of:
1. Meaning present - syntax altered. [N.B. syntax includes synonyms].
2. Word order.
3. Omission.
4. Substitution.
5. Meaning altered.
6. Non-processing strategy - i.e. the repetition of the last 1-2 words only.
7. Other.

**Scoring**
Section 1 and 2 (words and nonsense words)
Correct responses are given 1 point. Maximum total for each section = 12.

**Section 3 (sentences)** Scoring for each sentence repetition response is as follows:

- **Correct (no errors)**: 4
- **Minor syntactic change - meaning retained**: 3
- **Major syntactic change - meaning retained**: 2
- **Major syntactic change - meaning lost**: 1
- **Major disruption/no response**: 0

Possible total for the sentence repetition = 48 - 4 = 12

Scoring is based on the view that responses form a continuum from totally correct to incorrect, and that a child who fails to reply accurately may still have derived meaning from the sentence. A binary choice of correct/incorrect is not useful. It is important to assess whether information is abstracted even if the right syntactic structure is not produced.

**Total Score** for 3 sections = 12 + 12 + 12 - 3 = 12

**Integration**

This subtest consists of 2 stories (see appendix). One is presented at the beginning of the section and the other at the end. They have similar semantic levels but differ in syntax complexity.

- **Story 1** consists of simple structures.
- **Story 2** has complex sentences with extended language patterns.

**Administration**

The story, disclosed by the assessor, is retold by the subject. Analysis monitors:

1. Number of propositions involved = 9
2. Location of propositions in correct sequence = 9
3. Grammatical maturity of each proposition = 9
4. Intactness of information in each proposition = 9

**Scoring**

Each area of analysis has 9 propositions = 9 points. Therefore:

- 9 = Propositions
- 9 = Location
- 9 = Syntax
- 9 = Intactness

**Possible Total** = 36 for each story. 36 + 36 = 72 - 3 = 12
AUDITORY RATIONALE

Theories of Recognition

Information processing begins with identifying input. Auditory recognition is the capacity to distinguish between phonemes, or individual sounds used in speech. Therefore, the assessment begins with phoneme/sound matching tasks.

Phonemes differ according to sound context. Some speech sounds are alike. Others have characteristics that set them apart and make them appear dissimilar. Consider the words: seek and bank. Although differing in only a single phoneme, they are rarely confused being distinguished by the wide phonetic difference between initial s and b. Now examine the pair wreath and reef. These may be muddled because of the phonetic similarity between final th and f.

Ability to discriminate sounds advances rapidly in some children, but more slowly in others. It is generally fully developed by eight years (Weisman, 1960), but should not be confused with obtaining meaning from words. This is conveyed through the total context of words, phrases or sentences, supported by voice, gesture and facial expression.

Auditory processes evolve sequentially on at least three levels. First is acuity the ability of the ear to collect sounds and transmit them to the nervous system. Second is understanding - the capacity to extract and interpret meaning from the sound patterns transmitted to it. Third is discrimination and retention - the facilities that permit differentiation of each sound from another, holding each in mind long enough to make accurate comparisons (Bangs, 1956).

This competence is assessed in sound and syllable matching. Memory is given low loading with only two stimuli for comparison.

Many researchers comment on recognition ability and its importance to language development (Strauss & Lehtinen, 1947; Bateman, 1968, 1969; Zigmond, 1969; McCleod, 1975; Rubin, 1986). Rosenthal (1972) reports that language disordered children have more difficulty discriminating speech sounds that are different because of temporal cues /t/ and /f/ than between those dissimilar because of frequency cues /s/ and /f/.

Hirsh (1959) and Edwards (1973) note problems in order discrimination with pairs: boots, mist, mists, take, ask. In these the listener must distinguish primarily on the basis of the order in which the last two sounds occur. In mists and mist the tongue is in approximately the same position for /s/ as it is for /f/ with similar spectra. These sounds are distinguished on the basis of transition duration. Temporal intervals as large as 15-20 m.sec. are needed for this perception, suggesting that order judgements require more central mechanisms than those associated with the peripheral auditory system.

This research indicates the importance of temporal, frequency and other cues in sound processing by providing tasks that cover these dimensions. (see appendix).

However, it is insufficient to consider sound processing alone. Rhythm, stress, intonation, pitch and pausing provide the reference points to which words can be attached. Tests include matching intonation and rhythm sequences.

Although speech is a sequence of elements, which are interdependent, the relationships between these are not of equal force. There has to be a 'superordinate' process to give meaning and organisation to the separate elements. As applied to language such a view calls for the use of transformational devices allowing for reordering and interruption of surface structure features (Neisser, 1967).

For example: the girl, who was in the front row, was chosen to take the message. The words girl, take, message, form the basic subject, verb, object code and are given the greatest stress, because they are the important content ideas of the sequence. It is the rhythmic underpinning of stress on important elements/words and pitch movements that brings out the significance of word groups and relates them together.

Martin (1972) presents a strong case for the conceptualisation of rhythm as
hierarchically structured units. He believes it is a misconception to believe rhythms imply periodic behaviour. They are hierarchical in organisation. Such a view has implication for spoken language and analysis of the perceptual process. This would allow input sounds to be temporarily patterned and the perception of initial elements enables later elements to be anticipated. Kracke (1975) likens this to a Gestalt strategy, where patterns are perceived without concentration on individual elements.

Therefore, children with poor communication may not have the acquired rhythm hierarchies to code sequential position and perceive, analyse and develop language to competent levels (Kracke, 1975). Whether deficits stem from basic rhythmic impairments or inability to deal with hierarchically ordered material is not clear.

However, rhythm is fundamental to comprehension and production of language and considered important for assessment.

Comment

Modern theories of perception (Local, 1993: Newcastle University: In Press) link perception of speech sounds to rhythmic patterns and see the basic unit as the syntagma (phoneme clause), which is a stretch of speech sound of several syllables with one stressed. At the level of grammatical structure, it could be hypothesised that stressed syllables coincide with content words and appear as critical features in processing meaning.

Thus, recognition is a complex task involving abilities to discriminate sound, pitch, rhythm and time stress. These are all included in assessment.

Theories of Association

The ability to see relationships, similarities and connections between things is the basis of much human thinking, language and learning involving abstraction.

This develops alongside language so that talking and thinking grow together. Objects, situations and events vary and the child needs to group things which are similar so the idea which connects them can be thought about.

Thus, association covers a wide field, but is important in linking incoming stimuli to already acquired knowledge. This involves the ability to form new relationships. For example: grass is green but sugar is ----(white/brown). Here, the connecting idea is tincture, which requires knowing word/colour links and that certain objects have a stable pigment relationship. Association depends on making the right cognitive and linguistic links forming the base for reasoning, critical thinking and problem solving. It is the area between reception and expression and crucial to information processing.
Behavioural psychologists (e.g., Piaget, 1960) recognise and differentiate a central processing area, but find it difficult to describe its activities. Remedial specialists (Bush & Giles, 1977) realise the importance of finding more precise data regarding this area of function. Therefore, subtests demand responses throughout the range of word forms (adjectives, nouns, verbs, prepositions, adverbs, conjunctions). Linguistic and cognitive information is supplied.

**Theories of Retention**

The ability to link ideas and words [association] involves retention of stimuli, in order to organise them appropriately. Some children have difficulty remembering what is heard long enough to repeat it immediately. Repetition of meaningful sentences is less difficult than empty sounds such as digits, random words or nonsense syllables. Word sequences are motivated by the semantic connection between them.

Three year olds, who can only repeat 2/3 unrelated words, are able to produce and comprehend long sentences because of significant verbal links. Pilot runs with pre-schoolers established that sentences were easier to copy than unrelated word lists (Sage, 1988).

In imitation, we analyse phonetically/semantically a rapid auditory memory trace, which fades quickly. Only the vaguest impression is gained by those who have problems in processing the acoustic stream. According to Olson (1973), memory span may reflect ability to handle verbal information and not be a measure of processing capacity. It expresses knowledge of the signal relying on selecting distinctive features of the acoustic stream and using perceptual strategies (Watkins & Watkins, 1980).

Studies have labelled physical imitation as prerequisite to language development (Rees, 1975; Moore & Meltzoff, 1978; Snyder, 1978) showing ability to represent behaviour of others internally.

Hagen, Hargrave & Ross (1970) suggest incoming information is processed at a number of levels, and degree of retention depends on depth of analysis received. Young children are unable to construct organisational schemes that aid recall; strategies of rehearsal and chunking are age related. Memorization only gradually emerges from cognitive encounters with external stimuli, which includes but goes beyond perceptual contact.

Huttenlocher & Burke (1976) suggest developmental increase in span of recall is associated with the speed subjects identify incoming items, and not improved storage capacity. This may merely reflect increasingly secure knowledge of the signal. Research indicates that children with language difficulty present poor auditory recall of sequential information (Menyuk, 1964; Stark, Poppen & May, 1967; Das et al. 1979; Winters & Semcuk, 1986; Merrill & Mar, 1987).
Stanton (1976) & Owens (1989) emphasize the strong effect of short term memory in comprehension so it seems important to devise assessments that require information beyond immediate capacity for observing strategies. For example, as immediate memory is restricted in length of time and capacity, a mnemonic may be useful for recall. The French for 'rabbit' is 'lapin' and a memory aid makes it easier to retrieve ['lapin' - think of 'lap' - imagine a rabbit in your lap - recall 'rabbit'].

Elicited imitation is used as an established method of data collection. (Menyuk, 1964 and Slobin et al., 1968). The assumption is that to reproduce beyond immediate short term memory, the child will have to process the sentence (syntax, semantics etc.). There may not be correspondence between adult linguistic rules which compose the utterance, and the development of the child's grammar. Thus, processing will be different from a person sharing the same linguistic conventions as the producer of the sentence. It is believed the reply reflects the linguistic system, and there is a systematic pattern to the changes which might occur.

Below a certain length (either in words, morphemes) and level of derivational complexity, a sentence may be within the memory span of the child, and yield no useful data. Similarly, a sentence beyond analytic and/or retentional capacity may produce an unprocessed response reflecting only phenomena of recency, high frequency word etc. familiar in unstructured (random, nongrammatical) word string recall.

To cover language capacity between 4-8 years would necessitate an unwieldy number of sentences rendering the test impractical. For this reason there are 4 lists of 12 sentences, each utilized with a particular age group. Within each an increase in syntactic and/or semantic complexity between 1-12 has been attempted.

Choice of structures has been determined by consultation of data on order, age of acquisition of particular features of syntax morphology by children, both from studies based on naturalistic evidence and experimental findings (Brown & Hanlon, 1970; Beilin et al., 1975). It has been taken that a reasonable base syntactic structure is the simple, active, affirmative declarative (SAAD) sentence. Given this, there are ways in which it could be made more difficult to process in an immediate elicited imitation task. The first might be retention of syntactic structure, but increase in number of morphemes, e.g. noun - sing + verb - pres - noun - plural + verb - past; or - noun - plural + verb simple pres + noun sing (i.e. subject/verb/object) etc. It has been demonstrated (Miller, 1975) that morpheme count is more significant than syllable and so the former is the factor controlled.

The second dimension might be variation of syntactic structure. In devising lists, the assumption is the more operations applied to the basic SAAD sentence to derive the next structure, the more complex the resultant sentence. Hence, derivation of a yes/no question structure from the SAAD sentence: 'The doll is eating' altering only the auxiliary to the initial
position, may produce a less complex one than a wh-question transformation of the auxiliary
plus addition of the wh-question requiring change of the auxiliary plus addition of the wh-
question marker, or a tag question reconstruction.

It is not claimed that a sentence involving five 'steps' from the SAAD structure is more
complex than one applying only four. Thus pilot studies were required to establish
from performance data the rank order of sentences within a list (Sage 1986-1990).

One cannot separate out entirely syntactic and semantic factors. However, it appears
reasonable to attempt to construct stimulus sentences where one is minimised, the other
maximised for supposed complexity. On this basis sentences have been included which 'test'
semantic processing status. Various classes of verb have been contrasted (eg. John helped
Bill to leave), where surface syntactic structure is maintained, but semantic relations varied:
polar adjectives contrasted, definite versus indefinite versus demonstrative, noun phrase
determiners.

Thus, subtests include a range of memory tasks. There is a section for nonsense
words to study short term memory and sound accuracy. As a basis for comparison, single
meaningful words are included to look at the semantic effect in retention. This is developed
in sentence repetition tasks demanding processing of syntax and semantics.

Research indicates that elicited imitation is a useful tool for assessing language
processing. It gives opportunity to study the strategies employed, and produces economical
data for assessment of speech and language status. This standard method allows
across group comparisons.

**Theories of Integration**

Story retelling encourages productive performance for studying narrative discourse -
an important area in the oracy to literacy shift.

An integrated task demands skills of recognition, retention, association and
complex organisation. A story requires the ability to put together details into a meaningful
whole. Expressing speech sounds, executing the linear scheme of a sentence and
remembering words for the purpose of speaking are the overt processes involved. However,
there are at least two types of covert patterning - linguistic and cognitive. Children transform
the story into their own words, reflecting their level of syntactic and vocabulary development
(linguistic patterning). In addition, they selectively recall features of the original story and
impose their own organisation on them (cognitive patterning). The retelling does not
directly involve short term memory, which is usually thought of as involving a time span
of up to twenty seconds (Baddeley, 1986). It engages long term or intermediate memory, if
one adopts Wickelgren's (1970) definition, as a time constant in the range from two
minutes to several hours. If short term memory is deficient it is interesting to observe if
this can be by-passed in story reproduction.
Caution is needed in interpreting responses. Sabatino (1969) measured discrimination of speech sounds and words as well as retention of digits and sentences. Rees (1973) concluded that it was difficult to know if tasks assessing perceptual function were actually a test of language knowledge. This remains problematic because it is impossible to assess a child with no input experience.

Stanton (1976); Paris & Lindauer (1976); Schlesinger (1977); Schmidt et al (1984) and Roth (1987) emphasize the necessity of acquiring active cognitive strategies for processing information. Therefore, interest is in observing learning approaches rather than normed data.

Jarmen & Das (1977); Jarmen (1978); Das et al (1979); Shafer & Peeke (1982); Lincoln et al (1985) and Merrill & Mar (1987) show marked differences in auditory processing performance of L.C.D. and N. populations so it is hypothesized that these will exist in the present study.

Thus, there is every justification for examining sound processing in some detail.

Speech and language therapists have had sound and syntax analysis emphasized in training and have developed individual programmes to remedy deficiencies [eg: Metaphon (1993); Derbyshire Language Scheme (1992)]. We now need to understand how problems in auditory processing can be dealt with in real contexts.

**VISUAL INTRODUCTION**

Language depends on making links between words/gestures and objects, people and events in the daily environment. Mapping what is heard to what is seen becomes important, first in three and then two-dimensional contexts of pictures, words and numbers.

Ability to recognise visual stimuli, link them to other experiences, remember their sequence and orientation and integrate these meaningfully is vital for learning.

**Recognition** - the ability to perceive and interpret what is seen and understand actual and abstract representations forms the content of the first section.

**Retention** - of symbols and coding of sequence and orientation is essential for reading and writing and subtests include both these aspects. Non-symbolic and symbolic stimuli is introduced for observing differences in performance.

**Association** - of events in pictures and writing is involved in school experience. Does the child recognize that a glove he is viewing goes on the hand? Does he know that ball and bat can be in the same category as tennis ball and racquet?
Unless this is established it will be difficult to abstract central meaning from pictures. The child who cannot achieve this, labels items instead of gathering information to understand the gist of the representation. The ability to associate underpins language for explaining, reporting detail, predicting (from the present context), hypothesising and expressing feeling. It requires linking of present context to remembered experience. Logic and problem solving are involved as well as matching auditory and visual images. Competences are tapped in tasks requiring response to visual relationships dependent on same/different attributes.

Integration - activities bring together recognition, association and retention in a complex picture exercise demanding appreciation of central meaning.

Therefore, all components of visual processing are crucial to development of abstract concepts particularly those involving time and space. They are vital to understanding the world we live in, think and talk about.

Materials

These are based on visual experiences that are part of school and daily life. These are pictures, numbers, letters, words, shapes and forms.

Scoring

This is adjusted to 12 points for each four sections making a total of 48.

Administration

This depends on knowledge of same and different and the concept of repetition established examples.

VISUAL DESCRIPTION OF TESTS

Discussion of Stimuli: Picture Materials

Consultation was made with Bernard Klinger, Psychologist at the German Institute of Child Psychology and Psychiatry - University of Tubigen. He has researched assessment materials for children with communication difficulties. Findings suggest that pictures using bold outlines with maximum colour contrast (eg: black/white) between these and the background are most efficient (Klinger, 1974). Photographs are discouraged because of shadowy blurred features. Pictures using more than four colours prove distracting. Klinger points out that children with language problems are confused with images of green apples if they are used to eating red ones.
Visual display is important. Some objects are more easily recognised when presented slightly angled from above. Pilot runs (which Klinger observed) confirm this with objects such as book, chair and key (Sage, 1986-90), suggesting some angles show the shape of an object more clearly.

As a result, black and white pictures of common reference are used with features presented in the way children's books and pictures portray them. It should be noted there are cultural implications involved in the use of drawings and the need for experience of conventions used in artistic representations [i.e. language speaker/artist and receiver/viewer must share the same conventions].

After discussion with Klinger and an orthoptist drawings are produced in linear format. This enables observation of eye movements and fixation strategies as important factors in dealing with visual displays.

Tests are presented in book form with each item on a different page. Retention tasks have additional individual symbols, which are reproduced in the same sequence and orientation as the removed stimuli. Separate pictures and strips are used in the integration tasks.

**Procedure**

**Recognition**

Twelve picture matching tasks are presented. There are four colour ones (colour coding is used in management of dysphasia/dyspraxia/dyslexia). Matching of forms, individual letters, numbers, letter and number sequences occur in the other eight tests. Items present confusability in direction and orientation (e.g. p, b, d, q). This knowledge is important if using visual symbols in teaching.

**Administration**

An item, in a left hand box, is pointed out and the subject asked to select, from a choice of four, the one that is the same.

**Scoring**

There are twelve items each scoring 1 point with a total of 12 (see appendix).
This area deals with visual relationships. There are four items in three sections preceded by two examples.

**Section 1**

**Odd in Sequence**

The subject has to select the odd item in a sequence of four. *Example*: plate, glass, cup, mug; Which one doesn't belong? (plate).

**Similar in Sequence**

The subject is shown an object picture in a boxed area and has to select one similar from four possible items. Look, (point to the box) and find one like it.

**Pair in Sequence**

The subject is shown an object picture in a boxed area and has to find one that links with it from four possible alternatives. Look, (point to the box). What goes with this? The pictures are linear so the assessor may observe visual scanning. *For example*: watch for left to right eye movements or haphazard pattern of gaze directed to the page.
**Scoring**
Each item scores 1 point. The total maximum = 12.

**Retention**
The subject is presented with a sequence of two and later three symbols on a page. These are pictures, nonsense forms (having no obvious verbal label), numbers and letters. All stimuli have more than one orientation. The display is scanned for five seconds before removal. In front is a confusing group of four to six symbols. The right number, sequence and orientation have to be selected to recall the original display.

**Administration Example**
We're going to look at pictures. Here are two fish (place on the table), one going one way (indicate) and one the other (indicate). (Repeat with pictures of two different facing jugs). I'm going to show you a picture with these on for 5 seconds. You've got to pick out the cards to make one like mine, in correct order, each picture the right way round. The subject proceeds through two practice items and follows on with twelve test displays.

**Scoring**
Each response scores 1 point for correct sequence and 1 for orientation. The possible total = 24 - 2 = 12.

**Integration**
There are three activities involving pictures/picture strips.

1. **Sorting**
Two pictures are presented: 1. A bathroom scene. 2. A meal table.
The subject is given 8 cards to sort into groups, eg. fork - meal table; soap bathroom. There are 2 practice items.

2. **Story Sequence**
The subject is given a jumbled picture sequence to sort and place in the right order. There are 4 pictures. The example story is writing a letter and the scored sequence is having a bath. There is one possible sequence to prevent ambiguity.

3. **Complex Picture**
Pictures simulating life situations are resources to stimulate language. Recognition and retention of detail are necessary to generate verbal percepts/concepts.

**Tasks (Recognition and Retention)**
**Materials**
A large picture (A4 size) of a house/garden/street scene.
7 strips, containing 4 small pictures.

**Recognition Task**
The subject is presented with a large picture and 7 strips of 4 small ones. The first is an uncored example. A strip presents the same item (eg. door) but each small picture is detailed differently. The one seen on the large picture is selected.

**Retention Task**
The subject is asked to look at the large picture for 30 seconds before removal. Seven strips, with four small pictures of the same item detailed differently, are presented separately. One is a practice item. The subject has to indicate which (of the possible four) is the one depicted in the large picture.

**Scoring**
Section 1 = 8; Section 2 = 4; Section 3 = 6 (Recognition) + 6 (retention) = 12. The possible total = 24 - 2 = 12.
VISUAL RATIONALE

The visual channel includes processes of receiving, interpreting, linking, retrieving and integrating stimuli. When looking becomes assimilated with seeing, visual perception takes place. This is involved in most actions and is vital to learning word concepts, reading, writing, spelling and calculations. Frostig (1967) notes five abilities:

1. **Visual motor co-ordination** - co-ordination of vision with body movements.
2. **Figure ground perception** - selection from a mass of stimuli.
3. **Perceptual constantcy** - perception of objects possessing unchanging properties.
4. **Position in space** - perception of object space relations.
5. **Spatial relationship** - perception of object position in relation to self and others.

There appears to be developmental patterning in visual perception. Some scientists believe that ability for gross segregation of figure from background is present at birth, but form perception requires an extensive period of learning (Bangs, 1956; Ellis & Young, 1988).

Therefore, children may be expected to discriminate angular and oval objects before circles and ovals. Those below six years had greater difficulty judging mirror images than upside down figures (Gibsons, 1962). In reading readiness tests, they will recognise the one which is different if upside down, but may fail if the figure faces left when others are right.

The Gibsons (1969) cite spatial orientation as an important aspect of perceptual organisation which initially is irrelevant because the child will see people and objects in a wide variety of orientations over time.

Therefore, recording information about orientation on one occasion will not help recognition of another. When the child starts school and learns to read this becomes relevant. Many letters and numbers have the same form but differ in spatial orientation which alters their meaning value; eg. M W, N Z, p b d q, n u, l j, h y, 6 9 etc.

The evidence is experiments (Gibson, Pick & Osser, 1962) in which children 4-8 years had to match an outline figure to a series of choices, some identical to the standard and others varying along one dimension, including orientation. The major age differences were in orientation with older ones making fewer errors. This appears strange. When a child has to recognise a toy, it may not help to remember orientation of previous encounters. This is a question of memory rather than perception. However, for immediate activities this is essential - picking up toys/building bricks - is impossible unless the child takes in object orientation. If cognitive selection occurs, it is likely to be for what to remember than what to perceive.

Gibson’s experiment was complex involving memory and perception.
Studies using simple displays (Over & Over, 1967; Bryant, 1969), show that children can distinguish orientation well, but younger ones remember less effectively. Therefore, they appear to treat it as relevant to immediate behaviour and irrelevant to future needs. Bryant (1969) shows that children’s memory for orientation is specific. They recall horizontal, vertical and oblique lines when these have to be compared successively to other obliques. A binary match - mismatch code is adopted in orientation and position comparisons, which tells them whether parallels and objects are in line with each other or not. This code solves some discriminations but not others and would not help the child to read.

Such results suggest that perceptual development within modality and dimension involves changes from one code to another. Therefore, only through maturation and trial and error does direction and distance become meaningful.

There is a general type of developmental sequence related to acquisition of spatial concepts and their word symbols. Children learn ‘in’, ‘on’ and under before discriminating right and left. The latter appear to be associated with written language acquisition which is dependent on concepts of top, bottom, left and right.

Visual impairment may affect judgement. A child with limited or no peripheral vision may fail to match large pictures because he/she does not see outer portions where differences appear. The eye or its pathway may be disordered leading to poor discrimination of parts of a whole or spatial relationships.

Difficulties may relate to past encounters, previous sets, physiological experiences, condition of the visual pathways and the nature of the message. They are not identified easily. A nine year old child can look at, and name a picture square, but be unable to it copy accurately. Does he draw it as perceived? Does he have an accurate visual image but inability to convert this to motor skill?

Comment

There is need to obtain data for management of learning difficulty as Fagan (1968); Brown (1974) and Mosley (1980, 1981) have found significantly different results when normal comparisons are made on visual discriminatibn and memory tasks. Roth (1987) points out there is much to learn about these aspects.

Language and communication depend on ability to process and integrate information from all sense channels. It is necessary to separate this out to understand learning needs and arrange suitable input.

Studies by Harter et al (1971), Libkuman (1972), Richman et al (1978), Baddeley, Logie & Ellis (1988) and Snowling (1991) have noted differences in processing performance when comparing N with LCD populations. This assessment aims to provide:

1. An audit of information processing on haptic, auditory and visual channels.
2. A framework to enable useful observation of learning strategies.
3. A data bank of activities that might cause difficulty in learning.

**Summary**

It is perhaps significant that work on processing amongst the learning disabled population is weighted towards developmental reading disorders. This is not surprising when one considers that traditionally learning has been measured in terms of literacy ability. Our present interest is the relationship between oracy and literacy so it is hoped that research in cognitive processing will now relate specific issues in perception, retention, association and integration to narrative thinking.

This sequencing of ideas underpins both oral and written forms and is the core area tapped by the haptic, auditory and visual assessments of this research.

Snowling's (1991) comprehensive review of this area in relation to reading demonstrates that cognitive deficiencies play a significant part in learning difficulties. This study aims to extend this work by bringing together perspectives from oral and written performance of children.
## APPENDIX

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<tr>
<td>C - Profile 2 Sheets</td>
<td>92-109</td>
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</tbody>
</table>
THE LANGUAGE COMMUNICATION PROFILE

The aim of the profile is to collect quantitative & qualitative data on conversation and plot performance on the oracy-literacy continuum as a basis for developing language for learning.

Since the National Curriculum English Key stage 1 targets conversational abilities the profile provides a valuable tool for building teacher/therapist awareness of the significant aspects of communication requisite for narrative discourse which is the skill that takes oracy into literacy. For example, if a child demonstrates a lack of requesting behaviour it signals a likely difficulty in asking for help or information to build understanding and knowledge. Absence of this strategy impedes topic initiation and continuation which underpin all forms of narrative discourse.

Looking at a child's communicative competencies within group learning activities may be a useful way of setting targets for language development. Data from studies (Sage, 1979—86) suggests that a total communication approach to learning results in academic gains.

USE OF THE PROFILE

The detailed Language Communication Profile is not a practical reality for normal classroom use. Recording and transcribing "talk" is time consuming. Analyses demand a grasp of the different aspects of communicative behaviour so requiring experienced observers to monitor simultaneous activity. However, the framework is useful for teaching professionals what to perceive and the use of the profile achieves a "mental set" for general classroom observation of talk. Therapists need a tool for developing group based assessments and supporting language for learning. Teachers can use the profile as a framework for event sampling which does not require detailed analyses from transcriptions but nevertheless contributes information for classroom planning.

Thus, the Language Communication Profile can be used flexibly according to need and provides the focus for a quick screening or a more detailed observation of communicative behaviour. It allows therapists and teachers to develop a common framework in language education.
LANGUAGE COMMUNICATION PROFILE

SUBTESTS:

1 = correct sounds
2 = correct sentences
3 = topic initiated
4 = topic continued
5 = request
6 = open question
7 = closed question
8 = contributory comment (i.e., one not continuing topic initiated)
9 = maintenance comment
10 = positive face
11 = negative face
12 = meaning conveyed
13 = meaning not conveyed
<table>
<thead>
<tr>
<th>Intent</th>
<th>Language Function</th>
<th>Language Skills</th>
<th>Clarity</th>
<th>Conduct/Convention</th>
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<tr>
<td>Face, Moves</td>
<td>Conversation</td>
<td>Sentence</td>
<td>Sound</td>
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</tr>
</tbody>
</table>

**Sample Length:**

Program C
HAPTIC
18 Plastic Shapes and 1 Mask
BOOK 1
HAPTIC MOVEMENT
Diagram of Plastic Shapes used for Haptic Oral and Manual Tasks
Haptic Record Sheet

AUDITORY
Auditory Recording Sheets
Auditory Recognition
Auditory Association
Auditory Retention
Group 1 Words/Nonsense Words/Sentences
Group 2 Words/Nonsense Words/Sentences
Group 3 Words/Nonsense Words/Sentences
Group 4 Words/Nonsense Words/Sentences
Sentence Imitation Analysis
One Buzzer

VISUAL
BOOK 2
VISUAL RECOGNITION/ASSOCIATION
BOOK 3
VISUAL RETENTION/INTEGRATION
Visual Integration Picture
Visual Analysis
Summary Sheet
PLASTIC SHAPES (ACTUAL SIZE) USED FOR HAPTIC ORAL AND MANUAL TASKS

20 mm  10 mm  25 mm  10 mm  15 mm  10 mm  Diameter - 25 mm  0 - 10 mm  0 - 10 mm  Height
MAPIC MODALITY. Areas: 1. oral. 2. hand. 3. movement.

DIMENSIONS
1. Recognition
2. Association
3. Retention
4. Integration

Materials
1  2  3  4  5  6  7  8

PAPER HANDLING
1. Recognition
2. Association
3. Retention
4. Integration

- subject blindfold. Presentation of Pairs like/unlike.

- subject blindfold - presentation of threes - odd in sequence.

- subject blindfold - 2 sequences presented - like first one or not alike.

- folding paper - putting in envelope - licking envelope.
I'm going to say 2 sounds. You tell me if the sounds are same/different - like/not alike.

1. **Vowel and Consonant Matching**
   - e.g. 
     - u - i
     - e - I
     - a - e
     - b - s
     - p - f
     - d - d
     - r - r
   - 1. I - e u - u
   - 2. n - d
   - 3. s - t

2. **Syllable Matching**
   - e.g. pov - tov
   - to - to
   - k3 - k3
   - ga - ka
   - 1. m - V - g V
   - 2. rat - vat
   - got - gut
   - f - flip
   - sh - sh

3. **Intonation Matching**
   - 1.
   - 2.
   - 3.

4. **Rhythm Matching**
   - e.g. .. - .. - .. - .. - .. -
   - 1. .. - .. - .. - .. - .. -
   - 2. .. - .. - .. - .. - .. -
   - 3. .. - .. - .. - .. - .. -

**Total = 48 / 4**
AUDITORY ASSOCIATION

e.g. You eat from a plate. You drink from a .................

1) Grass is green. Sugar is .........................

2) A bird flies. A fish ............................

3) Cats have fur. People have .....................

4) Planes move fast. Boats move .................

5) A man has a house. A bird has a ..............

6) People get up in the morning. People go to bed ..........

7) Butter goes on bread. Tea goes ................. a cup

8) John is a boy. Mary is a ......................

9) Children have parents. Flowers have ..............

10) The rain is pouring. The sun is .................

11) Cars run on roads. Trains run on ...............

12) Houses have builders. Books have ...............  

Score 12.
AUDITORY RETENTION

Direction: I'm going to say a word, and we're going to play copycat, you just say what I say.

Example: I say four, and you say ...........
       I say toe, and you say ...........

Words, Group 1. 4/5
1) bee
2) sew
3) more
4) ate
5) ice
6) Anne
7) pop
8) fish
9) mop
10) cocoa
11) river
12) sunny

Nonsense Group 1. 4/5
1) pa
2) sa
3) si
4) ag
5) ip
6) of
7) pag
8) vut
9) fes
10) 'la:ə
11) 'zesi
12) 'fəuz
**AUDITORY RETENTION**

**Direction:** I'm going to say a word, and we're going to play copycat, you just say what I say.

**Example:** I say *four*, and you say ...........
I say *toe*, and you say ...........

<table>
<thead>
<tr>
<th>Words</th>
<th>Group 2</th>
<th>5/6</th>
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<tbody>
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<td>1)</td>
<td></td>
<td></td>
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<tr>
<td>12)</td>
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<table>
<thead>
<tr>
<th>Nonsense Words</th>
<th>Group 2</th>
<th>5/6</th>
</tr>
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<tbody>
<tr>
<td>1) tav</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) sip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) sof</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) 'tæpɔ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) 'eIpɔ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) 'ɛmə</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7) 'oIpɔ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8) 'oIpɔ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9) 'ɛtʃən</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10) 'ɛr tɛku</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11) 'ɪ-steɪ ən</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12) 'ɪ-nəpɛŋ</td>
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</table>
AUDITORY RETENTION

Direction: I'm going to say a word, and we're going to play copycat, you just say what I say.

Example: I say four, and you say ............
         I say toe, and you say ............

Words. Group 3, 6/7
1) paper
2) fisher
3) noisy
4) puppet
5) faces
6) mummy's
7) buttercup
8) tidiness
9) coffeepot
10) teenager
11) cinema
12) holiday

Nonsense Words. Group 3, 6/7
1) 'ænf
2) 'iːna
3) iv'ag
4) om'un
5) 'pæ fə ni
6) no ʃə ni
7) ə'sə se
8) ʃə to 'læk
9) ʃʃә ':tri
10) 'pæ təpæk
11) ʃə ʃə vi
12) ve 'təməʃf
AUDITORY RETENTION

Direction: I'm going to say a word, and we're going to play copycat, you just say what I say.

Example: I say four, and you say ...........
I say toe, and you say ...........

Words. Group 4. 7/8
1) offer
2) easy
3) appear
4) attire
5) asleep
6) telephone
7) motoring
8) package
9) potato
10) decided
11) photography

Nonsense Words. Group 4. 7/8
1) pə 'sa
2) 'fitu
3) 'grzi
4) su'sa
5) ni'ke
6) və 'fanip
7) 'gəmənəf
8) guvəľlu
9) dəfistom
10) təmək 'ku
11) 'sikəməɾət
12) rə ox'arək
### AUDITORY RETENTION - continued

#### Analysis

<table>
<thead>
<tr>
<th>Meaning</th>
<th>Word Order</th>
<th>Omission</th>
<th>Substitution</th>
<th>Meaning</th>
<th>Non processing strategy</th>
<th>Others</th>
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<tr>
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<td></td>
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</tbody>
</table>

#### Sentences. Group 1. 4/5

1) This doll likes the icecream.
2) That fish swims fast.
3) It's the bear the lion ate.
4) The lorry is being followed by the bus.
5) Some dogs don't drink lemonade.
6) Does your sister know that lady?
7) What is that cat chasing.
8) Is my Dad cooking the tea?
9) A red ball hit your round window.
10) The man who saw our little house was big.
11) Bill went into the kitchen and Mary sat on the chair.
12) It pushed the girl after it had eaten her dinner.
### Sentences. Group II. 5/6

<table>
<thead>
<tr>
<th>Number</th>
<th>Sentence</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>My little lorry carried an old shoe.</td>
</tr>
<tr>
<td>2</td>
<td>These funny animals eat in the night.</td>
</tr>
<tr>
<td>3</td>
<td>It was the fluffy doll the soft teddy kissed.</td>
</tr>
<tr>
<td>4</td>
<td>The fat boy was smacked by his cross teacher.</td>
</tr>
<tr>
<td>5</td>
<td>This lucky girl had not had a bad cold.</td>
</tr>
<tr>
<td>6</td>
<td>You did want to build a garage, didn't you.</td>
</tr>
<tr>
<td>7</td>
<td>When is your Mum going to come.</td>
</tr>
<tr>
<td>8</td>
<td>Say what you bought at the fair.</td>
</tr>
<tr>
<td>9</td>
<td>The long red train passed our clean big station.</td>
</tr>
<tr>
<td>10</td>
<td>The shop where I saw the dress that was nice was shut.</td>
</tr>
<tr>
<td>11</td>
<td>A quiet burglar went into the kitchen and into the pantry.</td>
</tr>
<tr>
<td>12</td>
<td>That lady who owned the little car ran quickly along the street.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hearing present</th>
<th>Word Order</th>
<th>Omission</th>
<th>Substitution</th>
<th>Meaning altered</th>
<th>Non-processing strategy</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Analysis**

- **Hearing present**: Indicates if the word was correctly heard.
- **Word Order**: Indicates if the words were in the correct order.
- **Omission**: Indicates if any words were omitted.
- **Substitution**: Indicates if any words were replaced.
- **Meaning altered**: Indicates if the meaning was altered.
- **Non-processing strategy**: Indicates if any non-processing strategies were used.
- **Other**: Indicates any other relevant information.
AUDITORY RETENTION - continued

1) The doll was bathed last night.

2) Your pen was taken by the window.

3) It was the elephant who ate the bone.

4) Those pretty girl's dresses had not had any holes in them.

5) Didn't you think that you wanted a wash.

6) Why have the plates fallen down.

7) All the happy children went for a tiring walk.

8) We found the baby with the longer hair.

9) Dad couldn't think of what her name was.

10) They have brought the car which has the bent wheel.

11) If it moves shout, he said.

12) The bee flew through the room and sat on the window before going to sleep.
<table>
<thead>
<tr>
<th>Analysis</th>
<th>Meaning altered</th>
<th>Word Order</th>
<th>Omission</th>
<th>Substitution</th>
<th>Meaning altered</th>
<th>Non-processing strategies</th>
</tr>
</thead>
</table>

**Sentences. Group IV. 7/8**

1) John's mother phoned Jill's father up earlier.

2) Those bigger fish were swimming slower than mine.

3) Wasn't it the car the bus hit.

4) Who is the person who wasn't bitten by the green cat.

5) Lucy wouldn't have been able to do those sums anyway.

6) They promised not to forget to try to feed her mouse his fish.

7) Because the lights didn't work the people couldn't see.

8) Is Uncle Pete coming to cut the hedge, and Uncle John the grass.

9) Which is the ice cream which has a cherry on top that fell down.

10) Even the three very sad dirty faced boys were laughing.

11) Who's the child the teacher saw smack the lady's smallest dog.

12) After seeing his Aunt in hospital, he went to the sweet shop before going back to school late.
Story 1. There's a knock at the door. Tina the little girl goes to the door. It's her Auntie Margaret there. Auntie Margaret is carrying a basket. There is a blanket over it. Something soft and furry is under there. Tina puts her hand in to feel. She hears a meow. It's a cat.

Story 2. A car stops in the road and Pepé the black cat walks to the gate where he sees his friend Cindy the dog who is looking at the car. There is a man in it and Cindy jumps up to look and sees something nice and tasty. Some bones. It's their dinner.
<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
</tr>
<tr>
<td>General ability. A (above average) B (average) C (below average)</td>
</tr>
<tr>
<td>Behaviour</td>
</tr>
<tr>
<td>Motor Skills</td>
</tr>
<tr>
<td>Gross</td>
</tr>
<tr>
<td>Fine</td>
</tr>
</tbody>
</table>

### Recognition

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>eg. 1</td>
<td>eg. 2</td>
<td>eg. 3</td>
<td>eg. 4</td>
</tr>
</tbody>
</table>

### Association

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>eg. 7</td>
<td>eg. 8</td>
<td>eg. 9</td>
<td>eg. 10</td>
</tr>
</tbody>
</table>

### Retention

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>eg. 11</td>
<td>eg. 12</td>
<td>eg. 13</td>
<td>eg. 14</td>
</tr>
</tbody>
</table>

### Haptic Analysis

<table>
<thead>
<tr>
<th>Recognition</th>
<th>Association</th>
<th>Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>H</td>
<td>M</td>
</tr>
</tbody>
</table>

### Integration

- 1. Folding paper. 1 pt
- 2. Putting in envelope. 1 pt
- 3. Listing envelope. 1 pt
Subject
Tested
Assessment
Coloured Progressive Matrices Sets by J.C. Raven.

Total Score

Renfrew Action Picture Test

Information Score = (mean score - range for )

Grammar Score = (mean score - range for )

H.A.V. Inventory
Haptic Analysis

<table>
<thead>
<tr>
<th>Recognition</th>
<th>Oral =</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hand =</td>
</tr>
<tr>
<td></td>
<td>Movement =</td>
</tr>
<tr>
<td></td>
<td>Subtotal =</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Association</th>
<th>Oral =</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hand =</td>
</tr>
<tr>
<td></td>
<td>Movement =</td>
</tr>
<tr>
<td></td>
<td>Subtotal =</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Retention</th>
<th>Oral =</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hand =</td>
</tr>
<tr>
<td></td>
<td>Movement =</td>
</tr>
<tr>
<td></td>
<td>Subtotal =</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Integration</th>
<th>Subtotal =</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL</td>
</tr>
</tbody>
</table>

Auditory

<table>
<thead>
<tr>
<th>Recognition</th>
<th>Subtotal =</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vowel &amp; Consonant matching =</td>
<td></td>
</tr>
<tr>
<td>Syllable &quot; =</td>
<td></td>
</tr>
<tr>
<td>Intonation &quot; =</td>
<td></td>
</tr>
<tr>
<td>Rhythm &quot; =</td>
<td></td>
</tr>
<tr>
<td>Association</td>
<td>Subtotal =</td>
</tr>
<tr>
<td>Retention</td>
<td>Subtotal =</td>
</tr>
<tr>
<td>Integration</td>
<td>Subtotal =</td>
</tr>
</tbody>
</table>

| TOTAL             |             |

Visual

<table>
<thead>
<tr>
<th>Recognition</th>
<th>Subtotal =</th>
</tr>
</thead>
<tbody>
<tr>
<td>Association</td>
<td>Subtotal =</td>
</tr>
<tr>
<td>Retention</td>
<td>Subtotal =</td>
</tr>
<tr>
<td>Integration</td>
<td>Subtotal =</td>
</tr>
</tbody>
</table>

| TOTAL             |             |

Summary Analysis

Mean for year age group on Pilot
GROUP I.  1 - 5 years.

GROUP II.  5 - 6 years.

GROUP III.  6 - 7 years.
5. pl. - prep. - pron. - SAAD

GROUP IV.  7 - 8 years.
5. Wh. - c. passive relativized (subord.)

\[\text{GROUP II.  5 - 6 years.}\]
\[\text{GROUP III.  6 - 7 years.}\]
\[\text{GROUP IV.  7 - 8 years.}\]
SECTION 1: PERSONAL ISSUES - THE NATURE OF LANGUAGE & COMMUNICATION DIFFICULTY

The C-Profile (Part 1 & 2): Methodology: Results: Discussion

This section describes use of the C-Profile (Part 1 & 2) on N and LCD children, in order to locate differences in their performance. It takes the following format:

1. Methodology - outlining sample selection, administration and recording procedures.
2. Sample Characteristics - locating the two groups on other measures.
3. Test - Retest Reliability - gaining a measure of consistency of the recording method.
4. Validity - assessing the approach as a useful framework for considering communication.
5. Results & Discussion - looking at similarities and differences between groups.

1. Methodology

Eighty children were chosen for assessment. Forty of these were described as normal by schools based on criteria of no known physical, mental or emotional problems. Random selection was made [names drawn from a hat] and medical records checked to confirm 'normal' status. The other 40 children were diagnosed as having language and communication difficulties as a result of referral and assessment by the Speech & Language Therapy Service.

The N group came from three schools in a Midland county - two in towns and one from a village. The LCD were from two sources: twenty children in two language units attached to mainstream schools. The remainder were from other primary schools referred because of inadequate academic progress when compared with peers.

Criteria for Sample

Groups were matched for age, environment & socio-economic level as well as non-verbal IQ.

Age

In each group of forty there were four sub-groups of ten children as follows:

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>N</th>
<th>L.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 - 5</td>
<td>1</td>
<td>1a</td>
</tr>
<tr>
<td>5 - 6</td>
<td>2</td>
<td>2a</td>
</tr>
<tr>
<td>6 - 7</td>
<td>3</td>
<td>3a</td>
</tr>
<tr>
<td>7 - 8</td>
<td>4</td>
<td>4a</td>
</tr>
</tbody>
</table>
It was not feasible to match child for child in each age category. The mean age for each group shows the level of matching achieved. This was identical for groups 1 & 1a. The only significant difference was between groups 3 & 3a (p < 0.02). Table 5 tabulates this. The difference was not too important in this context. It was impossible to select randomly the language disabled subjects in the same way as N children because of less choice available. This was the best match possible and took a year of sorting through clinical cases to achieve.

<table>
<thead>
<tr>
<th>Age</th>
<th>Mean Comparisons of N and LCD Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 - 5 years</td>
<td>5 - 6 years</td>
</tr>
<tr>
<td>1 1a 2 2a 3 3a 4 4a N LD</td>
<td></td>
</tr>
<tr>
<td>mean age</td>
<td>55.20 55.20 68.50 66.60 78.90 75.60 89.70 87.90 73.07 71.33</td>
</tr>
<tr>
<td>S.D</td>
<td>4.34 4.19 2.67 2.91 2.28 3.60 2.11 4.04 13.23 12.66</td>
</tr>
<tr>
<td>t</td>
<td>0.00 1.52 2.45 1.25 0.60</td>
</tr>
<tr>
<td>P</td>
<td>1.00 0.14 0.02 0.22 0.54</td>
</tr>
</tbody>
</table>

Environment

In each group of forty children, thirty came from town and ten from country settings.

Socio-economic Level

The use of father's occupation to determine social class was based on the Registrar General's classification of occupations, modified to match that in use by Speech and Language Therapy Services in Britain since 1979. This follows Newson's (1966) sampling procedure. Class 1 & 2 were combined into one for analysis whilst class 3 was divided into two: 3 (white collar - W.C.) and 3 (Manual - M). This separated white collar and supervisory manual occupations from skilled manual ones. These were graded according to the most recent edition of the Registrar General's classification. Class 4 was ambiguous, including workers in heavy manual employment, such as stokers and foundry workers, and those in semi-clerical jobs like mail sorters.

It was initially decided to use discretion and upgrade family status on the basis of mother's occupation, if she was in a higher category than father. In practice this was not necessary to do so as there were no wives in higher grade occupations than their husbands possibly because of the small sample used. Income was not taken into account.
Each of the two samples contained 35% class 1, 2, & 3 (W.C.) and 65% class 3 (M), 4 & 5. [see table 6 below]. This was different from Newson's (1966) class composition of a random sample of 27% class 1, 2 & 3 (W.C.) and 73% class 3 (M), 4 & 5. However, this group was within the urban community of Nottingham twenty five years ago, whereas the research sample included rural and town areas in a more affluent era.

### Social Class Samples of N and LCD Subjects

#### Table 6 Social Class Sample Composition of 8 Groups of 10 children 4 - 8 years

<table>
<thead>
<tr>
<th>Class Group</th>
<th>1</th>
<th>1a</th>
<th>2</th>
<th>2a</th>
<th>3</th>
<th>3a</th>
<th>4</th>
<th>4a</th>
<th>Totals Groups 1-4</th>
<th>Totals Groups 1a-4a</th>
<th>Totals %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3(WC)</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>10</td>
<td>9</td>
<td>36</td>
</tr>
<tr>
<td>3(M)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>9</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>9</td>
<td>9</td>
<td>18</td>
</tr>
</tbody>
</table>
Non-verbal I.Q.

It was decided to impose some standard procedure to match non-verbal ability for the two groups. Raven's Coloured Progressive Matrices (R.P.M.) Sets A, Ab, B revised order (1991) were chosen. Although there are some doubts concerning reliability expressed by Raven, Freyburg (1990) puts forward a claim for a higher degree of reliability when administered in group rather than individual testing sessions (0.89, 0.87, 0.76).

In this study the test was applied individually. It has been used extensively with language disabled children providing useful information on cognitive development and proving successful in differentiating between those of high, average and low general ability (Sage, 1989). The stimuli presented are non-symbolic in contrast to the symbolic nature of language assessment. It is practical because it is easy to administer and needs little explanation. In a pilot study, preceding this research, (Sage, 1989) Matrices' scores for thirty children correlated with teacher ratings at a 0.84 level. Therefore, the difference was not significant.

Again, it was not possible to match child for child on non-verbal ability. In each main sub-group, the mean scores were used for comparisons (table 7).

Comparisons on R.P.M for N and LCD Subjects

<table>
<thead>
<tr>
<th>Score</th>
<th>Groups</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>18.30</td>
<td>15.90</td>
</tr>
<tr>
<td>S.D.</td>
<td>1.70</td>
<td>2.08</td>
</tr>
<tr>
<td>t</td>
<td>1.31</td>
<td>2.35</td>
</tr>
<tr>
<td>p</td>
<td>NS</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Other than group 1, there were significant differences between 2, 3 & 4. However, the total of 1-4(N) compared with those of 1a-4a (LCD) indicates the overall difference is not significant. It became difficult to match groups at the 7-8 year stage. Whether this indicates decreasing ability, a slowing up of progress, ineffective teaching methods or any other reason is speculation at this stage.
Constraints operating on Set Criteria

1. Home background and environment

These warrant special consideration, as influences of home and environment may cut across class or socio-economic divisions. Therefore, it was decided to exclude:

a] children not in the care of their own mothers.
b] illegitimate children, or those not legitimised before their first birthday.
c] Immigrant families, unless in England for ten years or more.
d] children known to have physical handicaps [including sight and hearing problems] or mental handicaps as diagnosed from pre-school screening procedures of Health Visitors and Doctors.

There were no children from a bi-lingual background. English was the first and only language spoken at home.

2. Schools/Playgroups

These contain a large number of influences affecting child development:

a] type of organisation - grouping systems by age [horizontal] or across age [vertical].
b] population - mono / multi-cultural
c] catchment area - urban / rural
d] accommodation offered - houses / high rise flats
e] staff/pupil ratio - high / low
f] special needs facilities - resources / level of support

Obviously, it was not possible to control these in the population studied, but they are strong influences when evaluating performance and must be considered as important hidden variables in evaluating child responses.

Selection

Children meeting the criteria laid down were randomly selected as previously described. The parents of those taking part in the study were notified by letter and asked to furnish details of occupations. Medical and school records were checked to ensure criteria were met by the sample.

Administration

The children were seen on three occasions in their school/playgroup settings. The informal dialogue was audio taped in classrooms. Conditions were as follows for the formal assessments.
a] a small quiet room with minimal distractions.
b] a table, at child height, with two chairs - one for the assessor and one for the subject.

The children were briefed and it was explained that some activities were being tried out and they had been chosen to participate in them.

Scoring Procedures
These are described in the previous section and are discussed further under Results.

Session 1
As none of the N group had received standard assessments of language and non-verbal ability, the first session consisted of two simple tests for everyone:

   This is a short screening test of language, using graded pictures and questions, to elicit responses from a child and provide data on:
   a] information given
   b] language structure used

   The assessment was chosen because:
   a] it is commonly used by speech and language therapists
   b] it is quick and easy to administer
   c] children are used to a picture question and answer format with adults
   d] an assessment of this test's validity, when compared with spontaneous samples analysed by Language Assessment, Remediation & Screening Procedure [L.A.R.S.P.] Crystal et al, 1976, shows a 0.84 correlation on language structure elements

   This is a test of non-verbal thinking skills, requiring subjects to complete a pattern from a range of possible choices. The assessment is in two-dimensional book format. It was felt to be the most appropriate instrument available because:
   a] it is quick and easy to administer
   b] the format is standard throughout the assessment
   c] it is used regularly in clinical settings and is felt to be a reliable guide to general ability.

3. Teacher Rating
   On the first session, the teacher/playgroup leader was asked to do a personal rating of each child's ability using the following scale.

   **Teacher Rating Scale of Children in the Research Sample**

<table>
<thead>
<tr>
<th>Above Ave.</th>
<th>Average</th>
<th>Below Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>A A-</td>
<td>B+</td>
<td>B</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Coding was done in letters as they were familiar with this type of rating but for analysis the recording was made in numbers as indicated above.

Session 2
In this session the C-Profile1[production] was carried out. Each child, in the study, was audi-taped in a group of four, using a portable Bell & Howell Model 3179X. This occurred when children were involved in group activities. In each cluster there were two boys and two girls. The recorder was run for ten minutes and three minutes from each tape was transcribed and analysed [diagram K - transcription of Liam and Mark in appendix].

Session 3
This consisted of administration of the C-Profile2 [processing]. Sections were completed on one visit and each timed using a watch with minute hands. A gap of five minutes was allowed between [eg. haptic - break - auditory - break - visual]. The interludes were not counted within the testing time. Response recording was completed on prepared forms available in the appendix.

2. Sample Characteristics of the two Groups on other Measures

Age
There is no significant difference between totals of N and LCD, although a slight significant difference exists between groups 2/2a, 3/3a, 4/4a. This is discussed under the methodology section.

Sex
Male/Female Distribution in N and LCD Subjects

Table 8 shows male / female distribution, in N and LCD groups. The N reflects population
patterns, with a slightly higher number of males in the sample. The LCD group, although not reflecting normal male/female distribution, does show the pattern of referrals to the local Speech & Language Therapy Service, where females, in the years 1980-90, formed between 20-25% of the total of children 0-18 years. This distribution is typical of other groups of children with special needs. The Department of Education Statistics [1992] gives the following figures in the 'speech difficulty' category.

D.E.S. 'Speech Difficulty' Category: Male/Female Distribution

Table 9  D.E.S. Statistics of Male/Female Percentages in the 'Speech Difficulty' Category

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>1537</th>
<th>68.25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girls</td>
<td>715</td>
<td>31.75%</td>
<td></td>
</tr>
</tbody>
</table>

The male/female distribution, in this study, reflects this trend, with many more boys having problems with language and communication than girls. Although sex differences are highlighted, as a point of interest, these are not considered in the sample characteristics of the main data.

Social Class

The social class distribution of both groups is discussed under methodology as socio-economic criteria for the sample. Table 6 indicates that both N and LCD subjects comprise similar ranges of socio-economic distribution.

Non-Verbal I.Q.

This was measured by Raven’s Progressive Matrices. Table 7 compares the results of both groups. As discussed, the overall scores are tipped in favour of the LCD sample in group 1 but this is reversed in group 4. As age increases it becomes difficult to match on this variable causing speculation on the effect of inadequate verbal skills on non-verbal abilities.

Teacher Estimates of Ability

A 1-8 scale was used to rate children’s ability as described under session 1 activities. Table 10 compares estimates of general aptitude for the two groups. The bias is slightly in favour of higher ratings for the LCD group but the difference is not significant. The twenty children in the language units were selected on a criteria of average or above ability so this may influence teacher responses as they do not anticipate below standard pupils in classes. This should be noted as the Local Education Authority involved in this research has always had a policy of integrating children with moderate
learning difficulties into mainstream settings and teachers expect some pupils to be functioning below normal for age. Therefore, this may affect teachers’ perceptions of children in the N sample.

**Teacher Ratings: Comparing N and LCD Subjects**

Table 10 A Comparison of N. and L.D. Groups using Teacher Ratings.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>L.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.57</td>
<td>3.82</td>
</tr>
<tr>
<td>S.D.</td>
<td>1.07</td>
<td>1.02</td>
</tr>
<tr>
<td>t</td>
<td></td>
<td>0.03</td>
</tr>
<tr>
<td>p</td>
<td></td>
<td>NS</td>
</tr>
</tbody>
</table>

**Observations of Behaviour between N & LCD Subjects**

The following structured observations were made in order to gain as much information as possible.

1. **Attention Control**

   It is generally agreed that children with language difficulties have immature levels of attention control (Reynell, 1979; Wallach & Miller, 1988). Therefore, it seems important to monitor this closely and the Reynell Attention Control Schedule (1979) was used, aiming to define developmental stages and indicate age levels. These cover 0-6 years and are subjectively rated from observation of child activities coded 0-3 [absent/occasional/fluctuating/stable]. The schedule is available in the appendix [Diagram K]. Attention is variable depending on the nature and situation of the task. However, since the tasks on the C-Profile 2 [processing] are standard it is useful to look at levels of attention control achieved by N and LCD groups. Three analyses were carried out, and tables 11 a,b, c show results.

**Analyses of Attention Control Levels of N and LCD Subjects**

<table>
<thead>
<tr>
<th>Comparison</th>
<th>U =</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 v 1a</td>
<td>0</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>2 v 2a</td>
<td>0</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>3 v 3a</td>
<td>0</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>4 v 4a</td>
<td>10</td>
<td>&lt;0.005</td>
</tr>
</tbody>
</table>
Table 1b Comparison of Age Trends between N. and L.D. using the Jonckheere Trend Tests.

<table>
<thead>
<tr>
<th>Comparison</th>
<th>S</th>
<th>(N. S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 v 2 v 3 v 4</td>
<td>S = 0</td>
<td>(N. S)</td>
</tr>
<tr>
<td>1a v 2a v 3a v 4a</td>
<td>S = 68</td>
<td>(N. S)</td>
</tr>
</tbody>
</table>

Table 1c Comparison of L.D. Groups 1a versus 3a & 4a, and 2a versus 3a & 4a, using Mann-Whitney U Tests.

<table>
<thead>
<tr>
<th>Comparison</th>
<th>U =</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a v 3a</td>
<td>18</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>1a v 4a</td>
<td>6</td>
<td>&lt;0.005</td>
</tr>
<tr>
<td>2a v 3a</td>
<td>16.5</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>2a v 4a</td>
<td>6.5</td>
<td>&lt;0.003</td>
</tr>
</tbody>
</table>

In table 1a the Mann-Whitney test was used to compare N and LCD groups at each attention control level, in all four age bands [N=1-4; LCD= 1a-4a]. This non-parametric test is appropriate to show awareness of the quality of the data. There are significant differences in all age bands between N and LCD groups.

Table 1b shows the result of the Jonckheere Trend test to assess if there is a tendency for scores to increase with age over the 4 groups in each sample. Results indicate neither is significant due to ceiling effects. They mask an obvious difference between groups 1a and 2a versus 3a and 4a. These are revealed by Mann-Whitney U Tests, recorded in table 1c.

There are significant differences shown between 1a v 3a and 4a ; 2a v 3a and 4a. Differences between 1a v 2a and 3a v 4a are not tested as they clearly are not significant. Since attention control levels are subjectively rated results must be treated with caution. However, there are notable differences in the quality of concentration between N and LCD which the data analyses judge as significant within each age band.

2. Response Time

C-Profile1 [production] is not a standard assessment and unsuitable for across group comparisons. Table 12 shows the mean scores for each age group on the C-Profile 2 [processing] subtests [haptic/auditory/visual]. This is a standard test and suitable for group comparison. The time each child took to complete sub-tests is recorded in minutes.

<table>
<thead>
<tr>
<th>Time taken in Minutes on the Communication Profile 2 [processing] for N and LCD Subjects</th>
</tr>
</thead>
</table>

--
A two-way analysis of variance [ANOVA] was used to analyse data. There are four separate ANOVAs, one for each sub-test and the total battery. Table 13 summarises this data.

ANOVA for Time Completion of the C-Profile 2 (processing) for N and LCD Subjects

<table>
<thead>
<tr>
<th>Group 1 and 1a</th>
<th>Group 2 and 2a</th>
<th>Group 3 and 3a</th>
<th>Group 4 and 4a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Group Age</td>
<td>Age</td>
<td>Group Age</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Means</td>
<td>667.01</td>
<td>52.25</td>
<td>15.01</td>
</tr>
<tr>
<td>f</td>
<td>266.96</td>
<td>20.91</td>
<td>6.01</td>
</tr>
<tr>
<td>p</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
</tr>
</tbody>
</table>

The effects for N versus LCD, and for age, are significant at a p < 0.001 level for all four dependent variables - haptic, auditory, visual and total battery. The only significant interaction effect is shown in the haptic test. Looking at the means, this seems due to the fact that improvement in completion time in the N group is clear [21.1 minutes down to 16.4 minutes]. There is much less gain in the LCD group [25.9 minutes down to 24 minutes].

The same clear effect is not shown in the auditory, visual or total figures. However, the trend is the same except for the visual test in the LCD group. Here, the response time does not show consistent improvement with age. For example, group 2a’s [5-6 years] mean score is 22.2 minutes whereas that for 3a [6-7 years] is 23.5 indicating that older ones take longer to complete the test than the younger. However, the LCD sample take 4-8 minutes longer overall on each sub-test than do the N group.

Related to this, is the fact that LCD children had greater problems understanding the nature of the task, either because of poorer attention control or inherent problems in processing. Thirty seven
out of forty LCD subjects needed instructions repeated more than once whereas only five out of forty of the N group required this. Repetition occurred when there was no response after 20 seconds. However, a lack of immediate response may have been due to shyness or lack of confidence and not the result of slow understanding. If some did not comprehend this had implications for performance.

The LCD group showed poor ability to alter mental set in sections such as visual association which demand three different approaches within the test [odd/similar/pair in sequence]. They tended to perseverate responses under these conditions. For example, in part 3 [pair in sequence] the correct response to number 1 is the second picture in the line of four [comb] to go with the stimulus picture[brush]. Twenty two % of LCD children pointed to this object picture position [second in the line] for two or more of the following questions. The N subjects showed no problems with changes in mental approach indicating less rigid thinking strategies.

3. Task Strategies

The N group overtly demonstrated strategies for dealing with tasks which were not evident in the LCD sample. For example, in the oral stereoagnostic tests the N subjects immediately used their tongue tips to feel round the edges of each object in the mouth. Not one LCD child used observable tongue or mouth movements. In the visual retention tasks, the N subjects, from group 2 upwards, used verbal rehearsal to help recall symbolic and non-symbolic stimuli. They made up their own labels where no conventional ones exist. For example, rehearsed as 'like an envelope'. None of the LCD subjects used verbal rehearsal in any of the four age bands.

Visual material was presented in linear format to enable subjective study of eye movements. Eye scanning of N children was generally even and economic. They fixated on visual forms and showed a systematic scanning strategy. Scores on visual memory show superior ability to retain optic images which help to speed processing. The LCD displayed little evidence of systematic visual strategies. Eyes wandered over the page with no established left -- right scanning pattern and they demonstrated less ability to fixate on visual stimuli when compared with N subjects.

The structured observations of both N and LCD groups showed marked qualitative differences between them. The LCD subjects displayed less mature strategies and struggled to concentrate. They were slower and not so co-ordinated in response and lacked confidence with an unknown assessor. However, both samples were similar in their wish to please an unfamiliar adult.

3. Test Re-test Reliability

Procedure: C-Profile 1 [production]

A test - re-test method was used to assess consistency and reliability of the inventory. This involved half the N sample [20 children] which was randomly selected from each age group and re-assessed within 28-30 days of the initial test using the same format [ie: same children in the group and
the same stimulus for conversation. The relationship between test and re-test scores was calculated using Spearman's rank order correlation.

Test Re-test Correlations on the C-Profile 1 [production] in N Subjects

Table 14 Test & Re-test Correlations on the C-Profile 1 [production] in N subjects

Sub-tests = 1-12; Age-groups = A - D; Numbers = reliability coefficients

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.84</td>
<td>0.85</td>
<td>0.90</td>
<td>0.87</td>
</tr>
<tr>
<td>2</td>
<td>0.76</td>
<td>0.92</td>
<td>0.83</td>
<td>0.86</td>
</tr>
<tr>
<td>3</td>
<td>0.81</td>
<td>0.88</td>
<td>0.91</td>
<td>0.82</td>
</tr>
<tr>
<td>4</td>
<td>0.69</td>
<td>0.70</td>
<td>0.68</td>
<td>0.71</td>
</tr>
<tr>
<td>5</td>
<td>0.74</td>
<td>0.71</td>
<td>0.68</td>
<td>0.69</td>
</tr>
<tr>
<td>6</td>
<td>0.78</td>
<td>0.70</td>
<td>0.65</td>
<td>0.67</td>
</tr>
<tr>
<td>7</td>
<td>0.72</td>
<td>0.79</td>
<td>0.71</td>
<td>0.68</td>
</tr>
<tr>
<td>8</td>
<td>0.63</td>
<td>0.78</td>
<td>0.79</td>
<td>0.75</td>
</tr>
<tr>
<td>9</td>
<td>0.79</td>
<td>0.79</td>
<td>0.79</td>
<td>0.76</td>
</tr>
<tr>
<td>10</td>
<td>0.89</td>
<td>0.92</td>
<td>0.87</td>
<td>0.91</td>
</tr>
<tr>
<td>11</td>
<td>0.90</td>
<td>0.91</td>
<td>0.88</td>
<td>0.90</td>
</tr>
<tr>
<td>12</td>
<td>0.94</td>
<td>0.91</td>
<td>0.90</td>
<td>0.87</td>
</tr>
<tr>
<td>13</td>
<td>0.96</td>
<td>0.86</td>
<td>0.87</td>
<td>0.91</td>
</tr>
</tbody>
</table>

Total Mean = 0.87 0.75 0.87 0.87

Sub-tests show reliability coefficients ranging from 0.63 - 0.96, suggesting that there are generally only small variations in performance when the profile is repeated within a four week interval involving the same children in the group and identical stimuli. Sub-tests 4-9, on all age groups, demonstrate the lowest correlations [topic continued; request; open/closed question; contributory/maintenance comment]. These areas may be more variable in performance than 1-3 and 10-13 [correct sounds/sentences; topic initiated; positive/negative face; meaning conveyed/not conveyed] and depend on shifting circumstances such as attention or opportunity. However, data does suggest that performance in standard formats is reliable over time.

The data was analysed by three different adults to give the following inter-rater reliability.

Reliability Coefficients for the C-Profile 1 [production] in N Subjects

Table 15 Inter-rater Reliability for the C-Profile 1 [production] showing Reliability Coefficients for N Subjects

1-3 = Assessors

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.90</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These show an acceptable level of assessor comparability.
A test-retest method was used to assess the consistency and reliability of the inventory. This involved half the sample which was randomly selected from all age groups and re-assessed within 28-30 days of initial assessment. The relationship between test and re-test scores was calculated using Spearman's rank order correlation. The results are shown below in Table 16.

<table>
<thead>
<tr>
<th></th>
<th>Test</th>
<th>Re-test</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haptic</td>
<td>0.98</td>
<td>0.85</td>
<td>0.91</td>
</tr>
<tr>
<td>Auditory</td>
<td>0.99</td>
<td>0.95</td>
<td>0.97</td>
</tr>
<tr>
<td>Visual</td>
<td>0.84</td>
<td>0.77</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Sub-tests show reliability coefficients ranging from 0.77 to 0.99, suggesting only small variations in performance when tests are repeated within a four week interval. The auditory retention and visual association tests show the lowest correlations. These two sub-tests have three sections, requiring a change of instruction and mental set. Therefore, this may make the task more complex and open to other factors, such as distraction and concentration, resulting in less reliability. In general, the inventory shows an acceptable level of test-retest reliability.

The data was also analysed by three different adults to give the following inter-rater reliability.

<table>
<thead>
<tr>
<th>Assessors</th>
<th>Reliability Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.97</td>
</tr>
<tr>
<td>2</td>
<td>0.98</td>
</tr>
<tr>
<td>3</td>
<td>0.98</td>
</tr>
</tbody>
</table>

Therefore, reliability coefficients demonstrate a high level of comparability between the assessors.
4. Validity

Validity considers whether the assessment measures what it claims to determine. Content is obviously important. If this is to be a useful measure of performance it must represent tasks that children are required to perform during formal school learning. The C-Profile1 [production] is a structured framework designed to observe conversational exchanges which take place in school. The validity issue is not one of content but whether the analysis gives useful information for teaching management. The National Curriculum Key Stage 1 requires a child to participate in conversation. The profile is designed with this target in mind - to supply a description of various aspects of verbal exchanges. The rationale expands the model of form, content and use that provides the foundation for the teaching of English in official documentation [Kingman, Cox Report, 1988]. Thus, validity is based on the practical operation of established views.

With regard to Communication Profile 2 [processing] activities for the inventory are selected on the basis of school requirements except for the haptic area involving oral and manual stereognostic tasks. However, the status of haptic performance is important, when making judgements of learning input, as it is essential to movement - specifically in this context - eating, speaking, reading, writing and understanding spatial concepts. This area tends to be ignored in formal testing as a primitive learning mode but it is essential to evaluate haptic performance as of equal importance to auditory and visual input in determining successful learning.

Concurrent Validity

This attempts to evaluate something it is not possible to measure exactly. For example, we cannot assess how a child processes information directly, but tasks that purport to do this can be compared with other widely used measures. In order to do this the C-Profile is correlated with:


The correlations of these 2 tests with the C-Profile on the N sample are shown below.

C-Profile1 [production] Correlated with R.A.P.T. and R.P.M

Table 16 Correlation Table comparing R.A.P.T. & R.P.M. with C-Profile 1 [production]

1-13 = Subtests
Table 19: Correlation Table comparing R.A.P.T & R.P.M. with H.A.V. on the Normal Sample.

<table>
<thead>
<tr>
<th></th>
<th>Renfrew</th>
<th>Ravens</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>0.54</td>
<td>0.61</td>
</tr>
<tr>
<td>2.</td>
<td>0.76</td>
<td>0.71</td>
</tr>
<tr>
<td>3.</td>
<td>0.82</td>
<td>0.65</td>
</tr>
<tr>
<td>4.</td>
<td>0.80</td>
<td>0.71</td>
</tr>
<tr>
<td>5.</td>
<td>0.78</td>
<td>0.68</td>
</tr>
<tr>
<td>6.</td>
<td>0.82</td>
<td>0.73</td>
</tr>
<tr>
<td>7.</td>
<td>0.78</td>
<td>0.65</td>
</tr>
<tr>
<td>8.</td>
<td>0.83</td>
<td>0.72</td>
</tr>
<tr>
<td>9.</td>
<td>0.86</td>
<td>0.62</td>
</tr>
<tr>
<td>10.</td>
<td>0.79</td>
<td>0.81</td>
</tr>
<tr>
<td>11.</td>
<td>0.63</td>
<td>0.52</td>
</tr>
<tr>
<td>13.</td>
<td>0.84</td>
<td>0.51</td>
</tr>
</tbody>
</table>

C-Profile 2 [Processing] Correlated with R.A.P.T and R.P.M.

Correlations for both C-Profile areas are substantial, although all are less than the +0.9 standard coefficient of reliability, as we would expect if the assessment is not to duplicate existing measures. The correlations suggest that the profile is measuring a behavioural area that has similarities to the two comparative tests. The profile does sample other behaviour and attempts to differentiate skills areas. Therefore, it aims to sample a wider range of abilities at different levels. The comparison instruments differ from the C-Profile in the following ways:

1. The R.A.P.T
   This test has bi-modal stimuli input [auditory instructions & visual pictures]. It analyses output according to perspectives of:
   a) Information - linking previous knowledge/experience to thinking skills.
   b) Structure - considering language competence and performance in terms of syntax use.
   Therefore, it is a screening device rather than a diagnostic assessment to pinpoint areas of need.

2. The R.P.M
This test uses non-verbal stimuli for pattern completion tasks. Although subjects may use auditory strategies to help solve problems, they are not dependent on symbolic knowledge. Therefore, it is a purer form of cognitive test in comparison with the Renfrew cognitive/linguistic approach.

Both tests are more focused on certain aspects of thinking/language in contrast to the broader based descriptive format of the C-Profile. The correlation coefficients support this contention.

Construct Validity

The C-Profile 1 [production] describes different aspects of behaviour - clarity, content, convention and conduct. Their mean correlation coefficients within and across areas are tabulated in the N sample.

**C-Profile 1 [production] Mean Correlations across Clarity, Content, Convention & Conduct Areas**

Table 20 Mean Correlations across the four areas of the Communication Profile 1 [production]

<table>
<thead>
<tr>
<th>Clarity (Cl)</th>
<th>Content (Ct)</th>
<th>Convention (Cv)</th>
<th>Conduct (Cd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.45</td>
<td>0.49</td>
<td>0.47</td>
<td>0.49</td>
</tr>
<tr>
<td>0.46</td>
<td>0.43</td>
<td>0.42</td>
<td></td>
</tr>
<tr>
<td>0.42</td>
<td>0.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.44</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mean 0.42

The table suggests correlations are low, indicating these areas are essentially different, although having some core components. For example, the ability to convey meaning [conduct area] will depend on sound and sentence patterns that can be understood [clarity area].

In C-Profile 2 [processing], construct validity is used to justify the information processing model of separation into distinct areas of recognition, association, retention and integration. Tables 21a & b look at correlation coefficients of haptic, auditory and visual subtests and their totals within areas of recognition, association, retention and integration across as well as within modalities in the N sample. Table 21a tabulates the correlations and their means for the four areas across H.A.V. Table 21b shows the mean correlation coefficients for each sub area within H.A.V.

**C-Profile 2 [processing] Mean Correlation Coefficients for Recognition, Association, Retention & Integration across Haptic, Auditory & Visual Areas**

Table 21a Mean Correlations for the four areas across H.A.V

<table>
<thead>
<tr>
<th>R</th>
<th>A</th>
<th>Re</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.48</td>
<td>0.50</td>
<td>0.47</td>
<td>0.56</td>
</tr>
<tr>
<td>0.54</td>
<td>0.61</td>
<td>0.56</td>
<td></td>
</tr>
<tr>
<td>0.38</td>
<td>0.43</td>
<td></td>
<td>0.44</td>
</tr>
</tbody>
</table>

Mean 0.46
Table 21b  Mean Correlations for the 4 Areas within H.A.V.

<table>
<thead>
<tr>
<th></th>
<th>Haptic</th>
<th>Auditory</th>
<th>Visual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R    A  Re  I</td>
<td>R    A  Re  I</td>
<td>R    A  Re  I</td>
</tr>
<tr>
<td>R</td>
<td>0.69 0.69 0.53</td>
<td>0.67 0.55 0.67</td>
<td>0.62 0.62 0.67</td>
</tr>
<tr>
<td>A</td>
<td>0.80 0.75 0.69</td>
<td>0.49 0.61 0.02</td>
<td>0.58 0.58 0.80</td>
</tr>
<tr>
<td>Re</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>0.70</td>
<td>0.49</td>
<td>0.64</td>
</tr>
</tbody>
</table>

Total = 0.61

Tables 21a & b indicate higher correlations within rather than across modalities. This supports the view that the four processes are essentially interactive, but to enable a problem to be pin-pointed with greater accuracy, there is utility in separating them out and keeping other skills in low loading. Where correlations are marked [visual retention/integration and haptic retention/association (0.8)] this is not so well achieved as when they are negative [auditory integration/retention (-0.02)].

Correlations are lowest in the auditory area, suggesting a wider range of skills and processes tapped in this channel. This modality involves the understanding and use of complex and interactive prosodic, phonological, linguistic, semantic and pragmatic codes and taps extensive knowledge and skill.

Table 21a shows that correlations across H.A.V. are low [retention = 0.3; association = 0.5] suggesting the three areas are different although having core components. For example, in the association area processing in all modalities depends on appreciating features of similarity and difference and linking present information to previous experience and knowledge. Although there are underlying points of comparison in the general pattern of activity, differing strategies are employed by individual channels to deal with present and past information. This is discussed further in the main results section.

There is substantial evidence to support different H.A.V. coding strategies in the area of retention which are considered in the final discussion. Low correlations are indicative of this fact.

Higher correlations within rather than across modalities suggest an overlap of skills between areas. These are slight to moderate, suggesting that it is useful to separate processes. Across channel correlations are low but positive indicating some similarities but significant differences in coding strategies.
5. Main Results and Discussion

Differences in C-Profile 1 [production] Scores between N and LCD Subjects

Table 22 Differences in C-Profile 1 [production] Scores of N and LCD Children of Different Ages

| CODE: NS | = a non-significant difference |
| CODE: ** | = a difference at the 0.01 level |
| CODE: *** | = a difference significant 0.001 level |

GROUPS:
A= 4-5yr; B= 5-6yr; C= 6-7yr; D= 7-8yr

<table>
<thead>
<tr>
<th>SUBTESTS:</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>T=8.97(**)</td>
<td>T=11.7(**)</td>
<td>T=10.08(**)</td>
<td>T=15.3(**)</td>
</tr>
<tr>
<td>2</td>
<td>T=10.69(**)</td>
<td>T=12.6(**)</td>
<td>T=9.18(**)</td>
<td>T=14.99(**)</td>
</tr>
<tr>
<td>3</td>
<td>T=12.21(**)</td>
<td>T=13.0(***)</td>
<td>T=12.66(**)</td>
<td>T=11.45(**)</td>
</tr>
<tr>
<td>4</td>
<td>T=6.73(**)</td>
<td>T=6.5(**)</td>
<td>T=1.58(NS)</td>
<td>T=3.45(**)</td>
</tr>
<tr>
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DF=18

All differences are highly significant across age groups except for subtest 9.
Individual non-significant results:
Group A - subtest B (contributory comment) = NS
Group C - subtest 4 (topic continued) = NS
Group D - subtest 7 (closed question) = NS
Differences are highly significant across age groups except for sub-test 9 [maintenance comment]. Individual non-significant results are:
Group A - sub-test 8 [contributory comment]
Group C - sub-test 4 [topic continued]
Group D - sub-test 7 [closed question]

In general, the N group showed superior abilities in conversation which enabled them to control the content and gain benefit from exchange of ideas. The transcript of Liam and Mark [both 6 years] is typical of the data [diagram J: appendix]. Mark [LCD] uses no requests or questions which limit his power to manipulate the situation for his advantage. His conversational partner, Liam [N], facilitates and encourages responses [2,3,6,10,18,21,31]. Eventually Mark responds to these by contributing information [25,26,27] although it is not appropriate to previous input [21].

Data shows that it was rare for LCD children to initiate a topic. This means they fail to control their speaking environments and allow others to dominate, even [as in this transcript example] their partners are not seeking to take charge. This ability to initiate and continue topics is fundamental to the development of narrative which is viewed as vital for taking oracy into literacy (Westby, 1984). It forms the basis for prediction enabling argument to be followed and story line understood. This is discussed in an earlier section.

Also, the data reveals the low esteem that LCD children have within their conversational group. The following extract from a transcript of Jane [N], Emma [N], John [N] and Paul [LCD] reveals this.

Context: Measuring boxes: The children are top infants [7-6 years]

\begin{verbatim}
Emma .. Try 12
John .... It's too light, try 14
Jane .... any one see 14?
Paul .... by tair [chair]
John .... 14's not on the table
Paul .... by tair [chair]
Emma .... try looking under the table, John

Paul spots the missing weight and responds to Jane's request appropriately by stating that it is by the chair. However, his comment is ignored twice. The responses of the others in the group suggest that he could not possibly be correct. There are many examples of this in the data. Replies are disregarded because of the speaker's poor image, lack of clarity or insufficient use of non-verbal support in conveying meaning. The latter will be considered in the discussion section along with qualitative data. Whatever the reason, such reactions result in feelings of low esteem for the speaker who is passed over. Moreover, the LCD child frequently has responses repeated, as the extract shows below. The children are looking at a model of a classic car.

Stuart[N] ... What’s that?
Pete[LCD] ... spoke
Lynn[N] ..... spoke
\end{verbatim}
Lynn provides the correct model for Pete and in so doing signals that he is wrong so reinforcing the image of him as a 'poor communicator'. Providing the right word may be viewed as facilitatory as this is a common technique in therapy. However, Beveridge (1989) reminds us that such practice can have negative consequences and block further responses. This may have been the case in this transcript as Pete did not bother to speak again.

The often ineffective efforts of LDC children to give an impression of communicative competence result in others' attempts to protect them. For example, their peers will attempt to answer for them and in the extract below Claire [N] responds for Garry [LCD]. They are packing toys away.

Tim [N] .... Where shall we put these, Garry?
Claire [N] .... We'll put them in the play house, won't we, Garry.
Tim [N] ....... Right then, Claire... here's a box.

Garry is protected and prevented from answering by Claire and she is then involved in the next activity while he is ignored.

In summarising the data it would appear that the most important aspects of communicative behaviour on which children are judged are whether they have a good image in their group and talk in appropriate, relevant and understandable ways. The LCD children seem to be wanting in these areas and while some of their partners are sympathetic, others are impatient. Despite difficulties they attempt to participate as best they can and try to turn take and show interest. Even though LCD children are unrewarding partners they display an understanding of turn taking conventions of conversation. 'normal' individuals. Focus of past research has shown that violations are frequent for maxims of quantity and relevance [appropriate information required] in the mentally handicapped population (Sabsay & Kernan,1983). Leudar & Fraser (1985) indicate this may not reflect information processing problems but strategies in communication. At this point, we can only note that when N and LCD children are compared in conversation there is a marked difference in their communicative competence. This issue will be explored further in studies of management.

Comparison of N and LCD subjects across age on C-Profile 2 [processing]. H.A.V. Totals

<table>
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<th>Haptic</th>
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<th>Visual</th>
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</table>
Results show that LCD children, across age, have large discrepancies in haptic and visual, as well as auditory processing areas in comparison with N subjects. The variation is significant for all processing areas at a $p < 0.001$ level. The greatest difference is displayed in auditory processing. One explanation may be that auditory stimuli are more transient than either visual or haptic and heavily dependent on short term memory. Moreover, children are used to strong visual cueing at home [video/television] and school [educational aids] which may encourage visual rather than auditory processing. Teachers continually report inadequate levels of listening skills amongst pupils of all ages (Gibbons, 1985) which suggest this process has not had opportunity to develop.

Standard deviations appear much higher for the LCD group on auditory and visual tests, indicating a wider score variation in this population.

Comparison of N and LCD subjects across age on H.A.V. sub-tests of the C-Profile 2 [processing]

<table>
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<tr>
<th>Table 2.4 Comparison of Subtest Means for N. and L.D. across age on H.A.V sub-tests</th>
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</thead>
<tbody>
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<td>Mean</td>
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<td>L.D.</td>
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<td>p</td>
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Tables indicate that in all H.A.V. sub-tests there are significant differences \( p<0.001 \) between N and LCD subjects. The standard deviations are much smaller in visual and haptic than auditory areas for both groups. More variable scores are seen in auditory sub-tests particularly in the integration section. The complex analysis of the data [discussed under the C-profile description] may account for this fluctuation in scores.

### Visual

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### Tables Comparison of Age Trends For N. and LCD on H.A.V.

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</tr>
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<td>4 and 4a</td>
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| p | 0.001 | 0.001 |

#### Auditory

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</table>

| p | 0.001 | NS |

---

Table 25: Comparison of Age Trends For N. and LCD. on H.A.V.s.
Tables show a significant difference \( p<0.001 \) in mean H.A.V. scores for the N population. This is not the case for LCD subjects. In fact, there is no significant age trend in the auditory section. The score patterns do not show the same clear age trends as the N sample. For example, in the auditory section the 6-7 year group have a higher mean score than 7-8 year olds. The haptic area shows the clearest age trends \( p<0.01 \) followed by the visual section with a significance level of \( p<0.05 \).

**Age trend comparisons for N and LCD groups on the C-Profile 2 (processing) H.A.V sub-tests**

Table 2.6 Comparison of Sub-Test Means for N and L.D. in each Age Group on H.A.V sub-tests.

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**Auditory**

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### L.D.C

#### Haptic

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</tr>
<tr>
<td>f</td>
<td>5.14</td>
<td>1.95</td>
<td>1.85</td>
<td>2.40</td>
</tr>
<tr>
<td>p</td>
<td>0.005</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>

#### Visual

<table>
<thead>
<tr>
<th>Groups</th>
<th>R</th>
<th>A</th>
<th>Re</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>S.D</td>
<td>M</td>
<td>S.D</td>
</tr>
<tr>
<td>1a</td>
<td>7.70</td>
<td>2.41</td>
<td>6.30</td>
<td>1.64</td>
</tr>
<tr>
<td>2a</td>
<td>6.80</td>
<td>2.04</td>
<td>7.20</td>
<td>1.81</td>
</tr>
<tr>
<td>3a</td>
<td>9.10</td>
<td>2.28</td>
<td>7.70</td>
<td>1.57</td>
</tr>
<tr>
<td>4a</td>
<td>9.30</td>
<td>1.89</td>
<td>8.20</td>
<td>1.23</td>
</tr>
<tr>
<td>f</td>
<td>3.01</td>
<td>2.64</td>
<td>6.22</td>
<td>6.52</td>
</tr>
<tr>
<td>p</td>
<td>NS</td>
<td>NS</td>
<td>0.005</td>
<td>0.001</td>
</tr>
</tbody>
</table>
The tables demonstrate a clear difference between N and LCD populations. In N subjects there is a significant difference \( p<0.001 \) and an upwards score progression between age groups in all H.A.V. sub-tests. This pattern is not so clear in LCD children. There are significant age trends in all haptic sections as well as auditory recognition, visual retention and integration sub-tests. Haptic and visual recognition, auditory recognition, association and retention sub-tests show variability in scoring patterns with no clear upward progression with age. However, in the other seven sub-test areas age trend is progressively upwards, but differences between mean scores are not significant or marked as in the N population. The LCD sample is a heterogeneous group, displaying considerable problems in learning in their school environments. Half the subjects are educated in language units attached to primary schools and the remainder in mainstream settings where they are failing to progress at the same rate as their peers. Five out of twelve auditory and visual processing tests show no significant age trends demonstrating an unpredictable, unstable performance pattern amongst LCD children when compared with similar N participants.

C-Profile 2 [processing], H.A.V. sub-test comparisons between N and LCD participants within each age group
Table 28a Sub-Tests of H.A.V. that do not reach a $p < 0.001$ level of confidence

Haptic

<table>
<thead>
<tr>
<th>Groups</th>
<th>N.S</th>
<th>$p &lt; 0.05$</th>
<th>$p &lt; 0.01$</th>
<th>$p &lt; 0.005$</th>
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</thead>
<tbody>
<tr>
<td>1/1a</td>
<td></td>
<td>Retention</td>
<td>Retention</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(movement)</td>
<td>(manual)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/2a</td>
<td></td>
<td>Retention</td>
<td>Association</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(movement)</td>
<td>(manual)</td>
<td>(movement)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/3a</td>
<td></td>
<td>Association</td>
<td>Retention</td>
<td>Recognition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(movement)</td>
<td>(movement)</td>
<td>(movement)</td>
</tr>
<tr>
<td>4/4a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Visual

<table>
<thead>
<tr>
<th>1/1a</th>
<th>Recognition</th>
<th>Association</th>
<th>Integration</th>
<th>Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Association 1, 2, 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/2a</td>
<td>Association 1, 2, 3, Total</td>
<td></td>
<td>Integrate (sorting)</td>
<td>Recognition</td>
</tr>
<tr>
<td>3/3a</td>
<td>Association 1</td>
<td>Association 3, Total</td>
<td></td>
<td>Recognition</td>
</tr>
<tr>
<td></td>
<td>Integrate (sorting)</td>
<td></td>
<td>Association 2</td>
<td></td>
</tr>
<tr>
<td>4/4a</td>
<td>Association 1, 2</td>
<td>Association 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Integrate 1, 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Association
1= Odd in sequence
2= Similar in sequence
3= Pair in sequence

Integrate
1= Sorting
3= Picture recall
Tables 28 a, b, & c detail comparisons of N and LCD subjects on H.A.V. sub-tests within each age group. Table 28 a summarises information regarding sub-tests that fail to reach a p < 0.001 level of confidence. Statistical data is provided for haptic and visual areas only as all sub-tests of the auditory section show a p < 0.001 level of confidence. There is one insignificant difference [p < 0.52] shown in the haptic association [movement] test in groups 3/3a only. In visual recognition and association tests the following groups show insignificant differences:

**Recognition** - groups 1/1a [4 tests]

**Association** - groups 1/1a, 2/2a [4 tests]; 3/3a [1 test]

In the age breakdown, groups 4/4a [7-8 years] demonstrate all sub-tests beyond the p <0.05 level of confidence. Differences between groups become marked as age increases. This confirms observations and comments of professionals involved in managing LCD children that academic performance decreases with age in contrast to N peers.

The closer scores on visual recognition and association sub-tests, in groups 1-3, may reflect classroom practice at this primary level. In schools, attended by the sample, there is emphasis on visual matching/linking tasks as preparation for reading. All classes display quantities of this resource material. Children may be directed to this, by teachers, as little explanation or adult direction is needed so allowing staff opportunity to work with small groups. Therefore, pupils are used to handling this type of activity and score patterns may reflect classroom practice to some extent. When N and LCD children are compared on simple tasks that need minimal verbal instruction there may be less difference in performance than on complex activities demanding sequenced thinking, problem solving and self monitoring. The data seems to confirm this notion. As tasks become more complicated [eg: visual retention/integration tests] the difference between N and LCD becomes significant.

Therefore, visual recognition and association tests may illustrate classroom conditioning. Structured resources and a particular emphasis in teaching may lead to improved performances for the LCD children. This is demonstrated in one of the language units attended by the sample where there is high structure to learning and a skills approach to removing deficits.

The schools attended by the research sample show a change of teaching emphasis in the last year of the infant age range [7-8 years]. There is not as much specific skill training and greater application of learning to extended situations [eg: project work]. Classroom experiences become more abstract and less involved with here and now situations. Observations of the LCD sample in schools indicate that it is at this stage, when tasks demand a series of mental strategies, that they find it difficult to cope successfully. Adults then become concerned about academic progress. Certainly, the present studies confirm a widening gap with age and complexity of task between N and LCD subjects.

**Correlation patterns of the C-Profile 2 (processing), H.A.V. tests in the LCD subjects**
Table 2.9 Correlation Patterns of H.A.V. Sub-Tests in the L.D.

<table>
<thead>
<tr>
<th></th>
<th>Haptic</th>
<th></th>
<th>Auditory</th>
<th></th>
<th>Visual</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>R</td>
<td>A</td>
<td>Re</td>
<td>I</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.68</td>
<td>0.58</td>
<td>0.60</td>
<td>0.67</td>
<td>0.46</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.70</td>
<td>0.72</td>
<td>0.30</td>
<td>0.65</td>
<td>0.46</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.66</td>
<td>0.42</td>
<td>0.30</td>
<td>0.65</td>
<td>0.46</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total = 0.55</td>
</tr>
</tbody>
</table>

The table shows correlation patterns for the C-Profile 2 (processing), H.A.V. sub-tests. As with the N group [discussed under Construct Validity] coefficients are below 0.9 level, suggesting it is possible and useful to separate skill areas, with others in low loading, in spite of interactivity of intersensory processes.

Mean correlations for each H.A.V. area total in N and LCD participants

Table 3.0 The Mean Correlations for each H.A.V. Totals in N and L.D. Children

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>L.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>0.70</td>
<td>0.66</td>
</tr>
<tr>
<td>A</td>
<td>0.49</td>
<td>0.34</td>
</tr>
<tr>
<td>V</td>
<td>0.64</td>
<td>0.45</td>
</tr>
<tr>
<td>H</td>
<td>0.36</td>
<td>0.34</td>
</tr>
<tr>
<td>A</td>
<td>0.46</td>
<td>0.45</td>
</tr>
<tr>
<td>V</td>
<td>0.58</td>
<td>0.61</td>
</tr>
<tr>
<td>H</td>
<td>0.42</td>
<td>0.66</td>
</tr>
<tr>
<td>A</td>
<td>0.64</td>
<td>0.57</td>
</tr>
<tr>
<td>V</td>
<td></td>
<td>0.57</td>
</tr>
</tbody>
</table>

Correlations are lower for LCD compared with the N group in each H.A.V. channel area. This may imply that LCD children employ less range of skills in coping with tasks than do the N group. Certainly, task strategies [discussed previously] suggest this may be so. Correlation patterns are lower in the auditory area in comparison with either haptic or visual modalities. This may indicate a wider range of skills involved in auditory processing.

Discussion

This section summarises qualitative and quantitative data from the C-Profile 1 (production) and 2 (processing) and aims to highlight important features.

C-Profile 1 (production): Qualitative Differences in N and LCD participants

Quantitative and qualitative information is possible to evaluate in transcriptions from audi-taped dialogues. Qualitative differences are obtained from notes made about the speaking situation,
recording two major paralinguistic features - gaze and pitch. Researchers [e.g., Berger & Cunningham, 1981; Gunn et al., 1982] suggest these may be important interactional contingencies when assessing responses. Gaze, in this context, is described as 'referential gaze' [Jones, 1977]. It is concerned with the type of looking where the child appears to be making some reference to his/her activity by a glance up. Therefore, it specifies the transfer of attention from the object of activity between one speaker to another and then back to the object.

A tally count reveals that 93% of N children used this strategy each time whereas only 19% of the LCD sample did so. Often a response was not directed at any one individual as N children were able to use a glance up and a sweeping gaze to make eye contact with the whole group. It was noticeable that none of the LCD children showed this technique. The 19% who used referential gaze did so only in the context of their remark being directed to one speaker only. For example, in the following activity the children [all 6 years] are dressing some cut-out models:

Penny: [N]... Look Mark, there's a green hat. [Penny looks at Mark and then at the hat articulating slowly and carefully]
Mark: [LCD]... Who wants.... [Mark looks at the hat and then Penny before using a falling rather than rising pitch tone]

In this context it is appropriate for Mark to make eye contact with all three children in the group. However, he only looks at Penny as she has addressed him previously. This is typical of the LCD child making a response that is linguistically appropriate but socially it would be pertinent to include all listeners. Moreover, it is noted that these children have problems coordinating brief glances to others with vocalisations [Mark looks at the hat and then Penny before speaking]. There are few instances of a brief gaze from a relevant object to a recipient, and back to the object, being coordinated precisely with what is said. The N subjects display no problems with integration of voice and gesture.

In a previous example [children weighing boxes] Paul makes a comment “by tair” [referring to a missing weight] which is ignored by others in the group, inspite of the fact there is a general search for it. However, Paul fails to make a referential gaze and this could be a crucial factor in grabbing listener attention and transmitting meaning. Indeed, Mehrabian (1969) reminds us that 55% of meaning is carried by gestures, 35% by vocal tone but only 7% by word. In this context, gaze patterns are important not only to support what is said but to gain attention and monitor whether meaning has been grasped by the listener.

In summarising this issue it is recognised that glances can perform an important part in the conversational process as they display to the speaker's recipient that they are communicating to them. Without this signal, vocalisations intended by the child to be communicative, may go unrecognised by other participants.

So far, discussion has centred on gaze behaviour that indicates to recipients that it is communicative. There may be an additional aspect worth noting as vocalisations produced with a rising
pitch are more quickly responded to by listeners who quickly turn their heads to attend. The N children usually insert an attention grabbing word such as 'look' and with a gaze + rising inflection they rarely are ignored. The LCD sample never use this combination of strategies. Generally vocalisations are of a falling or level pitch and do not seem to alert attention effectively. Of course, other issues are likely to be involved here as good speakers have mastered breath control which allows them to use vocal dynamics [pitch, pace, pause, power & pronunciation]. In contrast poor speakers have inadequate breathing patterns resulting in a falling away of the voice in speech sequences. All the LCD sample would fall into this latter category and be described by voice experts as having limited techniques of speech delivery. Good speakers derive skills from opportunities to use language in a variety of ways. It is clear, from this data, that LCD children do not have the same opportunities as N ones to develop these performance skills.

It has been argued that referential gaze, in conjunction with dynamic speech patterns [gaze + rising pitch], is an effective technique to elicit a response from the recipient. Qualitative observations suggest this strategy is generally missing in LCD child's behaviour. This short coming is likely to systematically distort the communicative environment as it will be remembered by audiences producing a lasting and non-standard context in which deformed and/or inadequate conversational skills are exercised [Leudar et al, 1987]. The contention is reinforced by the fact that N children are found to speak more slowly and carefully to LCD partners, repeat what they say and offer corrections. This reinforces the idea of a 'poor speaker' and lowers LCD child's self esteem.

C- Profile 1 [processing]: Quantitative Differences between the N and LCD Participants

The profile shows very significant differences in performance between N and LCD participants across age. The only insignificant difference, in all age groups, is in the use of maintenance comments. This signals that both groups are similar in their wish to continue the topic under discussion. Each group shows basic conventions of turn taking but there is a major difference in who controls the discussion as it is rare for the LCD child to initiate a topic. In the 4-5 year group there is no significant difference in 'contributory comments'. This holds for 'topic continued' in the 6-7 year band and 'closed questions' in 7-8 year olds. Jones (1980) and Cunningham et al (1981) present evidence for difficulty in topic initiating and continuing behaviours with LCD subjects which this data supports. Such children will fail to receive feedback from others in the way that normals do. In the management studies, presented later, it is shown that once adults are aware of this fact they can alter their communicative strategies so that at the end of a programme the LCD children are showing great improvements.

Parents and professionals have to learn to be less directive and to develop questioning techniques that help facilitate the use of words to extend thinking and continue discussion. The work
of McConkey (1980) and Weistuch & Lewis (1985) supports this approach and has differed from others because of their emphasis on language for learning, and the importance of contextual speech and topic extension in building cognitive and linguistic growth. The data of this research clearly illustrates the problems that LCD children have in developing language for learning with peers that are more conversationally able than themselves. However, we need to study the LCD subject in interaction with different partners [other children and adults], in a variety of contexts, in order to determine what the child brings to the interaction and the effects diverse aspects have on learning capacity. This question is addressed later in studies of management.

C-Profile 2 [processing]: Qualitative Differences between N and LCD Participants

The groups were observed to assess their task strategies and the following comments are made:
1. The LCD sample displayed lower levels and less stability in their attention control.
2. The LCD sample took longer to complete tasks.
3. The LCD sample demonstrated no overt strategies [eg: verbal rehearsal of the visual material].
4. The LCD sample showed less mature and coordinated scanning strategies from left to right.
5. The LCD sample exhibited problems in adaptive behaviour and needed repetition of instructions.

Observations are made in each of three modality areas:

a) Haptic

Most noticeable was the LCD group's lack of ability to know what to do with shape stimuli. In oral recognition tasks they showed no attempts to move objects around in the mouth for feeling form differences. They did not exhibit rapid and persisting tongue tip movements as did normal subjects. Similar responses were exhibited in manual tasks. There was less attempt to use finger tip movement to rotate and examine shapes. In the integration task, when blind folded and required to put a large piece of paper in an envelope, the LCD subjects showed poorer organisation of the various components of the activity than N subjects. They used more trial and error approaches and were less motivated and persistent in completing the task well. These qualitative observations are substantiated in quantitative data in the following table.

Mean Comparisons of Haptic Recognition [Oral & Manual] & Integration of C-Profile 2 [processing]

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>L.D</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>Haptic Recognition</td>
<td>3.15</td>
<td>1.20</td>
<td>14.59</td>
</tr>
<tr>
<td>Manual</td>
<td>Haptic Recognition</td>
<td>3.85</td>
<td>2.77</td>
<td>9.04</td>
</tr>
<tr>
<td>Integration</td>
<td>Haptic</td>
<td>8.75</td>
<td>6.02</td>
<td>6.86</td>
</tr>
</tbody>
</table>
b) Auditory

The LCD children did not appear to integrate hearing and listening as successfully as the N group [auditory recognition tests]. They showed less physical alertness [observed in posture and facial expression] and needed constant reminders about tasks. The retention tests indicated that LCD subjects failed to code the unstressed syllable of words in repetition tasks [eg: a'part, a'bout, a'side], although demonstrating ability to articulate the unstressed neutral vowel /a/. This may be due to poorer perception of the underlying patterns of the acoustic stream. Together with a tendency to reduce polysyllabic words and produce the wrong intonation patterns [eg: questions repeated as statements - also evidenced in discourse analysis - see previous extract of Mark saying "Who want"? with a falling tune] this may suggest basic problems in coding prosody and underlying time pulse of speech sequences.

The LCD population tended to simplify phonological patterns as in the word te/le/phone which was produced as te/foun [syllable reduction]; pho/to/gra/phy - fô pie [sound blend omission] and but/tet/cup - butat a p [consonant harmony]. This may be due to poor perception of time pulse / sound differences; problems with articulating complex motor sequences; moto-kinesthetic feedback or involvement of all these aspects.

In retention sentence repetition tasks, the LCD subjects made no response to 42% of the items. In others, a non-processing strategy repeating just the last few words, was frequently displayed. This is an example of 'echo-box' memory, in which physical rather than structural / semantic characteristics of language are retained. In contrast, the N group generally derived meaning from the sentence even when unable to reproduce it with complete accuracy. A typical response to group 4, sentence 10 [Even the three very sad dirty faced boys were laughing] was 'The three dirty faced boys were laughing'. This type of sentence recall involves reproduction of the memory episode and text editing (Kintsch & van Dijk, 1979). Often the LCD sample made word substitution errors [eg: palace for pantry] which Bilsky et al (1983) explain as a breakdown at the second stage, reflecting poor editing skills.

The LCD group displayed just as much difficulty in accessing the semantic as well as syntactic information. This is confirmed in the story re-telling task. Story 1 is composed of simple sentences and 2 has a complex structure. In spite of basic syntax, story 1 was as difficult for the LCD children to access for meaning as story 2. None of them were able to reach a level where 50% of the details were
correct, whereas most of the N sample did this with ease. Liles (1987) and Roth (1987) alert us to the lack of linguistic cohesion that these responses represent. In half the stories re-told by the LCD children there was evidence of the story ‘gestalt’, but fewer details, less markers for time, space and causal relations.

c) Visual

The LCD sample displayed less difference in recognition/association than retention/integration sections when compared with N children. Most noticeable was a persisting tendency to mirror match items. This was not found in the N subjects after the 4-5 year level (group 1) but was present in all LCD groups, and in the top band (group 4a (7-8yr.)] half of the children showed this error pattern.

In association tasks, the LCD sample were able to make second order relationships [matching odd / similar / same in sequence]. However, they demonstrated difficulties in adapting to different test instructions and needed repetition to prevent perseverating responses. The N subjects were able to shift mental sets with relative ease.

Orientation caused problems in recognition matching tasks [mirror response]. This persisted severely in retention activities where LCD subjects showed as much problem with this as they did with sequence.

This may demonstrate a lack of relative codes (Bryant, 1974) showing failure to take in and remember relations between things. Bryant’s studies indicate that normal children manage this easily.

Retention displayed the largest difference in performance between LCD and N participants and orientation caused more problems than sequence. This may indicate insufficient coding strategies. In the integration picture sequencing tasks, the LCD groups repeated their problems with ordering. Not one child, in the sample of forty, produced the story sequence correctly. They displayed impulsive trial and error and change of mind. In contrast the N subjects found the task easy, demonstrating more reflective styles of operation with fewer errors in responses.

Such activities reflect elements of top-down and bottom-up processing or a blend of the two (Miller, 1984). Getting the gist of a story is a top-down process requiring a narrowing down of the topic through various stages. However, putting sequences together demands a focus on detail, which is a bottom-up approach proceeding from the more abstract [individual picture cards] to the concrete situation [completed picture story sequence].

Although most of us have a preferred strategy we need a cognitive [deductive] and data driven [inductive] thinking style in order to process information satisfactorily. The results suggest that LCD children were not so able to apply a joint approach in this particular integration task.

The complex picture, in the integration section, reflected observations of adults working with LCD participants [teachers of the research sample]. Many of these children closed eyes/averted gaze, as if wanting to avoid studying the picture. They found it difficult to search for details in the illustration and impossible to remember them when it was removed. The performance of the LCD group, on visual
tasks, had marked impact on their teachers, when they were invited to observe a repeat session. This, more than other areas, is one with which they closely identify, and they were made aware of the poor quality of some teaching materials.

Here again, the LCD group may lack the cognitive (deductive) thinking style along with the data driven mode (inductive). Therefore, they cannot cope with an integrated learning activity as represented in the complex picture task. This view is supported by Wallach & Miller (1988) in recent studies of children with language and communication difficulty.

Summary

Conventionally, communication is defined as intentional transmission of meaning in a formal code between people who share these rules. Most research on the genesis of communication falls into two camps: those believing it is dependent on cognitive advances and others maintaining that social interaction and affect are the propagators. Whilst the relationship between communication and cognition is unclear, a detailed understanding of human interaction and information processing may provide us with a profitable area of investigation. By studying interactions, sensitivity to the context and rules of communication as well as possible causes of failure is raised. The data confirms that when LCD and N subjects are compared in the same context there are significant differences in interactive and information processing performance. It is assumed that early disruptions of social-affective relations will be the prelude to difficulties in integrating these with cognitive forms of communication. Whether social difficulties precipitate cognitive ones or vice versa is impossible to establish as both are interdependent in learning development.

Certainly, the LCD subjects find it difficult, but not entirely impossible to extract meaning because of problems in structural organisation of stimuli. This makes them slow to respond and compounds their troubles in dealing with conversation. Their lack of 'overt strategies' (e.g. verbal rehearsal) leads one to speculate on intersensory patterning and transfer. Work of Attneave (1969) and Wallach & Miller (1989) suggests that each processing modality has a different facility for handling data. Input to auditory and visual channels is respectively temporally and spatially ordered. The haptic system seems to be organised successively rather than simultaneously (Geldard, 1966).

Content of material as well as modality presentation may determine code processing (O'Connor & Hermelin, 1978; Owens, 1989). When picture presentation is too fast for subjects to name they are less remembered than word displays in sequential memory tasks. On the other hand, free recall and recognition for the same picture material is better than for words. Paivio & Csapo (1971) and Ellis & Woodbridge (1985) interpret this as indication of imaginal and verbal memory codes having different attributes. Visual memory is held to be organised spatially and is inefficient for storing sequential order of picture units.

Conversely, the verbal system is specialised for sequential processing, and storage order is efficient for linguistic units. For concrete words and nameable pictures, providing presentation rate is
slow enough, it is assumed that coding occurs simultaneously in separate linguistic and image stores (Paivio & Csapo, 1971; Jarman & Das, 1977; Das et al., 1979). Philipchark & Rowe (1971) presented subjects with animal/object names associated with sounds [cat, clock, drum], or sounds themselves. Names were remembered better, and one explanation for the difference is that they are more easily rehearsed.

When written or spoken words are recalled there is no difference for either item or order information. Written words or letters are treated as verbal rather than visual material and are temporally ordered (Kahn, 1978, 1984; Merrill, 1985; Owens, 1989). Therefore, information is not necessarily stored in the modality code presented, but can be transferred to the system best able to deal with it. In this study, there is evidence that the LCD group cannot deal with any but directly presented stimuli. They do not show verbal rehearsal strategies, as do N subjects, so information is probably treated less flexibly.

Ordering, in motor memory, has been investigated less than vision and audition. Pepper & Herman (1970); Weiss, Weisz & Bromfield (1986) have assumed it is similarly structured to other modalities. Wilberg & Samela (1973) state that motor memory differs in essential respects. The subject has to perform both initial and recall tasks and this can be compared to verbal memory in conditions where what is said has to be retrieved. Thus, motor programmes are monitored and subject to spontaneous delay and interference. Movements not under the control of the subject [eg: passive ones] are recalled less well, so that output rather than input is crucial for skills involving action. There are qualitatively different features from other modality memory systems.

The LCD sample, compared with N subjects, displayed less differences in haptic than auditory or visual retention. As this system is more primitive and fundamental it may be better developed or less subject to disruption.

Discussion suggests that LCD children may not develop the ability to transfer information into different codes. In the study, they did not use speech as a mediator and this lack of verbalisation appears to lead to unstable responses. Similar conclusions have been reached by researchers of children with learning difficulties. [Butterfield et al., 1973; Brown, 1974; Borkowalski & Cavanaugh, 1979; Reid, 1980; Owens, 1989]. The LCD participants may be impaired in coding words into percepts and vice versa. This seriously affects auditory and visual memory tasks. On the other hand, they show less problems in recognising and matching patterns when compared with N children. This leads to speculation about storage of items and a poorer ability to draw on the range of codes available to others. Failure to derive / evoke verbal or visual representations may lead to sole dependence on the same modality through which stimuli are presented. Qualitative and quantitative evidence lends support to this idea. In this event, there will be problems in dealing effectively with multi-sensory input.

Speculation is focused on brain differences that might be involved. Experiments have indicated the left of the temporal lobe appears to be the focus for making oral symbols (Thompson, 1967). This is reported to be the central area for auditory and visual memory activities (Bangs, 1956). Reports demonstrate this is the first avenue of learning to subside in adults when aging affects brain
tissue. Therefore, it may the last area to function in some children.

Memory is important for developing attention control, selecting meaningful input signals and rejecting redundancies that impinge from the outside world. Edwards (1973) discusses the brain wave form known as the contingent negative variation (CNV), which is an expectancy response (set to attend) of the reticular formation. Children under three years do not show this effect and neither do those with language difficulties. It is said to develop with suitable stimulation, produced by differentiating the modality and rate and order of stimulus applied.

The site of brain wave activity has suggested defective memory and retrieval mechanisms relative to classification of incoming information. Autopsies have demonstrated structural abnormalities in the hippocampus, an area of the brain important for meaning interpretation of incoming stimuli (Suetsugu, 1979; Ball & Nuttall, 1980).

Such findings are of interest in the present context. The LCD sample indicate problems in intersensory patterning which is an activity, like attention, of the reticular system in the basal ganglia. Their attention control is markedly inferior to N participants. The implication is that this area of the brain has not developed spontaneously and needs careful modality input in order to do so. The C-Profile 2 [processing] is seen as a useful framework to gain information about this activity.

A recent review by Owens (1989) confirms the findings of the C-Profile showing those with learning difficulties demonstrate specific differences in all sensory processing when compared with normal subjects. Nugent & Mosley (1987) find they display less efficient attention allocation and capacity. Such children heed fewer dimensions of a stimulus and are less likely to focus on relevant issues. They encode information more slowly than normal learning peers and require longer inspection time to recognise items which may result from delayed initial sensory registration or inactive higher processes responsible for directing attention. Nettelbeck & McLean (1984); Sperber & McCall (1984) state that processing is relatively automatic for normal individuals requiring minimal allocation of brain resources. In contrast, those with learning difficulties do not appear to develop this resulting in fewer resources for higher level problems.

Mosley (1985) suggests that slower recognition time is due to a difference in memory scanning rather than the mechanics of responding to stimuli. Wacker & Greenbaum (1984) find that visual discrimination is enhanced if subjects are taught to verbally rehearse salient dimensions of items. The LCD sample, in this study, did not show verbal strategies when dealing with visual tasks. They displayed inadequate organisational abilities and the arrangement of sensory information is important for retrieval. Poor classification quickly overloads brain storage capacity and hinders memory (Harris, 1982; Merril & Mar, 1987). Information is more easily retained if pre-organised (Lincoln et al, 1985).

Merril & Mar point out that processes of sequential and simultaneous synthesis in language coding are less efficient in those with learning problems so that auditory processing is difficult. Ellis et al (1982); Semchuk (1986) reinforce the view that rehearsal, repetition and organisation are lacking in this population. They conclude that pictures are better recalled than words [confirmed in this study].
probably because the 'imaginai' code is depended on and facility is not gained with the more abstract language one. Varnhagen et al (1987) find short and long term auditory storage poor in retardates and feel it may be related to echoic memory [ability to hear sound after physical stimulation has ceased] decaying more rapidly.

Therefore, organisational and memory tasks are major difficulties for the LCD children and may be indicative of higher cognitive processing problems (Robinson & Robinson, 1983; Levine & Langness, 1985). These researchers report successful intervention if processing is considered within the normal daily context. Owens (1989) also advocates this, citing work of Scrugg, Mastropleri & Levine (1986) and Sternberg, McNerney & Pegatore (1987) to support communicative and cognitive training. Brooks & McCauley (1984) specify deficit [training absent processes] and prescriptive [facilitating processes needed] approaches and state the latter method is more relevant.

Thus, the process model of communication and cognition offers targets and techniques for intervention. Establishing an audit of factors within & without the child is the first step in combining a cognitive and contextual communication methodology. The C-Profile demonstrates the possibility of this and its findings are endorsed in past and present studies of learning difficulty.

The hypothesis that children with language and communication difficulty display differences in cognitive and conversational behaviour when compared with normal peers appears to be proved by the C-Profile study.
## APPENDIX

<table>
<thead>
<tr>
<th>Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>C - Profile 1 Transcript</td>
<td>151</td>
</tr>
<tr>
<td>Reynell Attention Control Schedule</td>
<td>152</td>
</tr>
</tbody>
</table>
**COMMUNICATION PROFILE: TRANSCRIPT OF LIAM(N) & MARK(LD)**

**Context:** Choosing time in class - the boys are playing with cars.

**Incorrupt:** Sounds, sentences.

<table>
<thead>
<tr>
<th>Line</th>
<th>Transcript</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>(N)Hey..Mark! T C P</td>
</tr>
<tr>
<td>15</td>
<td>Pass the car(s) here. R. P</td>
</tr>
<tr>
<td>16</td>
<td>Put the (them) on the table.*beside this lorry. R. P</td>
</tr>
<tr>
<td>17</td>
<td>(LD)Car (green) &amp; red.**there's a red car &amp; a green car. C C - M N C</td>
</tr>
<tr>
<td>18</td>
<td>Umm...pause MC</td>
</tr>
<tr>
<td>19</td>
<td>Put the green car by the (red). R. P</td>
</tr>
<tr>
<td>20</td>
<td>(LD)No response. N</td>
</tr>
<tr>
<td>21</td>
<td>(N)OK! (pause) MC N N C P</td>
</tr>
<tr>
<td>22</td>
<td>Give (the) car(s) to me. R. C Q T X P</td>
</tr>
<tr>
<td>23</td>
<td>How many have we? C Q T X P</td>
</tr>
<tr>
<td>24</td>
<td>Car(s).**red &amp; green, C C - M N C</td>
</tr>
<tr>
<td>25</td>
<td>(there are two cars-red &amp; green-a shiny red car &amp; a shiny green one).</td>
</tr>
<tr>
<td>26</td>
<td>Umm...red &amp; blue MC</td>
</tr>
<tr>
<td>27</td>
<td>We've two cars. C C</td>
</tr>
<tr>
<td>28</td>
<td>Big &amp; shiny. C C</td>
</tr>
<tr>
<td>29</td>
<td>We'll put (them) on here. C C P</td>
</tr>
<tr>
<td>30</td>
<td>Right on this table.**pause C C</td>
</tr>
<tr>
<td>31</td>
<td>Do you want (to) race? C Q T X P</td>
</tr>
<tr>
<td>32</td>
<td>We can use (the) floor. T C</td>
</tr>
<tr>
<td>33</td>
<td>It's nice (and) smooth. T C</td>
</tr>
<tr>
<td>34</td>
<td>What do you think? O Q P</td>
</tr>
<tr>
<td>35</td>
<td>We'll race. T C</td>
</tr>
<tr>
<td>36</td>
<td>(LD)No response. N</td>
</tr>
<tr>
<td>37</td>
<td>Jane that(*has got that). M C - M N C</td>
</tr>
<tr>
<td>38</td>
<td>Jane have got another cars over there, over theirs, over there*in Miss Simpson's* desk. C C</td>
</tr>
<tr>
<td>39</td>
<td>Has (she) got (the) big green one over there, the big green shiny one from there. C C</td>
</tr>
<tr>
<td>40</td>
<td>Jane is taking her nice big car over to the home corner to play. C C</td>
</tr>
<tr>
<td>41</td>
<td>Car(s).**points &amp; gesticulates. T C</td>
</tr>
<tr>
<td>42</td>
<td>(Look! Jane is taking her car over to the home corner to play)</td>
</tr>
<tr>
<td>43</td>
<td>Umm... M C</td>
</tr>
<tr>
<td>44</td>
<td>Do you want her to play? C Q T I P</td>
</tr>
<tr>
<td>45</td>
<td>She can join. T C</td>
</tr>
<tr>
<td>46</td>
<td>She can race too. T C</td>
</tr>
<tr>
<td>47</td>
<td>We can have three cars. T C P</td>
</tr>
<tr>
<td>48</td>
<td>Umm... yeh... yeh... we can now. that's right... we can play now with Jane. M C P</td>
</tr>
<tr>
<td>49</td>
<td>Jane can come. C C</td>
</tr>
<tr>
<td>50</td>
<td>If it'll be good. C C P</td>
</tr>
<tr>
<td>51</td>
<td>I'll win. C C</td>
</tr>
</tbody>
</table>

**COMMENT:**

Mark (LD) uses no requests or questions which limits his ability to manipulate activities. His conversation partner, Liam (N) is facilitating & encouraging responses (2, 3, 6, 9, 10, 18, 21, 31). Eventually Mark responds by contributing information (25, 26, 27) although it is not appropriate to the previous input (21). It is very rare for any LD child to initiate a topic (as shown on data sheets of LCP). This means that LD children fail to control their speaking environments & allow others to dominate, even when (as in this example) their partners are not seeking to be controlling. The ability to initiate & continue topics is fundamental to the development of narrative which is the skill that takes oracy into literacy.
REYNELL ATTENTION CONTROL

STAGE 1: Attention for task momentary / not sustained.
Distracted by new stimuli.

STAGE 2: Rigid attention for own task.
No integration of other participation.

STAGE 3: Single channel attention.
Needs help to transfer focus from task - directions - task

STAGE 4: Single channel attention. Under own control, but needs time to
transfer directions to task.

STAGE 5: Integrated attention. Can assimilate directions relating to
engaged task without interruption of activity.

STAGE 6: Integrated attention well sustained.

CODE 0 - 3
0 = absent
1 = occasional
2 = fluctuating
3 = stable
SECTION 2: PARENTAL ISSUES - THE ATTITUDE OF CARERS

A Study of Parent Views of Professional Practice using a Questionnaire Method

Background Issues

The nature of communication difficulty has been clarified using the C-Profile with N and LCD subjects. Significant differences in performance between the two populations were found and to explain these further we now consider the context of child management.

Cunningham & Hilton Davis (1985) remind us that help for children begins with understanding what parents believe, expect and need. "If they [the professionals] listened to parents, trusting them to be competent and capable, instead of giving instructions all the time, they would be more useful". [parent's comment]. This view reflects changes that have taken place in regard to children with special educational needs as now we are encouraged to view parents as partners with professionals.

As a result of the Warnock Report (1978) children are no longer categorised [eg: physical / mental handicap] and emphasis is on determining their needs as individuals. 'Special needs' define what is essential beyond normal requirements for children [eg: finance, housing, special medical / educational provision].

In addition, the movement towards community care as opposed to residential placement implies greater involvement of families. Linked to this is a shift towards more integration of disabled children into the community [schools] and earlier identification and provision. This has broadened the concept of special needs resulting in expanding numbers of professionals engaged in the field and additional contact between parents and experts.

The general changes in society for more democratic control and self help are reflected in greater parental pressure on child services (Mittler, 1988). The parent/professional partnership forms the basis of child management. At the core of this collaboration is the parent's attitude towards expert input to the child and family. In order to understand how this might affect interaction a study is devised to evaluate parental perspectives.

This is described as follows:

1. The Introduction - placing the study in context
2. Parent Attitudes to Child Management - examining roles of parents and professionals
3. Assessment of Attitudes - discussion of issues
4. The Questionnaire - basic considerations and construction
5. The Study - preparation and description
6. Main Results & Discussion - issues for planning
1. Introduction

The Court Report (1976) on child health services, and Warnock Report (1978) on education of handicapped children, have tossed into the debating arena two frequently opposing groups - parents and professionals. A subtle tug of war often exists between the two and children with special needs are pulled by interests and wishes of both. These involve client requirements within constraints of bureaucratic services.

In this context, a questionnaire of consumer attitudes, is appropriate to record parent views and assess them for management planning. This was carried out in an Opportunity Group, run by Mencap to support children with special educational needs. There are sixty children registered, thirty of whom are diagnosed as having below average development. Thus, pupils with difficulties have the chance to play and learn alongside 'normal' peers.

Parents' views are illuminating. They wish to exert a more powerful influence over their children's future. Professional credibility is frequently questioned in the context of management which is felt to be often inappropriate for child and family.

2. Parent Attitudes to Child Management

Both Court and Warnock reports have thrown into sharp relief the lack of cooperation that has traditionally existed amongst parents and professionals regarding care and attention of children with special needs.

Parents, often carrying a burden of grief and guilt for their child's handicap, put strong emotional pressure and heavy demands on professionals, who, in turn, are afflicted with huge workloads and increasing administration. In Education, teachers are having to deal with the immense demands of implementing the new National Curriculum and standard assessments at 7, 11, 14 and 16 years. Health Service re-organisation through Trusts is changing the nature of medical treatment by introducing market forces and demanding high commitment to service promotion. These situations engender added pressure and stress at work. It is not surprising that experts find it easier to function if their procedures go unquestioned by parents. Those who challenge are often regarded as 'difficult' and labelled - overanxious, emotional, irrational, overprotective, lacking in understanding and ill-informed [collected from case notes].

There appears an unwillingness to give parents credit and a desire to label them unflatteringly. This may be a reaction to pressure and strain, or a defensive move to enhance personal status and justify the professional role of power and authority.

Traditional roles make it difficult to establish cooperative and non-oppressive relationships
VIEW - client's problem seen in context with all responsible for management.
FIT CONTEXT TO CLIENT

All round strategies of dealing with problems. Improved perception. Positive action.

SHARED MANAGEMENT with FEEDBACK & EVALUATION

ACTIVE roles for all & emphasis on cooperation.

PARTNERSHIP between client, parents & professionals with equal responsibility.

FLEXIBLE roles & approaches developed to client's needs

Acts in CLIENT'S INTEREST & is accountable for what is done.

Employed by CLIENT

VIEW - focus on problem in the client rather than in the context.
FIT CLIENT TO CONTEXT

Misunderstanding, poor communication, dissatisfaction, limited perception of the problems.

PROFESSIONAL DOMINANCE LACK OF FEEDBACK & sensitivity to client view

Client & parent reduced to PASSIVE role. Required to accept without question.

Client seen as PATIENT with problem needing EXPERT treatment.

TRADITIONAL work role based on a Medical Model.

TILT in perception of client in ways serving INSTITUTIONAL INTEREST.

Employed by WELFARE STATE INSTITUTION - Clinic, Hospital, School

EMPLOYED on behalf of client.

EXPERTISE

CLIENT INTEREST

Qualifications Training

PROFESSIONALS

INSTITUTIONAL INTEREST

DIAGRAM TO SHOW TWO COMPETING MODELS OF PROFESSIONAL RELATIONSHIPS
between parents, professionals and children. Diagram L illustrates two competing models of professional relationships. On the right, the professional is employed by state services. There is a distinction between their expertise and willingness to employ it on behalf of the client. Service institutions such as clinics, hospitals and schools constrain ability to use skills to advantage. Such organisations devise routine ways to handle issues. For example, in the Child Development Centre, attended by the LCD sample, staff were only able to assess within that context. A feeding problem had to be handled by discussion over a desk rather than observation of a meal-time in the child's home. These pressures tilt professionals' perceptions of children and their needs in ways that ultimately serve institutional self interest. There is often mismatch between parent and child needs and experts' requirement to work within the system. The result is that the child is fitted to context rather than vice versa.

On the left, the diagram depicts how the professional is employed by the client. This situation has political as well as personal implications consigning authority to the consumer. The power of choice puts the client in an active role seeking out expertise to suit particular needs. He/she can remove 'custom' if the service rendered is unsuitable and does not fit requirements. The greater authority of the client encourages a more assertive, committed approach and is likely to foster cooperation in solving problems satisfactorily.

Probably professional-parent relationships have aspects of both models built into them and a tilt towards one or other depends on the context in which they are involved. However, it is a useful analysis when considering relationships between groups with different personal interests.

This framework helps in understanding the Opportunity Group, which was set up initially to provide care and later educational facilities for under-fives with problems in development. State services did not offer what parents and children needed. In this context consumers have the power because if they do not like what is on offer they seek elsewhere. There is greater capacity to organise resources for the needs of child and family. A partnership between parents and professionals is possible with shared management. The child's problem is more likely to be seen in the normal context and present and future needs clearly identified.

Literature on parents of children with special needs has stressed their need for professional help and advice (Pugh, 1985). However, confidential records have been the rule and these have been traditionally unavailable for parents to view and comment on (Tomlinson, 1981). The legal statementing procedures of the 1981 Education Acts have sought to remedy this, but in practice, have resulted in professionals not expressing the truth because of a fear of reprisals from their employing authorities who are unable to resource recommendations to the levels required. Mainly middle class parent pressure groups have developed working for a range of handicaps [eg: Action '81]. The journal "Parents' Voice" is influential. The majority of parents have no voice. Tomlinson (1981) reports a study of special needs assessment. Parents did not feel they were sufficiently informed about professional decisions and matters were discussed in terms they could not understand. They felt 'pushed around' by a complex system. One father, whose child had been seen by at least twelve
professionals, summed it up: "We were helped by one. The rest can go to hell". There was a feeling of "being sent for and told" rather than being consulted. Twelve years later the situation seems no better. A recent survey with regard to disability rights [1993] by AFASIC [association for all speech impaired children] supports these views for the LCD population.

This brings us back to the initial point regarding expert roles. Professionals generally claim a right to practise what they profess to know and give advice and help derived from expertise. They require to be trusted by clients. This poses problems in state services as clients have limited authority to question judgements, although legislation (1988, 1992) has sought to strengthen parent powers in regard to educational services and given them rights to appeal against professional decisions.

However, parents know more about their children and while professionals may acknowledge this fact their training and ideology encourage them to ignore it in practice. Traditional cultural priorities may be forgotten - the fact that parents' rights over the child take precedence over professional, personal and moral views (Gliedman & Roth, 1980). The hazards of this are summarised by Freidman (1971): "The customary professional characterisation of the client insists upon his ignorance and irrationality and is prime justification for the professional's inclination to make the client at best a passive participant in the work". In essence, everyday status as an adult citizen, capacity to reason and right to dignity are eroded.

The fact that the client is a child greatly adds to the complexity of the situation, because professionals cannot avoid taking into account the parents. They are enforcers to the system and obliged to go along with it in the interests of their child. Views become subordinate to the professionals' ideas of parent priorities and duties when the child comes under expert care. Difficulties are created if parents speak up and question professional views. This happened to one family when attending a hospital eye clinic with their daughter. They had visited periodically, for five months, with no diagnosis made. On one occasion, after a prolonged wait at the hospital, the consultant and hospital administrator were challenged about their system. Feeling frustrated a private opinion was sought. The family were seen within a week and the child operated on ten days later. The parents were told that if the eye had been left longer blindness would have occurred.

Experts may misperceive the conflict in personal values between themselves and parents as a challenge to their proficiency and role. They view the client's duty is to make the most of what is provided and not to evaluate provision. The system may encourage this view with policies that work against needs of both parties.

Institutional arrangements also make it difficult for professionals to set up reasonable working arrangements with one another. The case study, discussed earlier, illustrates this perfectly noting the dilemmas of health and education staff with different terms of employment. This can cause difficulties in gaining cooperative and consistent management. For example, some therapists have a regular commitment to working in specialised units. However, they do not have school vacations like education staff and naturally like to take leave within term time when holiday accommodation is much cheaper. It is common for them to be away in November, February and May which are crucial times in
the school year. This type of issue causes friction in working relationships.

A Place for the Parent View

There is a strong case for making parents active participants with other professionals in the early development of handicapped children. Newson (1976) points out that “they know more about the child, on a very intimate level, than anyone else does”. Yet often their expert knowledge has been overlooked, leading not only to misconceptions about the child’s strengths and weaknesses, on the part of professionals working with him, but also to failure to make maximum use of educational possibilities within the home (Pugh & Russell, 1977). The 1981 and 1992 Education Acts have increased parents rights with regard to their children with special educational needs. However, there is the probability that these will only be exercised by assertive parents which may result in others receiving an even worse deal.

Desire for more control was felt keenly by parents in the Opportunity Group. As early as 1972, they had voiced a need for care facilities for handicapped children. Mencap took up their plea and initiated a group in their headquarters on four days each week. It became evident that parents wanted help in developing their children’s abilities and funding was secured from 1975 for a physiotherapist, speech & language therapist, and teacher. In 1982, changes in professional management were put into operation following the Warnock report (1978). The ‘working alongside’ method of parents and professionals was replaced by a ‘working with’ approach in assessment and management. Testing methods of experts were not readily understood by parents so it was decided to adopt a developmental profile to cover areas relevant to child needs (Sage, 1989). It was considered that parents’ expert knowledge should be available for assessment if balanced views were to be achieved for each child in relation to needs and goals.

Parents’ strong feelings regarding child assessment arose from experiences at the Child Development Centre. This operated an Interdisciplinary Team assessment, over two weeks, for children failing routine screening checks by health professionals. Parents and children naturally found this a harrowing experience. They were seen by people they did not know, on unfamiliar territory. Feeling overstressed, emotional tensions rose to the surface, and the child rarely did himself justice, so families felt the situation worked against them when important educational decisions rested on findings. Parents expressed the view that expert testing procedures were too formal and remote from daily criteria. When they are administered by people who had little knowledge of the child and his/her idiosyncrasies, inappropriate judgements may result.

The history of the group, compiled by the leader (1980-85), documents these feelings in relation to situations that parents and professionals were involved in during that period. This is available in the appendix. It establishes that parents felt isolated and alienated from assessment and management of their child’s problems whilst professionals lacked a framework for their involvement and wasted time because they were unable/unwilling to revise traditional practices.
In this context, a survey of parent attitudes is appropriate to provide data that might reach a wider audience and help initiate changes in relationships between experts and families.

3. Assessment of Attitudes

Attitude assessment has been widely attempted in recent years. Methods vary from a sociological survey discovering the central tendency of a group but giving no information regarding individual members, to psychophysical methods which aim at assessing with considerable accuracy the relative attitudes of individuals in the group.

One of the problems in assessment is that its attempt may cause a shift in thinking. By bringing reason to bear on the subject consciousness may be raised and cause attitudes to change. An individual, questioned about his feelings for coloured people, may, for the first time, bring thoughts to the surface and decide to change mode of behaviour. Therefore, the process of assessment is likely to result in modification of the original attitude. This has affected some methods and techniques in use.

There are many ways of looking at attitudes. It is possible to set up artificial experiments and watch reactions of selected individuals but this can be cumbersome and the subjective interpretation may be ambiguous. Another approach is to study the expressed opinion of subjects but this may cause them to put forward views for the benefit of the assessor, from a desire to oblige, shock or disguise feelings. Sometimes an interview technique is used encouraging the subject to talk/write about himself and his/her views but these are known to be statistically unreliable (Coolican, 1991). Projection techniques, such as Murray's Thematic Apperception Test, have something of the controlled test and the interview/essay. The subject is faced with an ambiguous picture to talk/write about and responses are analysed by reference to norms based on material supplied by a large number of other subjects. The analysis is subjective and introduces an element of unreliability. An appreciation of the need for more objective means of assessing attitudes has led to various types of scales. The usual form consists of a set of statements with which agreement/disagreement can be expressed. Thurstone (1927-59) pioneered this method and others have refined the technique (eg: Likert, 1932; Guttman, 1950).

Doubts sometimes are expressed about the truthfulness of answers on attitude scales as people tend to say what is most flattering to themselves, or what they feel the interviewer wants to hear, rather than give real opinions. Offensive statements, causing strong emotional reactions and refusal to cooperate, can be problem factors. Irrelevance and ambiguity may be present.

However, for the purposes of this research, a statement questionnaire is felt to have the following advantages:

- possibility of making the situation anonymous by using unsigned forms
- those unwilling to cooperate need only fail to return forms [disadvantage of self-selection here]
- avoidance of subjective judgements by the researcher
- easy to administer

4. The Questionnaire

Before constructing questionnaire statements a model of the positive and negative attributes of assessment / management is made.

A Model of Assessment Management

<table>
<thead>
<tr>
<th>POSITIVE</th>
<th>NEGATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROVIDES PROFILE</td>
<td>IMPOSES CONSTRAINTS</td>
</tr>
<tr>
<td>[abilities - disabilities]</td>
<td>[arbitrary test selection]</td>
</tr>
<tr>
<td>PROMOTES UNDERSTANDING</td>
<td>INITIATES CONFUSION</td>
</tr>
<tr>
<td>[basis for observation]</td>
<td>[data open to differing interpretation]</td>
</tr>
</tbody>
</table>

Provides Profile - abilities / disabilities
Assessments aim to provide a picture of strengths and weaknesses and often provide norms for standard age comparisons

Promotes Understanding - basis for observation
Assessments aim to provide insight into a child's performance as a basis for planning intervention / support

Imposes Constraints - arbitrary test selection
Assessment procedures impose constraints on two counts:

1. Test Selection - Standard tests may have norms that may not be useful comparisons for the child in question [eg: material may be normed on American rather than English children and become quickly out of date]. Tests are arbitrary in the selection of items for assessment and the processes / skills tapped. Formal / informal procedures are both open to bias.

2. Test Interpretation - Experts administering tests may be unfamiliar with the child and interpret responses inaccurately. Tests are based on different theories, obtain different information, use different tasks and give different results so that it is difficult to collate data that means anything. Frequently tests do not relate to life situations so that generalising information has little utility.

Initiate Confusion - data open to differing interpretation
Experts interpret tests according to the differing philosophies of their training. For example, this may
lead a doctor to look at management implications arising from the assessment situation quite differently from a therapist/teacher. Doctors may state that a child's comprehension is normal on the basis of a good result on the British Picture Vocabulary Scale. This is a word and picture recognition test, and does not relate to normal communicative situations where words are understood in context and in sequence. As doctors do not work with clients in the same way as therapists/teachers they are unlikely to be so aware of broader language and communication issues. It is not uncommon for parents to be told by one expert that function is normal and by another that significant problems are apparent [parent debriefing after the questionnaire study]. Ten parents mentioned their children had received initial developmental screening by doctors and health visitors and were told that communication was normal when later testing by a speech and language therapist had uncovered impaired language. It appears that if pronunciation is reasonably clear adults will not suspect other problems. Communication difficulties are often too subtle to spot casually and if children do not contribute to conversations it is easily assumed they are shy.

Statement questions are designed to cover the positive and negative attributes just described. They are constructed to make a choice from a range of numerical values and consist of a series of statements about which people can express agreement/disagreement along a continuum of feeling. This is referred to as the Likert Scale (1932).

Example:

<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>undecided</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

A range of choices in values seems essential as attitudes vary in extremeness, complexity and strength. Responses are scored and added together to give a score indicating a person's attitude towards assessment and management.

Construction

Eighty statements that express as much variation as possible of positive and negative feeling towards assessment and management were collected. The pool was given to ten parents of children who had experienced assessment and management of their child in the Child Development Centre. Statements were sorted into five piles representing gradients from extremely negative through neutral to extremely positive and mean value by the judges computed for each statement, representing the 'scale value'. Those that were placed in widely discrepant categories were eliminated. The middle 50% of categories [interquartile range] into which statements were placed was worked out. A set of forty statements representing more or less equally spaced values was selected to cover the range of attitudes towards assessment.

Statements are worded in language that is easily understood and certain alterations were made on the suggestion of parents and others as a result of the pilot.
The final questionnaire includes:

1. A front page with instructions
2. A section for personal comments
3. Three questions seeking information on who first spotted the child's problem and the time lapse
4. The forty statements for coding

A copy of the questionnaire is contained in the appendix.

The Population Studied

Parents, involved in the study, have children attending the Opportunity Group who are under the Child Development Centre for multi-disciplinary assessment. The children have a range of language and communication difficulties. The pilot sample confirms that parents hold similar views. They suffer grave anxieties about their children's future and are afraid of the pressures of the system with constant bombardment by a range of professionals. Most are unwilling to assert themselves in case it reflects badly on their child.

All parents were keen to operate in the study and saw it as an opportunity to voice their feelings.

The 25 parent couples who were involved compared favourably with Newson's (1966) sampling procedure in regard to class composition, seen in the table below.

Table 32 A Comparison of the Study Population with Newson's Class Sample

<table>
<thead>
<tr>
<th>Class WC:1,2,3</th>
<th>Class M:3,4,5</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS 32%</td>
<td>68%</td>
</tr>
<tr>
<td>NS 27%</td>
<td>73%</td>
</tr>
</tbody>
</table>

5. The Study

A preparation meeting was held to which parents, involved in the study, attended. The pilot had demonstrated need to explain what is meant by formal and informal tests and for parents to put what they feel about statements, rather than what they think should be the situation. They were able to understand the difference between formal / informal assessments because of informal profiling in the Opportunity Group. Parents had been instrumental in seeking such an approach in order to become better informed and involved in child management.

This initial gathering proved useful in clarifying the aims and intentions of the study and sorting
out possible problems. 28 forms were distributed to parents and a date set for sending back. 25 of these were returned. The remaining three were not requested as these parents were undergoing reassessment with their children at the Child Development Centre and it was not wished to burden them further. The excellent return rate may have been due to parents' wishes to make their views heard and the questionnaire provided them with this opportunity.

Reliability

A test re-test method was used in the pilot study [six parents] and the main study [10 parents], with a four week interval between administration. Scores for the 40 statements were computed and displayed in rank order with re-test values alongside [see appendix]. The set of scores was pooled and correlated using the Pearson Product Moment Correlation to give $r = 0.93$.

Validity

To some extent, validity is built into the scale with the collection of statements and the preparation and selection of them for the final draft using scale values. A construct validity study might have been useful but was really impracticable as it would have involved investigating attitude change following modification of practice.

Data Analysis

Advice on analysis was sought from a social psychologist. As the sample was so small only quantitative data was felt to be appropriate. This was carried out on the three general questions relating to identification of a child's problem as well as the forty statements.

5. Main Results and Discussion

Analysis of the Three General Questions + Comments and Forty Statements

<table>
<thead>
<tr>
<th>General Question</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you spot your child's problem before an expert?</td>
<td>23 parents [yes]</td>
</tr>
<tr>
<td>2. If an expert spotted your child's problem first, can you state profession? [doctor, health visitor etc.]</td>
<td>1 parent - doctor, 1 parent - health visitor</td>
</tr>
<tr>
<td>3. What was the time lapse between spotting your child's problem and appointment for assessment?</td>
<td>7 months [mean score] [3-18mth range]</td>
</tr>
</tbody>
</table>

This information indicates that parents say they are good at spotting problems in their child's
development. There is an average 7 month delay between identifying the problem and receiving assessment and maybe, for a number of reasons, parents fail to alert professionals immediately to the situation. However, experts are known to disregard parents' anxieties regarding their children (Warnock Report, 1978). Fifteen parents [60%] mentioned this attitude amongst doctors. Mothers felt that they were considered overanxious and that general practitioners took the view that children grow out of problems if left alone. Twelve parents [48%] stated that doctors did not understand delay in terms of learning difficulty. The aspect frequently mentioned was speech and language delay relating to difficulties in reading and writing. Parents thought there must be connections between delays in one area and development in another which they did not have the information to understand. It was continually mystifying to come across experts who rarely considered the child's problems as a whole, but seemed only interested in the area they were trained to manage. Twenty two parents [88%] mentioned problems of conflicting advice from different professionals who did not understand each other's role in management. One parent said: "After attending the case conference I didn't know who to believe there were so many views expressed. At some point I decided they didn't know my son at all and I'd better ignore what they said in case I got mad and called them liars" [parent comment on the form].

Another parent has the final word: "I think experts are like bees - they drone on and drive you around the bend!"

Questionnaire Statements

For analysis purposes, scores at both extreme ends of the scale - strongly agree / agree - strongly disagree / disagree were added together to form a composite percentage total for agree and disagree to be compared with the category undecided [see appendix].

Percentages

Results show that few parents view assessment and management positively although there is feeling (46%) that they are necessary to child development. All parents [100%] favour informal as opposed to the general mode of formal assessment in the Child Development Centre. They feel that this should be a co-operative affair, involving everyone equally. 100% of parents want to make their own comments on record. These parents are able to make comparisons with the informal profiling they are familiar with in the Opportunity group.

Although parents strongly express the view that assessment and management are not explained to them (88%) it is clear that they have little faith in testing activities as 80% do not think they reflect normal experiences and 86% state they are not an accurate record of achievements. This result could reflect a limitation of attitude surveys as parents may not have felt this without having this consciousness raised. Also, 96% of parents deem results conflict with their own knowledge of the
Assessments are supposed to improve understanding of a child's problems so that needs may be met effectively but this does not appear to be the case. 60% of parents believe they do not help them to handle their children better - 32% are undecided about this. Certainly, 72% observe that assessments do not help to bring acceptance of the problem or lead to good management of children. Indeed, little faith in experts is expressed - 68% of parents consider that assessments do not help experts to know what to do with their children and 76% deem they do not interpret information correctly. 100% of them judge children do not relate well to people who test them.

The testing situation has negative effects for parents as 100% consider they are made anxious by it and 84% hold children react nervously. 76% of parents are of the opinion that assessments make them feel as though they have failed their children.

As already discussed, all parents and children had completed assessments at the Child Development Centre in order to provide them with a complete picture of progress. 60% of parents agree this was achieved. 76% are of the opinion that team assessments do not enable conflicting views of professionals to be resolved. This is a view expressed under 'any comments' on the first page of the questionnaire. Therefore, it seems that parents judge assessments as having limited utility. They are inaccurate, unfair to children, put everyone under pressure and do not lead to better management. Several parents put forward the view that comparing children with standard norms puts them at immediate disadvantage because their problems mean they miss out on common experience (comments on questionnaire). This implies that parents have missed the point of norm referenced tests as they are designed to show up weaknesses in comparison with others. However, it is obviously distressing to have to face the fact of one's own child performing well below the normal for his/her age.

Discussion with parents reveals they are often bitter and angry about the treatment they receive. One is left wondering whether parents are able to accept the limitations of institutional services. Most parents see assessments as a necessary evil as they realise their children are unable to cope in mainstream schools without appropriate support and need professional help to achieve this. However, it is clear they are sceptical about what is provided.

Discussion

The model of professional roles [diagram L] illustrates that traditional professional/parent/client relationships puts the child in a passive position. This means there is little feedback to experts regarding what parents and children feel about situations. Indeed, parents who express views are labelled 'difficult' and become unpopular.

Cunningham & Hilton Davis (1985) have highlighted three possible models of management practice:

1. The Expert Model - where professionals see themselves as having total expertise taking control
and making decisions.

2. *The Transplant Model* - where expertise from the professional is transplanted into the parents.

3. *The Consumer Model* - where parents, as receivers of services, have the right to decide what is appropriate for their child and view experts as consultants.

These models differ in the way they acknowledge the need for and seek to establish collaborative relationships. In the *expert* model professionals take control with minimal negotiation. The *transplant* model offers partnership with parents in the junior role. On the other hand the *consumer* model acknowledges parental expertise and rights to control and depends on professionals having the training to establish negotiated agreements.

It is clear from the evidence that parents in this study are involved in different models of practice according to context. The Child Development Centre is conducted on the *expert* paradigm whereas the Opportunity Group operates a *consumer* ideal. It is likely that models of practice will vary according to area of need. For example, dentists have the main diagnostic expertise for identifying needs requiring the parent to explain treatment and allay fears. There is a limited partnership signified here. On the other hand teachers require ongoing parental involvement for children with special needs in a joint educative partnership. The Child Development Centre has a diagnostic function and views itself as having special expertise with highly qualified professionals. In contrast, the Opportunity Group is manned mainly by volunteers and there is less expert involvement so making the consumer model a reality.

Both contexts develop group norms for the way they behaved from common interest and attitudes. Parents have collective concerns as do professionals. These can be regarded as a miniature culture and norms will govern how each group is conducted. The professional group sees itself as having knowledge and expertise and the role of dictating to parents what should happen to their children. Parents, as a group, generally fight shy of challenging expert decisions as they feel their own knowledge to be of little consequence and that standing up to professionals may have bad results.

Therefore, both groups form different cultures and when they are brought into direct contact, through children, there is infinite scope for misunderstanding and confusion. This may be a matter of misinterpreting the other's communication - verbal and non-verbal - and setting up an unstable pattern of interaction. The effect of this is likely to be rejection of each other as failing to conform to their view. This may have happened in the present situation resulting in parents feeling that professionals are impossible to get on with.

There are several solutions:

1. To find the views and pattern of action of both in order to interpret each side more satisfactorily. However, many behaviours are very subtle and it takes a long time to know them. It is also difficult to verbalise and be honest.

2. To make an effort to be more flexible and tolerant when dealing with each other and try to understand the needs and thinking of both sides.
These solutions can only be achieved if parents and professionals can develop a more equal partnership with positive involvement of both sides and an ability to successfully communicate.

It will not be easy because professionals, in this country, have been caught up in an ever increasing bureaucratic web. When people come together in groups to pursue collective goals they face complex problems of organisation. One solution to problems of large-scale management has been the development of bureaucracy. Merton (1961) defined this as a "formal, rationally organised social structure involving clearly defined patterns of activity in which, ideally, every series of actions is functionally related to the purposes of the organisation". Although its chief merit is supposed to be efficiency, speed and optimal returns on input, there has been increasing study of its negative aspects. Veblen (1928) developed the concept of 'trained incapacity', where one's abilities function as inadequacies or blind spots and actions based on training and skills do not adapt to changed circumstances. As Burke's (1935) echolalic phrase states "people may be unfit by being fit in an unfit fitness and their training becomes an incapacity". Dewey's (1938) concept of 'occupational psychosis' rests on similar observations. As a result of the very routinised procedures adopted by the system, people develop preferences, antipathies, discriminations and emphases. The structure exerts pressure to be methodical, prudent and disciplined, which transfers rules, originally conceived as inadequacies or blind spots and actions based on training and skills do not adapt to changed circumstances. As Burke's (1935) echolalic phrase states "people may be unfit by being fit in an unfit fitness and their training becomes an incapacity". Dewey's (1938) concept of 'occupational psychosis' rests on similar observations. As a result of the very routinised procedures adopted by the system, people develop preferences, antipathies, discriminations and emphases. 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may lose advantages. This is a major stumbling block to changing patterns of relations that presently exist between parents and professionals from the power dominated expert to a more equal partnership.

Attitudes of parents and professionals are often incongruent and it is imperative that both sides get together and talk seriously about an improved route to satisfaction for both parties. Neither side can be happy about the existing state and it is always the child who suffers in consequence.

The Warnock Report (1978) strongly emphasised the fact that many parents have difficulty convincing anyone their child's problems are real. Successful liaison depends on taking parents' opinions into account. Parents are primarily responsible for their children but usually lack the authority experts acquire from specialised study and qualifications. The parents' role demands more extensive management effort over a longer period than required by professionals. They develop an increasing understanding of their child's problems. However, they are less clear about what this means compared to similar children and unable to use their wider experience for greater confidence and clearer direction in their own efforts.

Therefore, professionals should be useful in making experiences with many children available to parents struggling alone. Unfortunately, many in decision making roles, have limited experience of children and families. In the Child Development Team only the physio and speech & language therapist worked with children on a regular basis. Knowledge, in both cases, was narrow. The physiotherapist specialised in orthopaedics and the speech & language therapist had a background in general practice. None of the other team members had exposure to the wide range of physical, mental, psychological and emotional problems displayed in children referred. They are supposed 'to learn on the job'. However, parents expect them to have specialist expertise and are puzzled when their confidence seems misplaced. This view is apparent in comments on questionnaire forms. "We've learnt to take what we're told with a pinch of salt. The way we've been treated makes us think they don't know what they're doing" is a quote from one set of parents.

This was not the parent view of all experts. Repeatedly, the value of physiotherapists' contact was mentioned. Parents appreciated their more informal methods and home visits for treatment. Working in the context where problems occur has obvious advantages for all involved. The physiotherapy service had no bureaucratic structure and had not evolved routine procedures like other services. All therapists were employed on the same grade and assigned a particular area in which to practice. Children only attended the Child Development Centre for plaster sessions as all other treatment was home based. Parents appreciated being helped to manage their child in their own context. This was in contrast to other services which were clinic based and where clients experienced a 'distance effect'. Parents said that tasks they were asked to carry out often had no bearing on real life needs. One parent spoke of speech & language therapy 'homework' in which her son had to roll balls to teddy viz: roll the ball to teddy; roll the ball to the side of teddy; roll the ball away from teddy. This mother did not understand the reasons for the task and was unwilling to question. The child had not responded and mother was frustrated, saying: "I can't see the point as it doesn't relate to what he
needs needs to do at home. It turned out that the child liked space people and not teddies so the activity may not have been appealing. This reinforces the idea of professionals working with children in contexts where they have learning needs. This may be home, playgroup or classroom.

Findings of the DES Education research programme following the Warnock Report (1978) bore out these views and are reported in “Some of Our Children” (Shackleton Bailey et al., 1979). More recently such ideas have been taken up by McConkey & Price (1986). Researchers have shown that therapists working with individual children, in the isolation of clinics, miss the opportunity to share skills with those in daily contact with children. Procedures used are often unreal and of limited use.

These concepts of management are rooted in techniques that are not explained to others. In the questionnaire 84% of parents disagreed with the statement that strengths and weaknesses of assessment and management are explained to them. There seems reluctance to share skills which are the distinguishing marks of specialists. However, such a situation is justified by the fact that it is impossible to provide expert input for every child that needs it.

The Opportunity Group demonstrates a framework where it is possible to achieve complementary expertise with parents sharing their expert knowledge of the child with professionals giving information and demonstrating techniques. This has been achieved with all aspects of assessment and management. For example, parents are given a breakdown checklist of skills involved in eating and are asked to note behaviour at home. Observations are made of feeding times in the group and a profile completed after discussion.

In reality it is only useful to assess what the child can and cannot do in real life situations and work at goals to improve daily function in interactive modes. The interdependent relationship between parents and experts relying on each other’s knowledge to meet needs adequately is the ideal model of practice to support children.

Therefore, assessment and prescriptive action should not be seen as separate activities undertaken solely by people who have little involvement with children. Parents need to be included in all aspects of management to provide vital information and balanced views. This would help understanding of children’s reactions to tasks and help grasp principles of teaching.

The Warnock Education Study (1979) shows the disagreements that exist between parents and professionals and it is difficult to judge who gives the most objective picture. Children’s language and behaviour varies in different settings (Rutter et al., 1970; Cazden, 1977) and both may be describing accurately even when ratings seem at variance. Often professional training and techniques give insufficient expertise to all aspects of life at home and school. A rational, flexible approach to forming appropriate goals with active parent/professional collaboration is to be encouraged.

Implications for the future

The parents’ feelings against child management may surprise us as our perspective as professionals is that we have much constructive help to offer them.
Obviously, we need to establish information gathering methods but the formal procedures, largely in use, reduce performance in every sphere to numbers and are distrusted by parents. They feel there is limited value in these for accurately pinpointing problems and forming an optimal plan for action. The analysis of tests [table 2] completed on the LCD children prior to this study, confirms the narrow range of assessments undertaken giving credence to parents' views. They feel if their own observations are made part of the system a fuller understanding of children's developmental needs results.

There are two issues at stake here:

1. Co-operation between Parents and Professionals

   The experts' bureaucratic base means that co-operative relations with parents are difficult. This presents a dilemma as they are accountable to employers and on the other hand to clients. The two may not be in accord. What constitutes the best for the child may not be administratively possible. Tilt in perception towards family needs will only occur if parents pressure collectively for changes. Channels must be available through which they can express views, interests and feelings honestly so that planners know what consumers require. Recent Educational legislation (1988, 1992) has sought to strengthen parent power especially with regard to appeal procedures on legal statements.

   This means considerable changes of attitudes on both sides. Some parents need to become more vocal and assertive; professionals have to be less authoritarian and directive. An equal partnership can lead to more active interest and participation amongst those intimately involved in the child's daily life.

   Equality of partnership is not an easy concept to adopt. Although it is increasingly endorsed in education (Mittler & Mittler, 1982) it is only slowly being put into practice especially in medical professions. What exactly does 'equality' mean in this context? Pugh (1985) says that "a true partnership suggests an acceptance of equal skills and expertise - a sense that each partner brings something different but of equal value to the relationship". D'Ath (1982) makes a similar point, namely, that partners are "different but equal". Wolfendale (1983) goes further suggesting a true partnership is one which "parents are perceived as having equal strengths and equivalent expertise". Summarising the principle of partnership, she describes it as "mutual involvement, mutual accountability and mutual gain". It may also imply equal responsibility both in indentifying the problems and doing something about them. There is a parallel with the growth of self-advocacy and normalisation in the area of adult special needs.

   Equality in this context cannot mean that parents' assessments, skills or judgements are as good as experts or vice versa. It simply means they complement each other, bringing different sets of knowledge and techniques to the situation.

   Parents and professionals must understand that each has important but different influence. To forget or ignore this means a less than best strategy for management of the child with special needs. The sharing of initiative and responsibility is likely to push changes in context to suit the child rather than continually moulding him/her to the system which so often happens at present.
2. Co-operation between Professionals

An issue that parents felt strongly about was the lack of agreement existing between different professionals regarding management targets. They also expressed the view that professionals do not always have the skills and experience their roles require. A factor here, is the different personal characteristics of individuals involved in a wide range of professional work. This has frequently been the subject of analyses (Davie, 1977a). He suggested that subsequent training of different professional groups, usually in isolation from each other, certainly takes them further apart.

"They learn their own specialised vocabularies and their own restricted codes. More importantly, their framework of professional concepts will differ quite markedly, so that, sometimes even the same words can have different meanings or connotations. This shaping of the professional role will extend, for example, to firm [even rigid] ideas about confidentiality. In addition, social workers will often tend to develop a family/community-orientated perspective, whereas the teacher's will usually be child centred".

The barriers erected in training can be heightened in institutional settings, where professionals are employed in different services [health, education, social services], operating under various terms of reference and philosophy [see case study in previous section]. Therefore, experts have an independent base, but rely on other agencies in meeting child needs. For example, speech & language therapists, unable through service policy to make regular visits to homes and schools, depend on information from health visitors, social workers and teachers when devising management for children. There are positive influences to be gained from such a large pool of skill and experience but this can be negative if parents and clients are confused by different advice from the personnel involved with them.

To solve negative influences some thought has to be directed at initial and inservice training and the possibility of medical and educational workers having teaching elements together in order to achieve better recognition of each other's skills. Experts need to work with rather than alongside others for cross fertilisation of ideas and development of coordinated approaches.

All professionals who assess children need continuing experience of actually working with them so they gain understanding between testing and teaching objectives. This study notes limited parent faith in professional judgements reflecting lack of expert knowledge and experience.

Summary

The views of 25 parents of the 40 LCD sample are documented by means of a questionnaire on attitudes to management. The limitations of such an appraisal have been discussed, but it is believed the results are a valuable record of these consumer's views of a system that stamps and processes children with special needs. Attitudes are slow to change and consumer messages need repeating. A recent investigation by Stewart (1989) using a questionnaire to gauge parent
satisfaction with special needs provision, reinforces issues that emerge from this research. These are:

- professional reluctance to involve parents
- partnership credited with lip service alone
- decisions based on formal, threatening and unrepresentative situations administered by individuals unknown to the child
- carers feeling children are the property of the state.

These findings, conducted in consultation with the Parent Action '81 group, reflect Wildlake's (1989) statement regarding reluctance of professionals to recognise their traditional 'authoritarian' role is no longer appropriate in spite of a new era of professional accountability. There is conflict here as experts are only part of the decision making process [along with parents] but entirely responsible/accountable for actions. Professionals enter legal contracts with employers with regard to duties and responsibilities and clients in terms of rendering a service. These relationships are covered by laws of contract and torts [wrongs]. It is now accepted that parents are no longer prepared to take on trust decisions ordering their lives. The Education Acts (1988,1992) ensure they are able to turn to law for a second opinion. This public move towards professional accountability could result in experts being conscious of their authoritative role.

Other research (Rogers,1986) indicates the lack of positive commitment to partnership by authorities. Only 6% of LEAs list parent duties under the 1981 Act; just 14% refer to the concept of parents as partners and 67% fail to explain parent rights to attend assessments. Carers are likely to be disadvantaged from the outset due to inadequate information.

Redwood (1989) has produced a study of democratic revolutions which turns our mind to likening state institutions to the Warsaw Pact regime with a socialist state within a state. They are driven by many of their motives with similar results - stagnant performance, a vast bureaucracy and widespread discontent inside and outside the system. Such socialism should not be identified with any particular party or country. It is a phenomenon of modern societies with mass populations, where the proliferation of rights engenders growing irresponsibility in people, whilst demand for equality - in its nature insatiable - perverts principles of justice.

Once egalitarianism comes to be seen as an aim true purposes are subverted. Failure to realise the impossible dream is never taken to be criticism of the dream itself. The response is to impose more administration, added officious control and impracticable schemes. At the same time clients are made ever more dependent on the system and the need for effort if they wish to improve themselves. Failures are not viewed as necessarily the fault of the structure.

This seems to be the effect of recent legislation, although set up to give parents and children greater equality and control, has resulted in a reverse effect. These tendencies show little sign of decreasing. The recent National Curriculum is rooted in a concept of education as a mass phenomenon which is largely insensitive to the vast differences existing among pupils and parents with regard to aspiration, ability and belief and likely to impose orthodoxy in the centre of the system.

Therefore, the parents' dilemma of their children with special needs, mirrors that in the wider
society. Unless we recapture diversity and value the views and attitudes of others honestly, the working partnership between parents and professionals will not be a practical prospect but an impossible dream. Professionals, too, have their own predicaments having to cope with demands of employing authorities and wishes of clients. Laws ensure they are now more accountable for activities perhaps encouraging more rigid practices and less flexibility in decision making. These particular challenges ensure the construction of good practice is a priority for all.
# APPENDIX

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CHILD DEVELOPMENT CENTRE

PERSONNEL

Director - Senior Community Medical Officer (Child Health)

Staff - Medical - Medical Officer, Orthoptist, Physiotherapist, Speech Therapist,
               Nursing Sister, Nursery Nurse.
               Educational - Senior Educational Psychologist, Teacher, Teacher of
               the Deaf.
               Social - Senior Social Worker.

PROCEDURE

1. Parents receive an appointment for a 2 week assessment of their child at
   the Child Development Centre (situated in a converted house in the grounds
   of a Hospital). Assessment is either am/pm so the child does not have to be
   in attendance for the whole day. Appointments are given after a child has
   failed a routine developmental test screening given by a Doctor or Health
   Visitor. Children are normally seen in the 1 - 5 year age range and after
   initial assessment are reviewed annually with a 6 monthly 'Book Review'
   reports from Professionals collated and discussed at a case conference,
   if this is thought to be necessary.

2. The child attends and is seen initially by the Nursing Staff for a
   Denver Developmental Screening Test. Medical Staff then carry out a
   routine physical check and the Medical Director administers the Griffiths
   Scales. Thereafter, the child is seen individually by all the personnel
   mentioned above. These team members use a variety of Standard Tests to
   make a diagnostic assessment of each child's status. In between testing
   the child goes into a playgroup with the Nursery Nurse and the other child-
   ren who are undergoing assessment. There are approximately 5 children
   attending for each session.

3. At the end of the 2 week period a Case Conference is held and attended
   by other personal involved with the child (eg. G.P., Teacher, Play Group
   leader, Health Visitor etc.) Reports are available from the Child Development
   Team and other personnel. Recommendations are made regarding treatment/educa-
   tion. Towards the end of this Research Project parents were allowed to attend.
In 1930 the Rugby Mencap Playgroup became the Rugby Opportunity Group with changes introduced by Rosemary Sage (Speech Therapist) and Liz Rogers (Group Leader). The core activity - the Jigsaw Group - was so named because it aimed to put together a child's learning needs into an overall teaching/treatment plan. Parents, encouraged to attend the sessions with their handicapped and able children started to meet together to share their views and learn from each other's experiences. In November 1933, they formed themselves into the LINC (liaison of those involved in the needs of children) Parent Support Group. The numbers of able children in the Opportunity Group have increased steadily over the years. It has been exciting to see the benefits that integration brings to both handicapped and non handicapped children in a playgroup setting.

April 16th - May 2nd 1931

Early Learning Exhibition held at Rugby Library and featuring the work of the Jigsaw Group's Therapy/Teaching Programmes for children with learning difficulties.

June 1931

Liz Rogers (Opportunity Group Leader), Rosemary Sage (Speech Therapist) and Carol Evans (Physiotherapist) met the Rugby Child Development Team to discuss the newly formed Jigsaw Group.

September 1931

Liz Rogers was invited to sit on the Health Care Planning Team for Child Health. This was proposed by Dr. John Cash, Community Child Specialist, Warwickshire, at the June meeting.

October 5th, 1931

Mothers already attending the Opportunity Group sessions with their handicapped children, decided to get together for weekly meetings on Wednesday mornings. They arranged for different team members from the Child Development Centre to talk to them about the assessment of their children having to attend Brooke School and Ian Copus, newly appointed Headmaster of Brooke School, was invited to speak about his plans for the future.

October 27th, 1931

Visit of The Bishop of Coventry and The Director of Social Services, Mr. Bessell, to the Opportunity Group to meet the staff and children. This visit was proposed by Mr. Bessell after he had viewed some of Rosemary Sage's material on Early Learning displayed at a FPA Conference in September 1931.
May 1932
Evening workshop on Early Learning run by Rosemary Sage for the Opportunity Group staff, parents, physiotherapists, health visitors and social workers.

July 2nd, 1932
Visit of the Rt. Hon. Norman Fowler, Minister of State for Health and Social Services. He was making a study of schemes where there was a blend of professional and voluntary help.

September 23rd, 1932
Some Opportunity Group parents and staff attended a course at Warwick University entitled 'Towards an equal partnership - a working relationship between professionals and parents of handicapped children'.

October 5th, 1932
Evening meeting of Opportunity Group parents and professionals and other parents of young handicapped children at Richmond Lodge to discuss the possibility of re-forming a support group, previously started by the Child Development Centre in April 1931.

October 16th, 1932
Rugby Opportunity Group Conference, 'Children with Special Needs', chaired by Rosemary Sage, Speech Therapist. Speakers included local parents and professionals as well as national figures. Participants included parents and professionals from a wide area of the country. A LINC Group was discussed at the end of the conference session. (Liaison of those Involved in the Needs of Children).

November 1932
The first parents (Mr. and Mrs. L. Massey) attended their own child's case conference. This came about as a result of complaints by other Opportunity Group parents about the lack of information made available to them during their children's assessment at the C.B.C.

December 1932
A further Parent Support Group Meeting was held and a committee was formed. There seemed to be a general dissatisfaction amongst parents with regard to the assessment procedures. There was a wish for more participation in decisions involving their children especially about schooling.

February 1933
Miss Powell, Adviser for Special Education, in Warwickshire came to talk to the Parent Support Group and answer questions on the integration of handicapped children into normal schools.
She was strongly in favour of Special Schools.

June 1933

Professor Max Wald, Principal of the Wood's Foundation spoke on 'Special Education in America' and what parents had a right to expect from their local schools.

August 1933

Rosemary Sage presented a paper at the XIXth Congress of the International Association of Logopedics and Phoniatrics at the University of Edinburgh. One of her studies involved parents attitudes towards Assessment, at the Rugby Opportunity Group.

October 1933

A group of parents and professionals from Coventry, called 'Family Focus', came to give advice on the setting up of a support group.

November 1st, 1933

A Meeting of the Support Group, when the aims of such a group were drawn up and the name LINC (Liason of those Involved in the Needs of Children) was decided upon. It was agreed that all future meetings would be held at 95, Albert Street, Rugby, the home of Marianne and John Connolley, two of the LINC parents.

November 29th, 1933

Visit by Mark Vaughan, from the Centre of Studies on Integration in Education, to talk about the integration of handicapped children into normal schools.

February 10th, 1934

Visit of Patricia Potts, from the Open University, to the Opportunity Group, to observe for herself an integrated pre-school playgroup.

She also spoke to a meeting of parents asking about their attitudes to the Assessment of their children and their views on integration.

February 23rd, 1934

LINC parents and professionals attended the Regional Training day on the 1931 Education Act, run by the Spastics Society at Hereward College, Coventry.

March 7th, 1934

Visit by Thames Television to film a session at the Opportunity Group, for a documentary film entitled 'Perspective', featuring Louise Haile, a little girl who had made a dramatic recovery from Hurlers Syndrome following a bone marrow transplant from her sister.

June 23rd, 1934

LINC conference 'Integration in Action', held at Rugby School Centre.
The conference was organised by LINC members, both parents and professionals, in an attempt to change attitudes in Rugby to the integration of handicapped children into normal schools. Ninety people attended, mostly teachers, therapists, social workers and parents of handicapped children. No Education Officers, from local areas, were present, although they had received invitations to the day.

October 13th, 1984

A workshop was held at the Opportunity Group, dealing with some of the difficulties faced by disabled people and their families, called 'A life worth living'. The speaker was Rita Udall, a Counsellor and Tutor for the LMA, in personal relationships.

September 1984 - October 1985

Weekly LINC Meetings were held at 95, Albert Street. LINC parents of physically handicapped children have fought for the right to send their children to normal school and all have so far succeeded in getting their children a place in their local community schools. Recently two of the parents have been involved in the selection of helpers for their children. No such offer has yet been made to the parents of the three mentally handicapped children, all over 5 years. The meetings have involved helping these parents collect information and prepare their Appeals. A separate history of the LINC Group has been written up and is due to be published shortly by the Centre of Studies on Integration in Education. (CSIE)

October 9th, 1985

Visit to the Opportunity Group of Mr. G. Essex, Education Officer responsible for Special Needs.

LIZ ROGERS, OPPORTUNITY GROUP LEADER

December 1985
L I N C

AIMS OF THE LINC SUPPORT GROUP

1. To acknowledge the right of the children with Special Needs to the same opportunities for self-fulfilment as other children.
2. To acquire information and offer help and advice to parents.
3. To lobby relevant agencies to effect change and make appropriate improvements in the education and social welfare of children with Special Needs and their families.
4. To help change attitudes in the community towards children and adults with Special Needs.
5. To achieve the full participation of ALL children in the education and social life of their local community.

With the development of the Group a further and more specific aim emerged as a primary project. This was:

To help parents secure the admission of their child to the local school or nursery of their choice, including the integration of any child with special educational needs in the local ordinary school environment whether in mainstream class activities or within units within schools. This current project has been provoked by the 1981 Education Act. The new legislation enforced from April 1983, makes law those principles embodied in the Warnock Report and places exciting and significant new duties in the lap of all local Education Authorities. It should make possible much greater parental involvement in the identification, assessment and placement of children with special educational needs.
QUESTIONNAIRE STATEMENTS

1. Assessments (A) help you to understand your child (C).
2. A. help you to know what is wrong with your C.
3. A. help you to know what to do with your C.
4. A. help you to know why your C. behaves as he/she does.
5. A. help the Experts to know what to do with your C.
6. A. are explained so parents know the strengths & weaknesses & can interpret results with caution.
7. A. are explained by the person who gives them to your C.
8. A. help you to accept your child's problem.
9. A. help you to feel that you can do something about solving your C's difficulties.
10. A. reveal problems that you did not know existed.
11. A. reflect the tasks your C. has to cope with in normal life.
12. A. reflect accurately your C's achievements.
13. FORMAL A., with set tasks, giving age/intelligence scores, are best at predicting what your child will achieve.
14. INFORMAL A., which look at a C's behaviour in all situations & check off on a list of developmental areas, are the best guides to how a C. functions.
15. A. highlight problems that can be solved.
16. Team A. produces an all round picture of a C's development.
17. Experts, using A., interpret information correctly.
18. A. encourage labels for a child which limit what you expect from him/her.
19. A. produce results that conflict with your knowledge of your child.
20. A. sample small bits of behaviour only.
21. A. are a reflection of how a C. performs in one place, at one time, & with one person only.
22. A. are limited without back up knowledge from parents & others.
23. A. are a limited indication of what a C. functions like in normal life.
24. A. make parents feel anxious.
25. A. make children feel nervous.
26. A. make parents feel they have failed their child.
27. A. results resolve your previous worries.
28. Discussions, resulting from A. are better left to Experts.
29. Discussions, resulting from A. are better when Experts, Parents & Others combine information about a child.
30. Results & comments from A. should be available for parents to see & make their own comments on record.
31. Use of A. results leads to good management of your child.
32. A. results produce evidence that helps a child to receive better help.
33. Team A. enable conflicting views of Experts to be resolved.
34. Children always perform reliably on A.
35. Results of A. should be the main determinant of the C's management, and school placement.
36. Children usually relate well to people who test them.
37. INFORMAL A. produce more accurate results than FORMAL A.
38. FORMAL A. produce more accurate results than INFORMAL A.
39. A. are useful to compare the results with normal levels.
40. A. are necessary to discover children's needs.
QUESTIONNAIRE

1. This questionnaire contains 40 statements about ASSESSMENTS.

2. These statements can be coded as follows:
   
   Strongly agree  agree  undecided  disagree  strongly disagree
   5  4  3  2  1

3. Please read & ring what YOU feel to be the appropriate number.

The results are ANONYMOUS but are to be used to provide evidence as to what parents, in general, feel about ASSESSMENTS. They will be useful feedback in helping to meet children's needs more adequately.

Please make any comments on the Assessment Questionnaire in the space below, if you so wish. Thank you for your cooperation.

Your comments on the Questionnaire

Can you answer these?

1. Did you spot your child's problem before an Expert? 

2. If an Expert spotted your child's problem first can you state profession? eg. Doctor, Health Visitor etc. 

3. What was the time lapse between spotting your child's problem & appointment for Assessment? 

Rosemary Sage March 1986
1. Assessments help you to understand your child.
   Strongly agree  agree  undecided  disagree  strongly disagree
   5  4  3  2  1

2. Assessments help you to know what is wrong with your child.
   Strongly agree  agree  undecided  disagree  strongly disagree
   5  4  3  2  1

3. Assessments help you to know what to do with your child.
   Strongly agree  agree  undecided  disagree  strongly disagree
   5  4  3  2  1

4. Assessments help you to know why your child behaves as he/she does.
   Strongly agree  agree  undecided  disagree  strongly disagree
   5  4  3  2  1

5. Assessments help the Experts to know what to do with your child.
   Strongly agree  agree  undecided  disagree  strongly disagree
   5  4  3  2  1

6. Assessments are explained so parents know the strengths & weaknesses of the Test & can interpret results with caution.
   Strongly agree  agree  undecided  disagree  strongly disagree
   5  4  3  2  1

7. Assessments are explained by the person who gives them to your child.
   Strongly agree  agree  undecided  disagree  strongly disagree
   5  4  3  2  1

8. Assessments help you to accept your child's problem.
   Strongly agree  agree  undecided  disagree  strongly disagree
   5  4  3  2  1

9. Assessments help you to feel that you can do something about solving your child's difficulties.
   Strongly agree  agree  undecided  disagree  strongly disagree
   5  4  3  2  1

10. Assessments reveal problems that you did not know existed.
    Strongly agree  agree  undecided  disagree  strongly disagree
    5  4  3  2  1
11. Assessments reflect the tasks your child has to cope with in normal life.
   Strongly agree agree undecided disagree strongly disagree
   5  4  3  2  1

12. Assessments reflect accurately your child's achievements.
   Strongly agree agree undecided disagree strongly disagree
   5  4  3  2  1

13. FORMAL Assessments, with set tasks, giving age & intelligence scores are best at predicting what your child will achieve.
   Strongly agree agree undecided disagree strongly disagree
   5  4  3  2  1

14. INFORMAL Assessments, which look at a child's behaviour in all situations & check off on a list of developmental areas are the best guide to how a child functions.
   Strongly agree agree undecided disagree strongly disagree
   5  4  3  2  1

15. Assessments highlight problems that can be solved.
   Strongly agree agree undecided disagree strongly disagree
   5  4  3  2  1

16. Team Assessments produce an all round picture of a child's development.
   Strongly agree agree undecided disagree strongly disagree
   5  4  3  2  1

17. Experts using assessments interpret information correctly.
   Strongly agree agree undecided disagree strongly disagree
   5  4  3  2  1

18. Assessments encourage labels for a child which limit what you expect from her/him.
   Strongly agree agree undecided disagree strongly disagree
   5  4  3  2  1

19. Assessments produce results that conflict with your knowledge of your child.
   Strongly agree agree undecided disagree strongly disagree
   5  4  3  2  1

20. Assessments sample small bits of behaviour only.
   Strongly agree agree undecided disagree strongly disagree
   5  4  3  2  1
21. Assessments are a reflection of how a child performs in one place, at one time, & with one person only.

Strongly agree agree undecided disagree strongly disagree
5 4 3 2 1

22. Assessments are limited without back up knowledge from parents & others.

Strongly agree agree undecided disagree strongly disagree
5 4 3 2 1

23. Assessments are a limited indication of what a child functions like in normal life.

Strongly agree agree undecided disagree strongly disagree
5 4 3 2 1


Strongly agree agree undecided disagree strongly disagree
5 4 3 2 1

25. Assessments make children feel nervous.

Strongly agree agree undecided disagree strongly disagree
5 4 3 2 1

26. Assessments make parents feel they have failed their child.

Strongly agree agree undecided disagree strongly disagree
5 4 3 2 1

27. Assessment results resolve your previous worries.

Strongly agree agree undecided disagree strongly disagree
5 4 3 2 1

28. Discussions resulting from Assessments are better left to Experts.

Strongly agree agree undecided disagree strongly disagree
5 4 3 2 1

29. Discussions resulting from Assessments are better when Experts, parents & others combine information about a child.

Strongly agree agree undecided disagree strongly disagree
5 4 3 2 1

30. Results and comments from Assessments should be available for parents to see & make their own comments or record.

Strongly agree agree undecided disagree strongly disagree
5 4 3 2 1
31. Use of Assessment results leads to good management of your child.
   Strongly agree agree undecided disagree strongly disagree
   5 4 3 2 1

32. Assessment results produce evidence that helps a child to receive better help.
   Strongly agree agree undecided disagree strongly disagree
   5 4 3 2 1

33. Team Assessments enable conflicting views of Experts to be resolved.
   Strongly agree agree undecided disagree strongly disagree
   5 4 3 2 1

34. Children always perform reliably on Assessments.
   Strongly agree agree undecided disagree strongly disagree
   5 4 3 2 1

35. Results of Assessments should be the main determinant of the child’s management & school placement.
   Strongly agree agree undecided disagree strongly disagree
   5 4 3 2 1

36. Children usually relate well to people who test them.
   Strongly agree agree undecided disagree strongly disagree
   5 4 3 2 1

37. Informal Assessments produce more accurate results than formal Assessments.
   Strongly agree agree undecided disagree strongly disagree
   5 4 3 2 1

38. Formal Assessments produce more accurate results than informal Assessments.
   Strongly agree agree undecided disagree strongly disagree
   5 4 3 2 1

39. Assessments are useful to compare the results with normal levels.
   Strongly agree agree undecided disagree strongly disagree
   5 4 3 2 1

40. Assessments are necessary to discover a child’s needs.
   Strongly agree agree undecided disagree strongly disagree
   5 4 3 2 1
<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Undecided (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Assessments help you to understand your child.</td>
<td>56%</td>
<td>36%</td>
<td>10%</td>
</tr>
<tr>
<td>2. Assessments help you to know what is wrong with your child.</td>
<td>32%</td>
<td>23%</td>
<td>46%</td>
</tr>
<tr>
<td>3. Assessments help you to know what to do with your child.</td>
<td>32%</td>
<td>60%</td>
<td>8%</td>
</tr>
<tr>
<td>4. Assessments help you to know why your child behaves as he/she does.</td>
<td>45%</td>
<td>43%</td>
<td>12%</td>
</tr>
<tr>
<td>5. Assessments help the Experts to know what to do with your child.</td>
<td>12%</td>
<td>63%</td>
<td>24%</td>
</tr>
<tr>
<td>6. Assessments are explained so parents know the strengths &amp; weaknesses &amp; can interpret results with caution.</td>
<td>12%</td>
<td>88%</td>
<td>0%</td>
</tr>
<tr>
<td>7. Assessments are explained by the person who gives them to your child.</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>8. Assessments help you to accept your child's problem.</td>
<td>12%</td>
<td>72%</td>
<td>24%</td>
</tr>
<tr>
<td>9. Assessments help you to feel that you can do something about solving your child's difficulties.</td>
<td>12%</td>
<td>88%</td>
<td>0%</td>
</tr>
<tr>
<td>10. Assessments reveal problems that you did not know existed.</td>
<td>24%</td>
<td>60%</td>
<td>16%</td>
</tr>
<tr>
<td>11. Assessments reflect the tasks your children have to cope with in normal life</td>
<td>12%</td>
<td>50%</td>
<td>38%</td>
</tr>
<tr>
<td>12. Assessments reflect accurately your child's achievements.</td>
<td>0%</td>
<td>96%</td>
<td>4%</td>
</tr>
<tr>
<td>13. FORMAL Assessments, with set tasks, giving age/intelligence scores are best at predicting what your child will achieve.</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>14. INFORMAL Assessments, which look at a child's behaviour in all situations &amp; check off on a list of developmental areas, are the best guide to how a childfunction</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>15. Assessments highlight problems that can be solved.</td>
<td>0%</td>
<td>96%</td>
<td>4%</td>
</tr>
<tr>
<td>16. TEA K Assessments produce an all around picture of a child's development.</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>17. EXPERTS using Assessments interpret information correctly.</td>
<td>8%</td>
<td>24%</td>
<td>7%</td>
</tr>
<tr>
<td>18. Assessments encourage labels for a child which limit what you expect from them.</td>
<td>12%</td>
<td>88%</td>
<td>0%</td>
</tr>
<tr>
<td>19. Assessments produce results that conflict with your knowledge of your child.</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>
20. Assessments sample small bits of behaviour only.
   Agree - 96%  Disagree - 0%  Undecided - 4%

21. Assessments are a reflection of how a child performs in place, at time &
   with person only.
   Agree - 96%  Disagree - 0%  Undecided - 4%

22. Assessments are limited without backup knowledge from parents & others.
   Agree - 100%  Disagree - 0%  Undecided - 0%

23. Assessments are a limited indication of what a child functions like in
   normal life.
   Agree - 96%  Disagree - 4%  Undecided - 0%

   Agree - 100%  Disagree - 0%  Undecided - 0%

25. Assessments make children feel nervous.
   Agree - 96%  Disagree - 0%  Undecided - 16%

26. Assessments make parents feel they have failed their child.
   Agree - 16%  Disagree - 84%  Undecided - 0%

27. Assessment results resolve your previous worries.
   Agree - 0%  Disagree - 83%  Undecided - 12%

28. Discussions resulting from Assessments are better left to Experts.
   Agree - 4%  Disagree - 88%  Undecided - 8%

29. Discussions resulting from Assessments are better when Experts, Parents &
   others combine information about a child.
   Agree - 100%  Disagree - 0%  Undecided - 0%

30. Results & comments from Assessments should be available for parents to
   see & make their own comments on record.
   Agree - 100%  Disagree - 0%  Undecided - 0%

31. Use of Assessment results leads to good management of your child.
   Agree - 4%  Disagree - 66%  Undecided - 28%

32. Assessment results produce evidence that helps a child receive better help.
   Agree - 40%  Disagree - 32%  Undecided - 28%

33. Team Assessments enable conflicting views of Experts to be resolved.
   Agree - 0%  Disagree - 76%  Undecided - 20%

34. Children always perform reliably on Assessments.
   Agree - 0%  Disagree - 96%  Undecided - 4%

35. Results of Assessments should be the main determinant of the child's
   management & school placement.
   Agree - 96%  Disagree - 5%  Undecided - 8%

36. Children usually relate well to people who test them.
   Agree - 0%  Disagree - 100%  Undecided - 0%

37. INFORMAL Assessments produce more accurate results than FORMAL Assessments.
   Agree - 100%  Disagree - 0%  Undecided - 0%

38. FORMAL Assessments produce more accurate results than INFORMAL Assessments.
   Agree - 0%  Disagree - 100%  Undecided - 0%

39. Assessments are useful to compare the results with normal levels.
   Agree - 29%  Disagree - 56%  Undecided - 24%

40. Assessments are necessary to discover a child's needs.
   Agree - 4%  Disagree - 14%  Undecided - 36%
**QUESTIONNAIRE:** Parents' Attitude towards Assessment of their Children.

*(results of 25 parents' views coded on 1-40 statements)*

**Numbers** - refer to the number of parents coding the statement, e.g., 7 = 7 parents.

Numbers for Strongly agree/Agree and Strongly disagree/Disagree are totalled together for a % Agree and a % Disagree.

S.A. = Strongly agree, A = Agree, U = Undecided, D = Disagree, S.D. = Strongly disagree.

<table>
<thead>
<tr>
<th>Statement</th>
<th>S.A.</th>
<th>A.</th>
<th>Total</th>
<th>U.</th>
<th>D.</th>
<th>S.D.</th>
<th>Total</th>
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<td>1.</td>
<td>0</td>
<td>2</td>
<td>3%</td>
<td>9</td>
<td>36%</td>
<td>7</td>
<td>23%</td>
</tr>
<tr>
<td>2.</td>
<td>0</td>
<td>7</td>
<td>23%</td>
<td>3</td>
<td>32%</td>
<td>6</td>
<td>22%</td>
</tr>
<tr>
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<td>3</td>
<td>32%</td>
<td>3</td>
<td>32%</td>
</tr>
<tr>
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</tr>
<tr>
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<tr>
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<td>4%</td>
<td>3</td>
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<td>14</td>
<td>56%</td>
</tr>
<tr>
<td>7.</td>
<td>0</td>
<td>3</td>
<td>12%</td>
<td>12</td>
<td>0</td>
<td>19</td>
<td>76%</td>
</tr>
<tr>
<td>8.</td>
<td>0</td>
<td>4</td>
<td>16%</td>
<td>16</td>
<td>3</td>
<td>12%</td>
<td>11</td>
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<tr>
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<td>24%</td>
<td>3</td>
<td>32%</td>
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<td>20%</td>
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<tr>
<td>10.</td>
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<td>3</td>
<td>32%</td>
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<tr>
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<td>12</td>
<td>2</td>
<td>5%</td>
<td>7</td>
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<tr>
<td>12.</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>3</td>
<td>12%</td>
<td>4</td>
<td>16%</td>
</tr>
<tr>
<td>13.</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>-</td>
<td>2</td>
<td>16%</td>
</tr>
<tr>
<td>14.</td>
<td>21</td>
<td>84%</td>
<td>4</td>
<td>16%</td>
<td>100%</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15.</td>
<td>0</td>
<td>10</td>
<td>20%</td>
<td>40</td>
<td>6</td>
<td>24%</td>
<td>3</td>
</tr>
<tr>
<td>16.</td>
<td>0</td>
<td>7</td>
<td>23%</td>
<td>23</td>
<td>3</td>
<td>12%</td>
<td>4</td>
</tr>
<tr>
<td>17.</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>6</td>
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<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>18.</td>
<td>11</td>
<td>44%</td>
<td>11</td>
<td>44%</td>
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</tr>
<tr>
<td>19.</td>
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<tr>
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<td>14</td>
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<td>10</td>
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<td>96%</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>21.</td>
<td>15</td>
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<td>9</td>
<td>33%</td>
<td>96%</td>
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<td>4%</td>
</tr>
<tr>
<td>22.</td>
<td>19</td>
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<td>6</td>
<td>24%</td>
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<td>0</td>
<td>-</td>
</tr>
<tr>
<td>23.</td>
<td>15</td>
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<td>9</td>
<td>33%</td>
<td>96%</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>24.</td>
<td>21</td>
<td>84%</td>
<td>4</td>
<td>16%</td>
<td>100%</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>25.</td>
<td>16</td>
<td>64%</td>
<td>5</td>
<td>22%</td>
<td>84%</td>
<td>4</td>
<td>16%</td>
</tr>
<tr>
<td>26.</td>
<td>15</td>
<td>60%</td>
<td>4</td>
<td>16%</td>
<td>76%</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>27.</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>3</td>
<td>12%</td>
<td>7</td>
<td>25%</td>
</tr>
<tr>
<td>28.</td>
<td>0</td>
<td>1</td>
<td>4%</td>
<td>2</td>
<td>8%</td>
<td>7</td>
<td>25%</td>
</tr>
<tr>
<td>29.</td>
<td>21</td>
<td>84%</td>
<td>4</td>
<td>16%</td>
<td>100%</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>30.</td>
<td>23</td>
<td>92%</td>
<td>2</td>
<td>8%</td>
<td>100%</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Statem.</td>
<td>S.A. %</td>
<td>A. %</td>
<td>Total</td>
<td>U. %</td>
<td>D. %</td>
<td>S.D. %</td>
<td>Total</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
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</tr>
<tr>
<td>31.</td>
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<td>1</td>
<td>4%</td>
<td>4%</td>
<td>7</td>
<td>28%</td>
<td>10</td>
</tr>
<tr>
<td>32.</td>
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<td>10</td>
<td>40%</td>
<td>4%</td>
<td>7</td>
<td>28%</td>
<td>4</td>
</tr>
<tr>
<td>33.</td>
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<td>1</td>
<td>4%</td>
<td>4%</td>
<td>5</td>
<td>20%</td>
<td>12</td>
</tr>
<tr>
<td>34.</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>1</td>
<td>4%</td>
<td>5</td>
<td>20%</td>
</tr>
<tr>
<td>35.</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>2</td>
<td>3%</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>36.</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>4%</td>
<td>9</td>
<td>36%</td>
</tr>
<tr>
<td>37.</td>
<td>16</td>
<td>64%</td>
<td>9</td>
<td>36%</td>
<td>100%</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>38.</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>4%</td>
<td>9</td>
<td>36%</td>
</tr>
<tr>
<td>39.</td>
<td>0</td>
<td>5</td>
<td>25%</td>
<td>2%</td>
<td>9</td>
<td>36%</td>
<td>7</td>
</tr>
<tr>
<td>40.</td>
<td>0</td>
<td>12</td>
<td>48%</td>
<td>9</td>
<td>36%</td>
<td>1</td>
<td>4%</td>
</tr>
</tbody>
</table>

**NOTE**
- + = over 50%
- * = over 75%

These percentages are calculated from the addition of two columns:
- Strongly agree/agree
- Strongly disagree/disagree
### Scores in Rank Order

<table>
<thead>
<tr>
<th>MAIN TEST</th>
<th>Pilot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 141</td>
<td>1. 125</td>
</tr>
<tr>
<td>2. 133</td>
<td>2. 116</td>
</tr>
<tr>
<td>3. 131</td>
<td>3. 115</td>
</tr>
<tr>
<td>4. 131</td>
<td>4. 112</td>
</tr>
<tr>
<td>5. 129</td>
<td>5. 107</td>
</tr>
<tr>
<td>6. 129</td>
<td>6. 100</td>
</tr>
<tr>
<td>7. 125</td>
<td>125 *</td>
</tr>
<tr>
<td>8. 125</td>
<td>125 *</td>
</tr>
<tr>
<td>9. 115</td>
<td>115 *</td>
</tr>
<tr>
<td>10. 115</td>
<td>115 *</td>
</tr>
<tr>
<td>11. 114</td>
<td>114 *</td>
</tr>
<tr>
<td>12. 112</td>
<td>112 *</td>
</tr>
<tr>
<td>13. 112</td>
<td>110 *</td>
</tr>
<tr>
<td>14. 112</td>
<td>112 *</td>
</tr>
<tr>
<td>15. 111</td>
<td>111</td>
</tr>
<tr>
<td>16. 110</td>
<td>110 *</td>
</tr>
<tr>
<td>17. 103</td>
<td>103</td>
</tr>
<tr>
<td>18. 103</td>
<td>103</td>
</tr>
<tr>
<td>19. 107</td>
<td>107 *</td>
</tr>
<tr>
<td>20. 107</td>
<td>107 *</td>
</tr>
<tr>
<td>21. 107</td>
<td>107 *</td>
</tr>
<tr>
<td>22. 106</td>
<td>107 *</td>
</tr>
<tr>
<td>23. 101</td>
<td>101</td>
</tr>
<tr>
<td>24. 100</td>
<td>100 *</td>
</tr>
<tr>
<td>25. 99</td>
<td></td>
</tr>
</tbody>
</table>

* = Reteats
SECTION 3: PROFESSIONAL ISSUES: TYPES OF COMMUNICATION MANAGEMENT

Studies to Investigate Individual and Interactive Management

Introduction

The review of learning and management considered how information is attained, the role of previous knowledge in acquisition, and the way affective issues influence how we perceive the process. Management needs to consider all these aspects and be aware of what learners bring with them to enable effective education targeting. Not only are individual characteristics of learners important but attitudes of families which support them and the relationships that are involved in collaborative enterprises between pupils, parents and professionals.

Theoretical premises have been explored in the first two sections. The research considered, as well as information from the present studies, contributes to understanding, but does not provide more than insights into the complex process of communication difficulty. Those who effect management will be unable to find one theory that will provide answers to all questions concerning intervention. This section introduces studies that aim to contrast two different styles of management in order to evaluate the efficacy of different methods. These are:

1. An individual approach which targets the child's deficits in language form in periodic sessions with a speech and language therapist.
2. An interactive approach which addresses child needs in the learning context and encourages appropriate support in group situations rather than individual programmes.

The individual approach follows "the expert model" (Cunningham & Hilton Davis, 1985) with the professional in control of decisions and deciding targets for remediation. However, the interactive method is in line with "the consumer model" in which the professional acts as consultant and instructor within the framework of an acceptable agreement with those involved in a child's learning. Therefore, the first method concentrates on factors within whereas the second emphasises those without the child.

In diagram M a teaching model is constructed that encompasses individual and interactive aspects.

Diagram M: Individual and Interactive Components of Communication

<table>
<thead>
<tr>
<th>LANGUAGE INPUT</th>
<th>CONTEXT CHARACTERISTICS: opportunity, group dynamics</th>
<th>LANGUAGE INTAKE</th>
</tr>
</thead>
<tbody>
<tr>
<td>The language to which the learner is exposed</td>
<td>PERSON CHARACTERISTICS learning style, motivation</td>
<td>The language the learner uses to build hypotheses &amp; determine rate of acquisition</td>
</tr>
</tbody>
</table>
The individual method concentrates on language input and intake and the personal attributes of the child, whereas the interactive approach takes into account context characteristics. The study compares outcomes from both types of intervention in groups as well as four individual children in two different schools. The subjects are tested before and after mediation.

Group Study

This study compares two groups of 15 children each in different schools [N and W]. It is described as follows.

1. **Methodology** - outlining the sample selection, administration and procedures as well as other measures used.
2. **Sample Characteristics** - of the two groups on other measures.
3. **Description of Methods of Management** - giving an outline of the two approaches used with the groups.
4. **Main Results and Discussion** - looking at similarities and differences between groups using quantitative and qualitative data.

1. **Methodology**

Sample

Two groups of fifteen children were selected from schools N and W on the basis they were clients of the speech and language therapy service and performing academically below the average of their peers. The schools were situated in a Midland town and had the following number of pupils.

School N = 405 pupils
School W = 417 pupils

There were six infant and six junior classes in each school and they were organised horizontally with the same age group in them. Both schools had a similar style of teaching with some class instruction by the teacher and mixed ability group work.

**Criteria for Sample**

The children were matched for age, environment, socio-economic level, as well as non-verbal intelligence.

**Age**

There were three sets of five in each school in the 5/6, 6/7, 7/8 year ranges. The mean ages for each set in both schools were as follows:
Table 33: Age means in each age group for schools N and W

<table>
<thead>
<tr>
<th>Age</th>
<th>School N</th>
<th>School W</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/6yr</td>
<td>5.10</td>
<td>5.11</td>
</tr>
<tr>
<td>6/7</td>
<td>6.7</td>
<td>6.6</td>
</tr>
<tr>
<td>7/8</td>
<td>7.9</td>
<td>7.7</td>
</tr>
<tr>
<td>T</td>
<td>6.87</td>
<td>6.80</td>
</tr>
</tbody>
</table>

Table 34: Age comparisons between school N and W

<table>
<thead>
<tr>
<th>Age</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>School N</td>
<td>6.4</td>
<td>0.45</td>
</tr>
<tr>
<td>School W</td>
<td>6.2</td>
<td>0.51</td>
</tr>
<tr>
<td>t</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.63 (NS)</td>
<td></td>
</tr>
</tbody>
</table>

These show no significant difference between groups [p>0.05].

Social Class

Children were grouped according to the Registrar General's Classification [discussed in section 1] as follows:

Table 35: Class distribution of subjects in school N and W

<table>
<thead>
<tr>
<th>Class 1,2,3 [WC]</th>
<th>Class 3 [M]</th>
</tr>
</thead>
<tbody>
<tr>
<td>N 67%</td>
<td>69%</td>
</tr>
<tr>
<td>W 33%</td>
<td>31%</td>
</tr>
</tbody>
</table>

Therefore, the class distribution was equable between groups.

Non-Verbal Intelligence

Raven's Progressive Matrices [RPM] [see section 1 for discussion] were used to assess non-verbal thinking ability. Results are tabulated below.
Table 36: A comparison of mean scores on the RPM for subjects in school N and W

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/6yr</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>6/7</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>7/8</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>t</td>
<td>0.34</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.74</td>
<td>[NS]</td>
</tr>
</tbody>
</table>

There is a slightly higher mean score for school W but this is not significant [p=0.05].

Constraints Operating on Set Criteria

Home Background & Environment

All children fulfilled the following criteria:
1. They were in the care of their mothers.
2. They all had fathers at home.
3. They were all native British with English as the first and only language spoken at home.
4. There were no known physical handicaps [including sight and hearing]

Schools

These contain a number of variables affecting child development, such as grouping systems, population, catchment area, accommodation offered, staff/pupil ratio and facilities for special needs. It is obviously not possible to control these precisely in the present study but schools were chosen for their similarity in style, organisation, catchment area and population as well as resources offered.

Administration

The children were seen on two occasions in school before and after their programme of intervention. Conditions were as follows for the formal assessment:
1. A small quiet room with minimal distraction.
2. The room contained a table, at child height, with two chairs - one for the assessor and one for the child.

The children were briefed and told they were to play some games. The C-Profile 1 [production] was carried out in the classroom using an audio-tape recorder [as described in section1].

Scoring Procedures

These were discussed in section 1 and will be considered under the main results section.
Session 1

Children were assessed on the following:
1. Raven’s Progressive Matrices - to give an idea of non-verbal ability.
2. The Utah Scales - to assess levels of development in speaking, listening, reading & writing
3. The Renfrew Action Picture Test - to ascertain informational and syntactic levels of language development
4. The Schonell Reading Test “My Dog” - to test word recognition and level of comprehension.

Session 2

This session consisted of administration of the C-Profile 1 & 2 as detailed in section 1.

2. Sample characteristics of the two groups in school N and W

Age
There was no significant difference between groups for age [table 33 & 34].

Sex

Table 37: Female / Maledistribution in N and W school groups

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>26%</td>
<td>74%</td>
</tr>
<tr>
<td>W</td>
<td>20%</td>
<td>80%</td>
</tr>
</tbody>
</table>

The distribution follows normal trends in special needs statistics [see discussion in section 1]. There is a variance between groups but sex differences are only highlighted as a point of interest and are not considered in the main data. The greater complexity of the male form with more possibility of breakdown has been the traditional reason for sex disparities in learning difficulties between girls and boys.

Social Class
This has been discussed under methodology [table 34]. Both groups comprise of similar class distribution.

Non-verbal Intelligence
Table 36 compares results of testing by Raven's Progressive Matrices. It should be noted that scores do not progress between groups 6/7 and 7/8 years and comments about LCD children, discussed in section 1, concerning a slowing up of rate when learning becomes abstract, may apply here.

**Behavioural Characteristics**

Diagram E [Communication Profile Section] summarises teacher/parent views of these LCD children. There were considerable difficulties displayed in formal contexts where children are compared with peers that were not so obvious in the informal situations of home. These issues have been discussed in the review.

**Base-line testing compared with testing after Intervention (1 year time interval)**

**Utah Spoken & Written Language Test (USWL T) (1984)**

This is a test of the four communication processes and there are 51 activities in speaking, listening, reading and writing spanning the 1-15 year age group. It is a useful test to screen skills but is normed on American children so that standards may not pertain to the British population. However, the assessment met the requirements of a joint oracy-literacy approach and was simple to perform and as it was used to compare two groups national norms were not a vital consideration. It was employed because there are no equivalent British tests. The table below compares results from testing on the Utah before and after intervention. Test 1 describes base-line assessment and test 2 the results after one year during which intervention took place.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>W</th>
<th>N</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>20.13</td>
<td>19.8</td>
<td>42.40</td>
<td>23.40</td>
</tr>
<tr>
<td><strong>t</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>p</strong></td>
<td>0.87 [NS]</td>
<td></td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td><strong>DF</strong></td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These results show there are significant differences between performances of the two groups on the second testing which are not demonstrated on the first occasion. The reasons for this will be
discussed under results.

**Renfrew Action Picture Test [RAPT]**

This test [discussed in section 1] was carried out before and after intervention. Table 39 tabulates results.

Table 39: A comparison of test 1 and 2 using the Renfrew Scales on subjects in school N and W

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>W</th>
<th>N</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>17.30</td>
<td>16.53</td>
<td>31.53</td>
<td>22.8</td>
</tr>
<tr>
<td>t</td>
<td>-0.30</td>
<td>-6.54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>0.77 [NS]</td>
<td>0.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DF</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These results show significant differences between groups when tested on the second occasion which were not apparent on initial assessment. These will be discussed later.

**Schonell Reading test “My Dog” (1977)**

This assessment is presented as a short reading passage with four sections in different print size forming clear cut off points for readers. Therefore, it is an evaluation of continuous reading material with ages for word recognition and for comprehension assessed from the 15 possible questions asked about the passage [text available to refer to]. It is a better indicator of ability to read and understand text than just a word recognition test. Norms are supplied for 6-9 years on the test. Although the means for the 5/6 year band [5.10 & 5.11] are just below this it was decided they were sufficiently close in age to be usefully included. The test was used instead of the Neale Analysis (1989) as teachers felt the reading content was more appropriate, there were fewer aspects involved in testing and it was easier to carry out in schools. Since both schools had rising five policies all children had been in education for over a year before testing.

In order to gain genuine comparisons the two groups of children in schools N and W were compared with fifteen others [eight from N and seven from W]. They were matched for age and non-verbal intelligence using Raven’s Progressive Matrices. Tables 40 and 41 tabulate results.

Table 40: Age comparison between schools N and W and control [C] subjects

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>N&amp;W</td>
<td>6.83</td>
<td>0.48</td>
</tr>
<tr>
<td>C</td>
<td>6.32</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>0.71</td>
</tr>
</tbody>
</table>
Results indicate no significant differences between groups.

Table 41: Non-verbal comparison [RPM] between school N & W and control subjects [C]

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>N&amp;W</td>
<td>16</td>
<td>0.51</td>
</tr>
<tr>
<td>C</td>
<td>16.50</td>
<td>0.62</td>
</tr>
</tbody>
</table>

Results show no significance between groups on non-verbal ability as measured by RPM.

Reading test results are shown in tables 42a,b,c,d,e; 43a,b,c,d,e; 44a,b,c,d,e; 45a,b,c,d; 46a,b. Tables 42a,b,c record errors in word recognition, comparing school N and W with controls on Test 1 and 2.

Table 42a: A comparison of errors in word recognition between test 1 and 2 [SRT] in school N

<table>
<thead>
<tr>
<th>Table</th>
<th>School N</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td></td>
<td>29.7</td>
<td>10.1</td>
</tr>
<tr>
<td>Test 2</td>
<td></td>
<td>7.6</td>
<td>2.02</td>
</tr>
<tr>
<td>t</td>
<td></td>
<td>7.73</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td></td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>
Table 42b  A comparison of errors in word recognition between test 1 and 2 (SRT) in school W

<table>
<thead>
<tr>
<th>School.W</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>31.7</td>
<td>11.9</td>
</tr>
<tr>
<td>Test 2</td>
<td>22.8</td>
<td>14.1</td>
</tr>
<tr>
<td>t</td>
<td>1.74</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.095</td>
<td></td>
</tr>
</tbody>
</table>

Table 42c  A comparison of errors in word recognition between test 1 and 2 (SRT) in controls

<table>
<thead>
<tr>
<th>Control Group</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>9.62</td>
<td>3.55</td>
</tr>
<tr>
<td>Test 2</td>
<td>4.46</td>
<td>1.76</td>
</tr>
<tr>
<td>t</td>
<td>4.69</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.0000</td>
<td></td>
</tr>
</tbody>
</table>

Table 42d  A comparison of errors in word recognition on test 1 (SRT) between schools N and W

<table>
<thead>
<tr>
<th>School N. cf W (test 1)</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>29.7</td>
<td>10.1</td>
</tr>
<tr>
<td>W</td>
<td>30.7</td>
<td>11.9</td>
</tr>
<tr>
<td>t</td>
<td>-0.46</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.65</td>
<td></td>
</tr>
</tbody>
</table>
Table 42 e  A comparison of errors in word recognition on test 2 (SRT) between schools N and W

<table>
<thead>
<tr>
<th>School N cf W (test 2)</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>7.6</td>
<td>2.02</td>
</tr>
<tr>
<td>W</td>
<td>22.8</td>
<td>14.1</td>
</tr>
<tr>
<td>t</td>
<td>5.43</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.0001</td>
<td></td>
</tr>
</tbody>
</table>

These show a massive significant difference between school N tests whereas school W records this as less than the 5% significance level. The control group also show a huge significant difference between tests. Although there is no significant difference between schools N and W on test 1 this becomes highly significant on test 2. Results will be discussed later.

Tables 43 a,b,c,d tabulate results for schools N and W when compared with controls on test 1 and 2 [error section]

Table 43a  A comparison between school N and controls on test 1 [errors]

<table>
<thead>
<tr>
<th>School N cf Controls</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>29.7</td>
<td>10.1</td>
</tr>
<tr>
<td>T</td>
<td>9.62</td>
<td>3.55</td>
</tr>
<tr>
<td>p</td>
<td>6.76</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.0000</td>
<td></td>
</tr>
</tbody>
</table>

Table 43b  A comparison between school N and controls on test 2 [errors]

<table>
<thead>
<tr>
<th>School N cf Controls</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 2</td>
<td>7.62</td>
<td>2.02</td>
</tr>
<tr>
<td>T</td>
<td>4.46</td>
<td>1.76</td>
</tr>
<tr>
<td>p</td>
<td>4.24</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.003</td>
<td></td>
</tr>
</tbody>
</table>
Table 43c  A comparison between school W and controls on test 1 [errors]

<table>
<thead>
<tr>
<th></th>
<th>School W cf Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Test 1</td>
<td>31.7</td>
</tr>
<tr>
<td></td>
<td>9.62</td>
</tr>
<tr>
<td>T</td>
<td>6.41</td>
</tr>
<tr>
<td>P</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Table 43d  A comparison between school W and controls on test 2 [errors]

<table>
<thead>
<tr>
<th></th>
<th>School W cf Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Test 2</td>
<td>22.8</td>
</tr>
<tr>
<td></td>
<td>4.69</td>
</tr>
<tr>
<td>T</td>
<td>4.55</td>
</tr>
<tr>
<td>P</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Results indicate there are significant differences between test 1 and 2 in comparison with controls for both schools but only a significant difference for school W on test 2. ($p = 0.000$)

Table 44a  A comparison of comprehension [questions answered] between test 1 and 2 for school N on SRT

<table>
<thead>
<tr>
<th></th>
<th>School N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Test 1</td>
<td>4.15</td>
</tr>
<tr>
<td>Test 2</td>
<td>2.25</td>
</tr>
<tr>
<td>t</td>
<td>7.56</td>
</tr>
<tr>
<td>p</td>
<td>0.0000</td>
</tr>
</tbody>
</table>
### Table 44b  A comparison of comprehension (questions answered) between test 1 and 2 for school W on SRT

<table>
<thead>
<tr>
<th>School W</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Mean</strong></td>
<td><strong>S.D.</strong></td>
</tr>
<tr>
<td>Test 1</td>
<td>4.17</td>
<td>0.65</td>
</tr>
<tr>
<td>Test 2</td>
<td>4.02</td>
<td>0.63</td>
</tr>
<tr>
<td></td>
<td>0.60</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.56</td>
<td></td>
</tr>
</tbody>
</table>

### Table 44c  A comparison of comprehension (questions answered) between test 1 and 2 for control subjects on SRT

<table>
<thead>
<tr>
<th>Controls</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Mean</strong></td>
<td><strong>S.D.</strong></td>
</tr>
<tr>
<td>Test 1</td>
<td>2.59</td>
<td>0.54</td>
</tr>
<tr>
<td>Test 2</td>
<td>2.25</td>
<td>0.45</td>
</tr>
<tr>
<td></td>
<td>-4.51</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.00001</td>
<td></td>
</tr>
</tbody>
</table>
Table 44d  A comparison of comprehension [questions answered] between schools N & W on test 1 and 2

<table>
<thead>
<tr>
<th></th>
<th>School N cf W (Test 1 &amp; 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Test 1</td>
</tr>
<tr>
<td>t</td>
<td>-0.08</td>
</tr>
<tr>
<td>p</td>
<td>0.02 (NS)</td>
</tr>
<tr>
<td>SD</td>
<td>= 0.68 (School N)</td>
</tr>
<tr>
<td></td>
<td>= 0.65 (School W)</td>
</tr>
</tbody>
</table>

These results show a massive significant difference between tests for school N and although there is a difference for school W this is not significant and in fact the data suggests less improvement in comprehension than word recognition [0.56 v 0.09]. In the control group there is a large significant difference between both tests.

Table 44e displays the time in minutes taken by subjects to complete the test.

Table 44e Mean times for completion of Schonell test “My Dog” for schools N & W and controls[C]

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>test 1</td>
<td>6</td>
<td>0.68</td>
<td>6</td>
<td>0.65</td>
<td>8</td>
<td>0.54</td>
</tr>
<tr>
<td>test 2</td>
<td>10</td>
<td>0.60</td>
<td>7</td>
<td>0.63</td>
<td>10</td>
<td>0.45</td>
</tr>
<tr>
<td>t</td>
<td>7.54</td>
<td>0.61</td>
<td>-4.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.00001</td>
<td>0.55</td>
<td></td>
<td>0.00001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This shows significant differences in time on tests 1 & 2 for school N and controls which are not shown for school W.

Tables 45 a,b,c,d provide across group comparisons for controls with schools N & W on test 1 and 2 [comprehension].

Table 45 a A comparison between school N & controls[C] on test 1 [comprehension]

School N cf Controls

<table>
<thead>
<tr>
<th>Mean</th>
<th>S.D</th>
</tr>
</thead>
</table>
Results indicate there are significant differences on test 1 between both schools and controls but on test 2 there is only a significant difference with school W.

Tables 46a & b tabulate results for the whole assessment and schools N and W with controls on test 1 and 2.
Table 46a A comparison between school N and controls on the whole test [SRT] on test 1 and 2

<table>
<thead>
<tr>
<th>School N cf Control</th>
<th>Test 1</th>
<th>Test 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>t</td>
<td>6.58</td>
<td>2.59</td>
</tr>
<tr>
<td>p</td>
<td>0.00001</td>
<td>0.016 (NS)</td>
</tr>
<tr>
<td>SD</td>
<td>= 0.603 (School N)</td>
<td>= 0.44 (Controls)</td>
</tr>
<tr>
<td>SE</td>
<td>= 0.17 (School N)</td>
<td>= 0.12 (Controls)</td>
</tr>
</tbody>
</table>

Table 46b A comparison between school W and controls on the whole test [SRT] on test 1 and 2

<table>
<thead>
<tr>
<th>School W cf Control</th>
<th>Test 1</th>
<th>Test 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>t</td>
<td>6.74</td>
<td>10.72</td>
</tr>
<tr>
<td>p</td>
<td>0.0001</td>
<td>0.0001</td>
</tr>
<tr>
<td>SD</td>
<td>= 0.63 (School W)</td>
<td>= 0.45 (Controls)</td>
</tr>
<tr>
<td>SE</td>
<td>= 0.13 (School W)</td>
<td>= 0.10 (Controls)</td>
</tr>
</tbody>
</table>

Results indicate that although there are massive differences on test 1 for schools N and W this only exists for school W on test 2 when compared with controls.

Table 47a & b provides a composite correlation comparing test 1 and 2 for schools N and W.
Table 47a: A comparison of schools N & W on test 1

<table>
<thead>
<tr>
<th>School N cf W (test 1)</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>29.7</td>
<td>10.1</td>
</tr>
<tr>
<td>W</td>
<td>30.7</td>
<td>11.9</td>
</tr>
<tr>
<td>t</td>
<td>-0.46</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.65</td>
<td></td>
</tr>
</tbody>
</table>

Table 47b: A comparison of schools N & W on test 2

<table>
<thead>
<tr>
<th>School N cf W (test 2)</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>7.6</td>
<td>2.02</td>
</tr>
<tr>
<td>W</td>
<td>22.8</td>
<td>14.1</td>
</tr>
<tr>
<td>t</td>
<td>5.43</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.0001</td>
<td></td>
</tr>
</tbody>
</table>

Results show a significant difference between both test results for schools N and W whereas on the baseline test 1 no significant difference is shown. Therefore, results suggest very significant improvement in literacy skills, as measured by word
knowledge and comprehension, for students who have followed an oracy-literacy approach to learning. This will be discussed under the results section.

Group Study: Description of Management and C-Profile Assessment.

Management

Until 1980 speech and language intervention was school based with the therapist attending each school [N & W] one half day a week. A policy decision in the speech and language therapy service resulted in school based support being discontinued and work rationalised in the local G.P. Health Centre. Therefore, school W children started to attend the health centre on a once weekly basis. However, due to programming difficulties at the G.P. centre it was not possible to include school N children and it was decided to set up a scheme for them to be managed in school with a once weekly consultation session from the therapist.

School W - Individual Intervention

Individual intervention has been discussed in the review sections and is based on the principle of measuring individual components of ability and where deficits are identified taking steps to remediate them. The most comprehensive framework for identifying problems in language development is the Language Assessment, Remediation & Screening Procedure [LARSP] by Crystal, Fletcher & Garman (1977). Using published accounts of grammar it sets out stages of normal syntactic development against which abnormal development can be measured [see profile in the appendix]. The authors argue for the centrality of syntax in the communication of meaning and claim that it has been neglected in clinical application. “In speech therapy, the traditional focus of training in language has been in phonetics (the study of human soundmaking in terms of articulation, acoustic transmission, and auditory reception) and, more recently, in phonology (the study of the sound systems of particular languages)”.

The LARSP approach was developed within the department of linguistic sciences at the University of Reading and has influenced the practice of therapists throughout the 1980s. Within education there has been growing interest in the teaching of grammar in relation to National Curriculum English attainment targets. In the 1970s grammar took second place to creativity in the teaching of the English language, but it is now considered that lack of attention to syntax has resulted in students not acquiring the underlying processes of sentence formation to express meaning clearly. Thus, the choice of a grammatical model of intervention reflects recent interests in both therapy and teaching.

All fifteen children undergoing grammatical intervention were seen at the health centre for a thirty minute session each week. They were accompanied by a parent or carer and were allotted 30 sessions of 45 minutes for their programme totalling 22.5 hours of direct contact time with the therapist [15 x 22.5 = 337.5 hours]. This time did not include base-line and follow-up testing but included any
necessary conversation with the parents/carers so that 30 minutes was the real time spent with the child. In addition the therapist attended the school three times during the programme to give feedback to teachers of the children during a staff meeting [3 x 1 hour]. Thus, 343.5 hours of therapy time was involved.

In the clinic each child had an individual weekly session with the same therapist which was directed to removing deficits in language. The procedure for remediation was based on the grammatical analysis of language disability by Crystal, Fletcher & Garman (1977) [Language Assessment, Remediation & Screening Procedure - LARSP]. Sessions were directed towards improving aspects of language form [both sound and syntax] in order to achieve the necessary structures to use communication appropriately. It is assumed that once structures are attained they will be used spontaneously in conversation. There is no attempt, in this model of intervention, to locate communication behaviour in the real context. It is hoped that individual skills acquired will transfer naturally with encouragement by the child's carers and teachers. This is a tacit assumption based on the view that speech and language competence brings communicative success. Profile 1 and 2 with glossary [appendix] denote the changes located in analysis before and after intervention with Robert [aged 5.9 years on the first assessment]. This is typical of the data. The following comments are made about profile 1 and 2.

Profile 1

This is an analysis of exchanges between the therapist and Robert. The main features are as follows:

a) The ratio of other stimuli to questions is the distribution one might expect to find in normal child-adult interaction.

b) The therapist's control of the complexity of stimulus structures results in less null responses than was observed in Robert's natural environment [school].

c) Most responses from Robert are intelligible suggesting that phonology is not a major factor in his communication.

d) There are few spontaneous utterances as Robert is not initiating conversational exchanges. The structures analysed are responses to stimuli from the therapist.

e) Word-level development is represented by -ing forms on verbs and some plurals.

f) The number of unexpanded minor responses is large in proportion to the whole.

g) The non-minor responses divide into two categories. First, the stage 1 single-item utterances and secondly, stage 2 structures outnumbering these over a wide range. At clause level there is SV, AX and VO and at phrase level AdjN, PrN, VPart, IntX and PrA [classified under 'other' on the profile]. Examples of these are line *stop fire* [VO]; line *go up* [VPart]; line *little girl* [AdjN]; *down there* [IntX].

Although not on this transcript it was observed that Robert did have the appearance of stage 3 structures [big shiny engine; brown dog / small]. Other observations suggested he had SVC or SVO...
structures. Thus, there are two courses of action open to the therapist. Stage 2 structures can be extended to include all those listed on the summary chart or if these are judged sufficient stage 3 structures may be worked on. The latter decision was taken as Robert was roughly two years behind his peers and needed the means to catch up. Motivation appeared good and may have been affected by painstakingly going through all the structures at stage 2.

Methodology

Table 48 Stage 2 to 3; Key: P=pictures; MI= modelled imitation; FA= forced alternative

<table>
<thead>
<tr>
<th>Session</th>
<th>Structure</th>
<th>Method</th>
<th>Example of output</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,3,4</td>
<td>X+O.NP</td>
<td>P</td>
<td>see a dog</td>
<td>omission of grammar words</td>
</tr>
<tr>
<td>5,6,7,8</td>
<td>PrDN</td>
<td>MI/FA/P</td>
<td>in a box</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>SVO</td>
<td>P/M</td>
<td>girl drawing tree</td>
<td></td>
</tr>
<tr>
<td>10,11,12</td>
<td>PrDN</td>
<td>M</td>
<td>under the table</td>
<td></td>
</tr>
<tr>
<td>13,14,15</td>
<td>do Imp.V</td>
<td>M</td>
<td>don't walk</td>
<td></td>
</tr>
<tr>
<td>16,17,18</td>
<td>AdjAdjN</td>
<td>FA/M</td>
<td>little brown dog</td>
<td>simple questions</td>
</tr>
<tr>
<td>19,20,21</td>
<td>VOA</td>
<td>FA/M</td>
<td>put it in box</td>
<td></td>
</tr>
<tr>
<td>22,23,24</td>
<td>VOOd</td>
<td>P/M</td>
<td>give Mark the pen</td>
<td></td>
</tr>
<tr>
<td>25,26,27</td>
<td>SVO</td>
<td>P/M</td>
<td>boy painting green tree</td>
<td></td>
</tr>
<tr>
<td>28,29,30</td>
<td>NegXY</td>
<td>M</td>
<td>not a cat</td>
<td>negation problem</td>
</tr>
</tbody>
</table>

Table 48 shows the structures modelled in sessions between stage 2 and 3 and the next profile taken. The method shows three main techniques [others are discussed in the single case studies]. As well as forced alternatives [FA] and modelled imitations [MI] there is the use of carefully chosen pictures [P] to fit the structures worked on. The first structure in the table is listed as X+O.NP, one of the early stage 3 structures. The notation stands for a structure of two clause-level elements, one of which is an O which consists of a phrase of at least two elements. The example given in the table is of a VO structure with a noun phrase at O consisting of a determiner plus a noun. Pictures were used to elicit this and similar structures. Robert's performance on this was variable with responses sometimes only having single-item noun phrases. He often responded, when VO was the required structure, with a verb with a -ing ending and a single noun, for example drawing tree. Sometimes, he would give SVO structures when one of the pictures had been modelled using this structure and at other times responding with one element utterances.

T it's a fox running /
R no /dog / no(1) fox /dog /
T here's a boy hopping /
R no /
T what is he doing then / Robert /
P jumping / jumping /
The picture showed a boy jumping. The sequence illustrates a technique used with pictures and modelled imitation. The therapist, instead of modelling a structure by describing accurately what was going on in the picture, or in the room, gives a false description. The intention is to provoke the child into correcting and it often works well.

Intervention began with early stage 3 clause-level structures, and then attempted SVOs. In the first four sessions a three-element phrase level structure was introduced, PrDN. This was the easiest of the three as the only additional complexity over similar stage 2 structures was the systematic use of the determiner. After modelling, Robert was able to use it in response to questions:

T is he in the bedroom / 
R no / 
T where is he / 
R in the bathroom /

Sometimes he was able to use this with clause-level structures:

T what's happening in the picture / Robert / 
R boy - kicking - ball /

In this case the structure had been recently modelled. A longer sequence shows his variable control over structures.

[The therapist asks where he keeps his budgie]

T do you keep the budgie in the garden / 
R no / 
T in the shed / 
R no / 
T in a box / 
R no / 
T perhaps you keep him in a metal cage / 
R yes / 
T you keep him in a metal cage in the kitchen / 
R yes / cage in the kitchen / 
T where / 
R cage kitchen /

Even when the PrDN model is given, Robert does not readily respond, but it may be because of the simple question stimuli. It is only when he is told where the budgie is that he gives a positive response and then he omits the first Pr and D which is probably because two of these structures are strung together. Finally, the syntactic coherence breaks down [cage kitchen], but he may not have been too interested in this line of questioning and only prepared to answer in a minimal way. Grammatical words disappear [see notes on table 4] and only two nouns are left. Although it is not marked here, the phrase is said with force, and the rising tone on cage is a high rising one and there is high falling tone on kitchen. This shows that although Robert can deal with three-element structures in the controlled situation he can revert to two-element sequences outside this.

At this point, the target was not just to consolidate three-element structures but to broaden
the range of prepositions used. He was able to make consistent distinctions between in/on but now models included under/on, behind/in front of/beside. The session for the modelled imitation had Robert describing himself in relation to a selected object [e.g., chair] as self orientation seems easier for troublesome prepositions. This worked well and he began to handle the distinctions confidently.

Procedures described have mainly applied to structures named as statements [generally affirmative]. There was little evidence that Robert was producing other sentence types, particularly question and imperative. However, this may have been because they were not required in this situation. Commands were introduced via MI in the course of modelling other structures. Robert was required to name an object required and reach into a box [with a hole in the top for the hand] and not to look. Items in the box were long smooth pencil, big soft ball, small wood cube etc. There were, of course, alternatives for choice [small hard ball]. Thus, it was possible to model AdjAdjN structures:

T don't look / Robert / Find the big soft ball / You must remember not to look /
R don't look /
.....
T now you ask me to find something /
R don't look / find the smooth long pencil /

Despite being presented with two different negative models he was able to use the negative imperative correctly. Other spontaneous structures were SVO he got book. Thus, the AdjAdjN structures were easily mastered and could be elicited by simple questions [see Table 4 notes].

The clause-level structures then attempted were VCO and the indirect object structure, VOIOd. The first was elicited initially with FA and then a range of sentences was extended using MI. The next excerpt shows imitation of a modelled structure:

T what do I do now / put it on the tree / tell me what to do / ?
R put it on a tree /
T put it on the big tree / it's a very green tree /

Eventually pronouns were not used in models like these and sentences like put the ball in the box were preferred. There are two reasons for this. One was Robert's incomplete pronominal system [there was no recorded evidence of they/them] which suggested avoiding plural pronouns at least in the O position. The second reason was evidence of word order difficulty in relation to pronouns in O position when associated with VPart structures. There were few instances of deviant word order throughout the sessions and the fact that pronouns in O position caused a word order problem suggests caution in using them. This sequence gives an example of what was said whilst playing with telephones:

T do you want me to call you up /
R uhm /
T what do you say /
R call up me /

The VOA showed a variable performance by Robert. This may have been due to the
unnecessary complexity of the models. Instead of beginning with simple adverbs like here, there in the A position the PrDN structures which were already established were used. So models like put the car in the box were reduced to car in a box / put in a box / put car in, depending on how Robert felt. At other times, in response to models he would produce structures like put it on your chair.

The final clause structure listed in table 4 is SVO with a two-element noun phrase at O. This was attempted because SVO was a structure that he was mastering and producing spontaneously at times. This approach was only partly successful due the complex NP. It was too much for him to manage. Pictures were used for this structure portraying something that could be described with a complex noun phrase at O. Models included: The man is wearing a red sweater. The girl is painting a black cat. An appropriate response came in this sequence.

T: yes a cat / and a white mouse / tell me about it / Robert /
R: um...
T: Tell me about it /
R: cat , running , white mouse /

Finally, in this series there were sessions on negation [table 48 notes]. This was an attempt to deal with the problem of using negative statements. Robert had three ways of negating:

i) No as a minor response to an affirmative statement by another participant. From example if the therapist said this is a green ball, Robert would say no, blue ball.

ii) He uses a stage 2 negative structure [not blue] to deny assertion.

iii) Repetion of an assertion [me got them] while shaking his head.

The third method proved the most complex for remediation. A blindfold game was used to cut out his dependance. Robert was blindfolded and asked to select items out of a box and identify them using the model it's a / an --. The therapist used the modal it's not a / an -- when an item was identified wrongly. The blindfold ensured the headshaking would not be a useful cue for Robert and he consistently used the not a / an -- negation form in this session. The headshaking took sometime to disappear and proved a common strategy amongst those with language delay.

Profile 2

It is not proposed to discuss this profile in detail, as most of the information it contains is a straightforward development of tendencies already noted on the first transcription. It shows that advance through the stages is occurring. The first appearance of a spontaneous utterance is noted. The number of stage 3 structures is in advance of stage 2 structures and there is wide coverage. Unexpected stage 4 structures are recorded, represented entirely at phrase level by those containing and; coordination forms had not been explicitly modelled to Robert in the clinical context.

Examples of stage 3 structures are seen. There is an SVO structure [me / - got them] and a
VOA [put them in - on the ceiling] with an appropriate use of the third person plural pronoun. However, a model of this in a preceding utterance is available. An AdjAdjN structure [three christmas trees] can be seen. All of these had been part of the remediation process. There are two examples of Neg XY, some instances of no plus explanatory assertion, and one of the perseverence of Robert's headshaking negation. Three demonstrations of the copula is in SVC structures are evident. At this stage he showed examples of can’t probably learnt as a single item and not a contraction of can + not, as there are neither instances of can nor instances of contraction in the session or previous ones. This is the example of can’t:

T have you drawn a picture of your bike /
R no / can’t draw my bike /

Comment

This programme was targeted primarily at improving a child’s syntax but there were other agendas addressed during intervention. The PACS Profile (1986) [appendix] monitors the sound system development of Robert. This has been designed to match the linguistic profile and it can be seen that developmental levels equate. The same situation held for the other fifteen students in this study. Therefore, it was felt that by improving the language levels of children their speech would be given the opportunity to develop. The MI techniques give the child chance to listen and monitor the normal sound and sentence pattern. Sometimes a child would need additional help to discriminate and produce a sound accurately and the listening programme [appendix] was used to support this. For example, where syllables were being omitted [tel/phone for te/le/phone] games would be played to monitor sound patterns [see page 9]. It was found that sound and syntax patterns could be dealt with together in this way and the children progressed through the stages in similar ways.

The intervention also gave opportunity to practise conversational strategies such as the use of questions and the profile shows the development of these devices within the normal syntax plan. However, there was no attempt to provide a carry over programme in school and evaluate whether improved language forms did help children to communicate more successfully in their learning. The three visits to school were opportunities to discuss general progress but there was not time to look in detail at the implementation of each child’s goals in the school setting. The teachers concerned made a note of what was being aimed for and as far as possible encouraged and supported pupils in class.

School N - Interactive Management

The fifteen children in school N were not seen weekly by a speech and language therapist and the basis of management was to locate their learning needs and meet them within the normal school programme. The speech and language therapist attended the school for one hour a week to monitor
the programme. There were three staff and parent workshops of 2 hours [total 6 hours]. The total speech therapy input time was 36 hours. This did not include the base-line and follow-up assessments. In addition an educational assistant saw the children in three groups for 45 minutes a week in school for 30 sessions [30 x 45 minutes = 22.5 hours]. They were then followed up in class and with parent discussions one hundred hours were involved in the project.

The problems of input from a health service worker (speech and language therapist) were discussed in the context of education demands. These include the National Curriculum and the necessity for all children to undertake standard assessment tests at ages 7, 11, 14 and 16 years.

An initial meeting between the speech and language therapist and school staff described areas to be defined and discussed:

1. The model of collaborative practice
2. Learning competencies at different levels of the curriculum
3. Learning needs of pupils
4. The learning management framework

1. The Model of Collaborative Practice

It was necessary to talk through and explore the process of working together and the following model developed from the study of different collaborative frameworks. The first of these was an examination of working styles in a child development centre and opportunity group (Sage, 1989) and the second a project at Central School of Speech & Drama set up to integrate therapy and teacher training (Sage & Shaw, 1990). The model evolved from observation of working styles and an attempt to locate factors that were important to effective practice. Recordings from successful and unsuccessful working styles were compared. The concept of favourable conditions was described in terms of consumer satisfaction and whether management outcomes met the expectation of all involved. Thus, the framework is based on subjective notions but the strength of the approach arises from the fact that it is established from collective ideas and therefore has validity arising from a group norm. The diagram N, below, identifies components that are felt to be necessary for positive results.

Diagram N: A Model of Collaborative Practice

A MODEL OF COLLABORATIVE PRACTICE

[Diagram shows a model with inputs and outputs, and actions such as consider, consult, contract, communicate, interact, complete, confirm, correct, calculate.]
Feedback from staff identified three components which are central to effective collaboration:

Communicate - giving participants [children, parents, teachers and therapist] planned opportunities to listen and share views. These were carried out on a weekly basis when the therapist visited school for an informal lunch-time meeting to evaluate progress.

Counteract - achieving a balance of perspectives and compromise of views. Therapists are trained in individual approaches to children and are not fully aware of the interactive communication demands on children in the formal learning context. Teachers are trained to operate in groups and have less skills in individual assessment. Different focusses in training and practice give rise to various philosophies which need confronting when evolving a cooperative work plan.

Complete - developing strategies which meet goals demands personal motivation and commitment to change. This process can be viewed as having an input - output phase.

The Input Phase: Consider / Consult / Contract

Consider the context as a preliminary to any possible action. The National Curriculum describes key stages and levels of attainment for children to work towards. Progress is monitored at the key stages of 7, 11, 14 and 16 years by means of standard assessment tests. The therapist must support learning targets, and produce assessment of a child with communication difficulty locating and describing curriculum needs. Therefore, teachers and therapists must agree common aims. The inertia principle can militate against change at this stage as teachers and therapists have different employment bases and do not have the same terms of service so that it is practically difficult for them to work together.

Consult. Consultation has to take place with participants to find out each other's views. This may start with an individual seeking one or two colleagues to validate an opinion. This preliminary endorsement fortifies intentions when setting up a wider consultation process between people. Polarisation of views can result and negotiation and compromise are essential. The validation of the group view forms the social dynamic that maintains progress towards the goal of combined working. The group cohesive experience is necessary to counteract problems along the way [staff changes] which threaten the logistics of the plan.
The final stage of input and involves sorting out roles and responsibilities which lead to planned goals. Roles must be clarified and relevant and realistic to the people concerned. This is achieved in preparation meetings and in the evaluative process.

The Output Phase: Calculate / Correct / Confirm

Calculate activities in progress and monitor regularly in order to find out what is happening [sometimes contrary to expectations]. This process was coordinated by the speech and language therapist who had the role of assessing and recording each child's progress and attended a weekly school meeting to update this.

Correct procedures must be established so that monitoring leads to change and adjustment both by children and the planning group. This was established through the weekly meeting.

Confirm. This is the process of supporting each other's role and involving partners in providing feedback on their own input. People can be critical and not aware of the constraints which operate in the implementation of any initiative. There is a need to be open about each other's difficulties and an attempt to negotiate realistic solutions. For example, when a classroom helper involved in the management was off on extended sick leave there were problems about filling her role in the scheme which demanded time, will and effort to solve. Initiatives can be negatively viewed as an extra burden on staff time when all are working within the constraints of continual scarce resources. However, the strength and energy of the group kept the process functional.

2. Learning Competencies at different levels of the Curriculum

Any successful programme has to be based on knowing what the targets are to be at each stage. Unfortunately the National Curriculum programmes of study describe activities and locate targets [e.g., key stage 1 English: participate in group conversation] without specifying the competencies needed to underpin such behaviour. Therefore, the first task was to produce speaking / listening / reading / writing expectancies for each age level as a preliminary to locating levels of activity that would take oracy into literacy. A check-list is available in the appendix for speaking, listening, reading and writing skills in the 1-8 year range spanning the needs of the infant curriculum. There are ten competencies for each level. It is not intended that these will form a comprehensive list but were agreed amongst staff as indicators of abilities needed at that level. What is included in any check-list has to be relevant to the population concerned and is likely to vary in different contexts. The initial draft list was drawn up by the speech and language therapist for the school's language curriculum. It was revised and amended after consultation with school staff.
by helping participants to transfer ideas and understandings into appropriate cooperative, consistent & continuous forms of practice

by investigating ways of constructing what happens - enabling participants to explore new perspectives

by helping participants clarify their ideas through response to each other's role and thinking

by providing a network and structure through which participants can meet, talk & share their experiences

CONSIDER → CONSULT → CONTRACT

CALCULATE → CORRECT → CONFIRM

COMMUNICATE

RECORDING

EVALUATING

CHANGING

FORMULATING

CARRY-OUT

DEVELOPING

SHAREING

THEORISING

RESPONDING
COMMUNICATION BEHAVIOURS

**STRUCTURING**
- Ability to express verbal language in correct sound, rhythms and word patterns
- Ability to use linguistic (words) and paralinguistic (voice, gestures, facial expressions) aspects and co-ordinate these to convey meaning

**PROCESSING**
- Ability to understand and use a wide range of vocabulary to make explicit meanings
- Ability to process information through sensory channels and build understanding and knowledge

**USING**
- Ability to use language consistent with intelligence and age levels
- Ability to use inner language for self regulation
- Ability to use language to satisfy needs
COMMUNICATION BEHAVIOURS

INTERACTING
- Ability to make eye contact and relate to others
- Ability to understand communicative conventions: greetings; turn taking / grabbing / passing devices; conversational moves - topic imitation / continuation, questions, maintenance and contributive comments, terminance.
  - Ability to **Listen** (take in what is said)
  - **Legitimise** (accept other's view)
  - **Level** (make message appropriate)
- Ability to use voice (pitch, pace, pause, power(emphasis)) for effective delivery
- Ability to use facial expression and gesture to support the message
- Ability to respond appropriately to requests / questions, showing positive face to others
- Ability to use space / proximity for effective exchanges

THINKING
- Ability to perceive the social context of communication for appropriate responses
- Ability to receive, recognise, retain and relate information from ears, eyes, touch, physical awareness, and use this to retrieve and respond
- Ability to understand and express a sequence of ideas / events and have the means to solve problems
- Ability to make choices from judgements of the relations of things and events
- Ability to amass arguments / views for persuasion and negotiation

FEELING
- Ability to observe and identify feelings / views / attitudes of participants and recognise one's own in relation to others
- Ability to relax, help others to feel at ease and form a bond of trust
- Ability to feel confident, assert oneself and respond positively
- Ability to disclose personal views so that others can find a point of relation to build shared understandings
- Ability to provide positive feedback (attention / interested) to maintain a co-operative exchange
3. Learning Needs of Pupils

These were located using the check-list previously discussed. The educational assistant monitored activities in the classroom and from the evidence observed compiled a profile for each child in the study (five in each of three classes). This provided the base for considering how to effect meeting needs and promoting changes in behaviour. Along with the checklist staff completed a General Attainment Profile (GAP) for each child [see appendix]. This aims to put communication within a wider context of behaviour and provide a basis for discussion with regard to meeting learning needs and building awareness of the necessary steps to efficient functioning. Diagram O 1 & 2 presents an algorithm and flow chart to take planners through the issues that need to be considered.

4. Learning Management Framework

The section on collaborative frameworks stresses that professionals with different training backgrounds [therapists - health; teachers - education] develop different perspectives which add to the difficulty of achieving cooperative practices. Part of the counteraction process [see collaborative frameworks model] involves producing a joint framework for considering communication. Diagrams P 1 & 2 represent the collective ideas of therapists [P1] and teachers [P2] who were involved in the research. Diagram P1 displays the conceptual perspectives of therapists and describes communication within an individual psychological framework. Diagram P 2 depicts the beliefs of teachers and provides an interactive sociological framework. Both models are valid, reflecting training and working styles, but need to be combined - individual issues must be described but their implication has to be considered within the group context. Therefore, management must address individual and interactive behaviour together within the oracy - literacy demands of school.

In the educational framework the National Curriculum acknowledges the equal importance of spoken and written language in accessing learning, and features both components in academic assessments. Post-sixteen education and training has communication as a core skill in five levels of assessment for National Vocational Qualifications. Therefore, any framework for teaching communication must take these context needs into account. These locate listening, speaking, reading and writing behaviour including problem solving, interrelating with others, the personal and social qualities involved in improving one's own learning [see gap profile] as well as numeracy and information technology where appropriate.

Using the oracy - literacy continuum [diagram C - Management Model section] twelve levels are worked out encompassing six areas: using effective delivery, communicating knowledge, communicating written text, role plays, listening and responding and written communication. They are explained further in appendix notes.

There is a foundation level which excludes the role play and focuses on the other five areas. The levels match the oracy - literacy continuum and have been evolved from experience of working
with communication difficulties throughout the age range. The scheme describes 12 core competencies for spoken and written language which are common to all communicative activities. Each section has specific competencies described which give an indication of what is expected [see appendix]. Although assessment is possible, by an outside assessor at each level, this research describes the pilot for the scheme and merely uses the model as a teaching guide.

Thus, the framework uses a group format for planned opportunities to develop oracy into literacy in a developmental way.

The Communication Opportunity Group Scheme (COGS)

The scheme began with a workshop run by the speech and language therapist. The COGS was discussed and issues important to general management such as learning styles, class discourse, group dynamics and resources explored. The aim of the gathering was to understand the importance of the right input to children and to understand how the normal level of discourse could be altered for children who had difficulties. Marion Blank’s (1987) four levels of instructional discourse were used to model this feature [see appendix]. Two strategies were negotiated to meet the children’s needs:

1) Observation of children in class to record communicative contexts where they made most / least contribution. This was to be used as a basis for choosing facilitatory working pairs / groups.

2) A once weekly COGS group. There were five children in each year group and they were to be seen with three others [without communicative difficulty] for a session with the educational assistant following the framework described. The children were to adopt the foundation and level 1 activities as appropriate.

The group operated on a set pattern.

1. Games to form group dynamics [bean bag games - calling a name and throwing the bag progressing from sound to whisper to mime]
2. Listen and respond activities [listening games - see appendix]
3. Individual activities [poems / reading / show and tell]

The aim was to help all children participate at an appropriate verbal /non-verbal level and to get them used to performing in front of others and enjoying the experience. Drama was used where appropriate [see appendix] and activities were chosen to complement and extend classroom ones. For example, a topic on 'hats' generated a game where the children had to go into a 'shop' [in pairs] and choose one for a fancy dress party.

The educational assistant was helped by a mother and progress was monitored in the weekly meeting. Helpful strategies that would encourage communication were discussed and the three
following slogans adopted to keep participants in group activities aware of the need to help each other. This idea was discussed within the collaborative frameworks model earlier in the section.

1. **Take a break** - encouraging a pause after a question, command, or direction to give the respondee chance to reply appropriately. This was to minimise controlling behaviour on the part of adults and other able communicators.

2. **Give a clue** - prompting with an appropriate clue [question or word] if the respondee does not reply or fails to convey meaning in the response.

3. **Make a cheer** - giving confirmation and praise in the form of specific, descriptive comment ["a good idea, Tom", rather than "Good boy"].

These techniques were evaluated in the weekly feedback sessions and were felt to be helpful for gaining better performances. Similar strategies have been effective in helping reading development. Wheldall & Colmar (1990) and Glynn & Wheldall (1992) produce research in support of pause, prompt and praise approaches.

As a general guide to activities the National Curriculum summary of documents (1989) relating to speech and listening skills for pupils 5-7 years was used for consultation [see appendix]. This suggests that at Key stage 1, level 2 [the average 7 year old] pupils should be able to speak with increasing confidence and to certain conventions of Standard English. These include speaking in such a way that subject and verb agree, syntax is logical and understandable; verb tenses are correctly used. The emphasis must be on correct usage. Children should be able to explain a simple sequence of events, listen with concentration and comment thoughtfully on what has been said. To attain level 3 pupils must be able to offer fluent, accurate and well-organised accounts of an experience or activity using correct and consistent use of verb tenses and negative forms. The COGS addresses these issues in a planned framework for their development.

**Comment**

The COGS is a framework based on core principles of personality, presentation, and performance developing in a planned way along with National Curriculum needs. Stages have evolved from published work of Stein(1980), Westby(1984), Heath(1986) & Kemper & Edwards(1986) into the oracy-literacy shift. These were piloted in British schools from 1990-1992 and the syllabus, in the appendix, incorporates adjustments made to assessments as a result of trials at each of the twelve levels. Fourteen assessors with extensive examining experience of oral and written communication were involved in the pilot. These included lecturers in schools of education and teachers from mainstream contexts. COGS reinforces the notion of oracy being developed alongside literacy in a
Table 4.9a

TESTING FOR DIFFERENCES IN LANGUAGE COMMUNICATION PROFILE SCORES FOR
SCHOOLS N & W

CODE:
NS = a non-significant difference
* = a difference significant at the 5% level
** = a difference significant at 0.01 level
*** = a difference significant at 0.001 level

TEST 1:

SUBTEST

1  T = -1.28;  P = 0.21 [NS]
2  T = -1.09;  P = 0.29 [NS]
3  T =  0.00;  P = 1.00 [NS]
4  T =  0.96;  P = 0.34 [NS]
5  T = -0.81;  P = 0.43 [NS]
6  T =  0.59;  P = 0.56 [NS]
7  T = -0.39;  P = 0.70 [NS]
8  T = -1.02;  P = 0.31 [NS]
9  T =  2.30;  P = 0.03 [*]
10 T =  2.07;  P = 0.05 [*NS]
11 T = -0.62;  P = 0.54 [NS]
12 T =  1.97;  P = 0.06 [NS]

TEST 2:

1  T = -4.19;  P = 0.003 [***]
2  T = -5.33;  P = 0.000 [***]
3  T = -6.41;  P = 0.000 [***]
4  T = -4.81;  P = 0.002 [***]
5  T = -3.48;  P = 0.002 [***]
6  T = -4.48;  P = 0.001 [***]
7  T = -6.01;  P = 0.000 [***]
8  T = -0.98;  P = 0.33 [NS]
9  T = -3.65;  P = 0.001 [***]
10 T =-19.44;  P = 0.000 [***]
11 T =  6.42;  P = 0.000 [***]
12 T =-18.79;  P = 0.000 [***]
13 T =  5.36;  P = 0.000 [***]

DF=28

The results reveal that children from School N consistently out-performed those from W on the second testing occasion although they did not differ substantially on the first assessment. The children from School N received an interactive oracy-literacy management whereas those from School W had individual targeted treatment to eliminate deficits in language performance.
Table 49b

TESTING FOR DIFFERENCES IN COMMUNICATION C-PROFILE 2
(HAPTIC/AUDITORY/VISUAL INFORMATION PROCESSING) IN
HAPTIC/AUDITORY/VISUAL (HAV) SCORES FOR SCHOOLS N & W

CODE: NS = a non-significant difference
* = a difference significant at the 5% level
** = a difference significant at 0.01 level
*** = a difference significant at 0.001 level

HAPTIC: SUBTESTS: DF=28

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AUDITORY: SUBTESTS: DF=28

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<td>Test 1: T=</td>
<td>0.46</td>
<td>-5.17</td>
</tr>
<tr>
<td>P= 0.65</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>NS/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RETENTION:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 1: T=</td>
<td>-1.15</td>
<td>-4.53</td>
</tr>
<tr>
<td>P= 0.26</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>NS/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTEGRATION:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 1: T=</td>
<td>-2.32</td>
<td>-5.81</td>
</tr>
<tr>
<td>P= 0.028</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>NS/</td>
<td></td>
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</tr>
</tbody>
</table>

VISUAL: SUBTESTS: DF=28

<table>
<thead>
<tr>
<th></th>
<th>Test 1</th>
<th>Test 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>RECOGNITION:</td>
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<td></td>
</tr>
<tr>
<td>Test 1: T=</td>
<td>0.22</td>
<td>-2.86</td>
</tr>
<tr>
<td>P= 0.83</td>
<td>0.008</td>
<td></td>
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<td>NS/</td>
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<td></td>
</tr>
<tr>
<td>ASSOCIATION:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 1: T=</td>
<td>0.79</td>
<td>-4.26</td>
</tr>
<tr>
<td>P= 0.44</td>
<td>0.000</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>RETENTION:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 1: T=</td>
<td>-0.40</td>
<td>-3.63</td>
</tr>
<tr>
<td>P= 0.69</td>
<td>0.001</td>
<td></td>
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<tr>
<td>NS/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTEGRATION:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 1: T=</td>
<td>0.72</td>
<td>-4.57</td>
</tr>
<tr>
<td>P= 0.48</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>NS/</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Although there are no significant differences between schools on the first testing there are substantial differences on test 2 (other than haptic retention, p=0.06). This indicates that children receiving an interactive oracy-literacy approach to learning out-perform those having an individual method targeting the removal of specific deficits.
systematic way and the next section reviews results of testing before and after intervention comparing the group who received this approach with another having the LARSP method.

5. Results and Discussion following base-line assessment, mediation and re-assessment

Tables 49a and b summarise results of Communication Profile 1 [production] and Communication Profile 2 [processing] for school N and W before and after mediation. Both tables indicate that school N consistently out-performed W on the second testing occasion although they did not differ substantially on the first assessment. On C-Profile 1 [production] the only non-significant difference on test 2 was for contributory comment suggesting that at the turn taking level there was similarity between groups which was not extended into their range of conversational moves. This suggests that the children wanted to take part and understood the rules of the activity but were not using the strategies to take part. However, their linguistic programme had addressed these in developing the appropriate forms and profiles had revealed evidence of acquisition within the clinical context. Therefore, there may be social reasons for their lack of use. This will be explored in the single case studies.

C-Profile 2 [processing] reinforces the evidence. There are significant differences on test 2 although on first assessment no substantial disparity was shown. The only non-significant difference was in the area of haptic retention \( p=0.06 \).

Testing on other measures confirms these results. The Utah test shows \( p=0.87 \) on test 1 and \( p=0.001 \) on test 2 [table 38]. The RAPT has \( p=0.77 \) for test 1 whereas for test 2 \( p=0.001 \) [table 39]. For the Schonell reading test "My Dog" the word recognition test displays \( p=0.65 \) for test 1 and \( p=0.0001 \) for test 2 [table 42]. The comprehension test discloses \( p=0.56 \) for test 1 and \( p=0.00001 \) for test 2 [table 44].

However, it would be simplistic to suggest that the technique alone was responsible for massive differences after one year of management even though recent evidence with regard to reading (Wright, 1992) suggests that such success is possible in British populations after Clay's Reading Recovery Programme adopting a problem solving and word awareness approach [Reading Recovery in New Zealand. HMSO, 1992].

In this study there are other issues that need considering when evaluating the approach.

1) Attendance

In school N attendance at sessions was monitored at 92% but in school W, where children had to be taken out of class and transported to the clinic, attendance was 71%. Thus, there was a difference of 20% in children's opportunity to benefit from the intervention on offer. As there was poor attendance overall it was not possible to compare the performance of good and bad attenders to
evaluate this dimension more fully. In the school-based programme there was an additional advantage because if children missed one of the groups they had the chance to join another one during the week (there were three operating).

2) Staff Involvement

In school N there was daily involvement of the educational assistant and support of the children's teachers. The staff had direct control of the scheme arranging activities and topics to complement other studies. In school W the therapist had direct control over the content of each child's programme. As visits to school were infrequent [once a term] there was minimal chance to integrate activities with the curriculum. Thus, children from school N had greater opportunities to have the content of their programme integrated into school routines and there were more chances for reinforcement.

3) Relevance

This issue relates to the former but is separately discussed as the scheme in school N was relevant to National Curriculum targets and used this framework to effect a complementary model of practice. In school W the language development programme was certainly pertinent to the development of language form but did not address communication use within the peer group. This is a crucial context for learning as it is now recognised how important collaborative talk is to academic success.

4) Resources

In school N the resources were provided by school or the child bringing materials from home to show and tell to the rest of the group. In school W the therapist chose resources from clinic and test equipment. This brings into focus the question of ownership, control and possession of the task. It is an important area of discussion in teaching but not in therapy. Teacher training addresses the notion of knowledge and control and how information possessed by the teacher / instructor / facilitator can be transferred to the learner. This forms part of teaching philosophy and methodology which does not feature in the medical model training of therapists.

Thus, it can be argued that these free variables are significant in effecting changes and may be as/ more important than the actual approach used. The interactive scheme [school N] involved more people and gave power of control to those involved in daily contact with the child. Therefore, it was possible to arrange the context to suit child needs. The individual approach targets a particular aspect of communication [language form] and although the framework allows the use of content that is relevant this is not so easy to effect if support takes place outside the appropriate context of learning.

Moreover, the interactive scheme tackles a wider range of skills embracing presentation [form and content] and performance [effective delivery] as well as personality [confidence and self image]. It is increasingly recognised that confidence is the first step towards success and to achieve this within
the child’s peer group increases his/her self worth in the learning group (Wheldall et al., 1992).

It could be argued that this is a general approach in contrast to the specific method adopted in the language remediation programme. The later approach is based on sophisticated recording skills dependent on advanced knowledge and skill in linguistic analysis and is thus dependent on having a professional trained in the method. The interactive approach is based on facilitators being made aware of issues such as learning styles, levels of discourse and control strategies in communication. These can be taught by inservice training and the scheme is only dependent on having available adults who can relate well to children, know how to organise and arrange learning, and are committed to an oracy-literacy approach.

In summarising this section, evidence obtained suggests that an interactive method of communication management, based in the child’s context of learning, has a better chance of effecting academic improvement than an individual approach. This affords greater opportunities to achieve a range of skills and addresses the issues of self-esteem, group collaboration and sharing of knowledge. There are advantages in that such a scheme is less dependent on scarce resources [appropriately trained speech and language therapists].

An analysis of time spent shows the following:

<table>
<thead>
<tr>
<th>School</th>
<th>Therapist’s time</th>
<th>Educational Assistant’s time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>36 hours</td>
<td>22.5 hours</td>
<td>100</td>
</tr>
<tr>
<td>W</td>
<td>343.5 hours</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Therefore, the therapist was involved in over three times the amount of work with school W children and as attendance was not so regular there was some waste of professional activity. In this model the therapist had the biggest investment of hours and, therefore, professional control was outside the school context.

In school N there was a small input from the therapist in relation to the time commitment of school staff. This allowed those with real influence and knowledge of the child to take the major decisions in management. It may be viewed by some as diluting specialist expertise. However, this could be seen as enhancing the role of all involved with child learning and a chance to achieve cooperative, consistent collaborative practice.

**Single Case Studies**

This section further addresses the issue of whether communicative difficulties should be treated as individual or interactive. The structure of this section is as follows:
1. **Background Issues** - looking at individual and interactive ideas.

2. **Case studies** - characteristics of children and schools and methodology of assessment.

3. **Description of Intervention** - cases A & B in school 1.

4. **Results & Discussion** - cases A & B.

5. **Description of Intervention** - cases C & D in school 2.

6. **Results & Discussion** - cases C & D.

7. **Summary** - evaluation of the two main intervention approaches: individual and interactive.

1. **Background Issues**

   As background it is noted that other disciplines have shown interest in the question of individual and interactive approaches. In psychoanalysis ‘object relations theory’ (Greenberg & Mitchell, 1983) is concerned with the growth of individuality out of interaction, recognising that it is relationships with others and with so called internal objects that build psychic structures (Alford, 1987).

   Costall (1986) and Costall & Still (1986) proposed **mutualism** which defines meanings as relations between individuals and their contexts. Philosophy discusses this under externalism which McGinn (1993) explains as an approach to the philosophy of meaning.

   Research in pragmatics indicates that communicative intentions and the force of its acts can be socially distributed and negotiated (Levinson, 1979; Edmonson, 1981; Leudar & Antaki, 1988; Leudar & Browning, 1988).

   There has been increasing recognition in the past decade that radical individualism perpetuated in research and practice, as an approach to communication management, has failed. The group studies explored some of the issues and the single cases consider these aspects further.

**Initial Studies**

Data from the C-Profile is used to consider some of the issues that emerge in the management of the single case studies. This can be summarised under three areas:

1. **Skills** - the ability to produce clear words and sentences and use them to represent real / imagined experience.

2. **Design** - the ability to produce utterances that are appropriate to the context and fulfil the speaker's aims.

3. **Function** - the ability to present self, maintain or transform social structures in communication.

Research has documented inadequate linguistic skills of learning impaired individuals with developmental and cognitive correlates (O'Connor & Hermelin, 1963; Schiefelbusch, Schiefelbusch, 1972; Mittler, 1978; Copeland & Smith, 1987). Less attention has been paid to language design and function with some exceptions (Price-Williams & Sabsey, 1979; Kernen & Sabsey, 1981; Leudar, 1981; Sabsey & Kernen, 1983; Turner, Kernen & Gelpman, 1984). This reflects the lack of status
spoken language has received in our education system resulting in limited opportunities to develop these aspects within the curriculum and reflect on their function in learning. Now that both spoken and written language are assessed on age-related targets in the National Curriculum impetus is given to the study of interactional aspects of communication. Evidence of this is available through the National Oracy Project journal “Talk” (editions 1989-1992) which describes projects in Britain detailing the impact of oracy activities on literacy development.

Sabsay & Kernan’s (1983) work is of particular interest in this connection. They have shown that an inability to articulate clearly results in increased frequency of ‘other initiated other-repair’ [unprompted clarification / rephrasing of what another person has said] signalling a message of incompetence which affects self image and dependency in communication. Brewer & Yearly (1986) comment that an individual may cooperate in their own stigmatization. Goffman (1986) discusses this further saying: "Those who have dealings with him fail to accord him respect and regard". Leudar, Fraser & Jeeves (1984, 1987) identify communicative withdrawal as a way of asserting personal autonomy so resulting in a deepening of the social problems.

Thus, it is through the interaction of the three processes of communication that actual difficulties are produced. The individualistic perspective has reified these locating problems in persons themselves and assuming they result from lack of skills. Of course they often do lack skills to allow effective and conventional expression but they also lack opportunities. Individualising communication difficulties overlooks the fact that their problems are remembered by audiences and so produce a non-standard context. Therefore, the aim is to establish principles to describe communication situations and apply them to the cases under investigation using an interactional approach.

**Principles of Communication**

Diagram Q provides a summary of three views regarding principles needed for effective interactive communication. These are based on three major concerns of contemporary pragmatics:

1. **Intentionality.** The speakers’ responsibility is to express their communicative intention whilst the hearers’ is to attribute it correctly. Meanings of utterances in dialogue are not the same as their sentence meanings but correspond to the speakers’ purpose in saying something. Utterances are successful as communications if their purpose is recognised. Thus, the intentional aspect of meaning is useful when analysing communications of language impaired people. Although language skills are affected they are able to communicate because clearly articulated and grammatically correct speech is not necessary for conveying communicative intent. The following exchange between Tom [case B] and the educational assistant [EA] illustrates this:

EA: Tom, what do you call this flower?
Tom: ertle
PRINCIPLES OF COMMUNICATION: A SUMMARY OF 3 VIEWS IN THE LITERATURE

GRICE (1975)
QUALITY: contribution that is true and backed by evidence
QUANTITY: contribution as informative as exchange requires
MANNER: clear, brief, ordered, unambiguous expression
RELEVANCE: response right for the occasion.

BROWN & LEVINSON (1978)
FACE: social value claimed by a person in an encounter
POSITIVE FACE: need for appreciation by communicative partner
NEGATIVE FACE: need for freedom from arbitrary constraints.
(power differentials alter face: e.g. one would normally be apologetic in pointing out errors but a teacher will not when correcting a pupil)

LEWIS (1983)
CHARITY: beliefs & desires of another person should be the same as our own as far as constraints allow
RATIONALISATION: beliefs & desires of another person should provide good reasons for their behaviour
TRUTH & TRUST: speaker utters what he believes to be true & hearer responds by sharing belief (unless he already has it) adjusting other views accordingly
EA: thistle?  
Tom: mhm

The EA restates Tom's word because at this stage she is not clear about the intended meaning. He appears to confirm that this was the one he was trying to say. Although he could have been repeating 'flower' [prosody = V] the intonation pattern resembled that of 'thistle' [prosody = \]. Therefore, communication was possible even though the word was not clearly articulated. However, there is a price on not being explicit as a pattern of validation is established:

EA: Who's going with Mrs Sage today?  
Tom: Mark and Anna  
EA: Mark and Anna [falling inflexion - 'yes' (prosody = \) not 'are you sure?' (prosody = / )]

Thus, partners of language impaired children often echo utterances with clear meaning. Speech and language therapists use such modelling processes to signal to a child the correct target required but there are negative consequences in foregrounding each communicative intent with a signal of incompetence.

ii). Conventionality: The rules of conversation are such things as turn taking and response relevance and have been discussed in detail before. Children with language difficulty do not always apply these rules as the following data from the case studies demonstrates.

EA: Did you like staying at Donna's house?  
Tom: [silence]  
EA: Did you like it there?  
Tom: Like Puff [Donna's rabbit]  
EA: Ooh! [moves on to another child as Tom turns away and obviously does not want to talk at the moment and answer the question]

In conversation we expect our audiences to understand our intentions and respond appropriately. When they fail we are likely to feel they are hostile and uncooperative. Fulfilling expectations is important in establishing relations with others.

iii). Face. This is the need of individuals to be appreciated by their communicative partners. Moves in cooperative conversations are constructed to take account of the participants need to preserve face. Politeness is an attempt to compensate for face threatening aspects of conversation moves. A continuation of the previous conversation illustrates this:

Anna: Tom's rude. He's not answering right.  
EA: P'haps he doesn't feel like talking today. When I'm busy I don't want to answer questions.

There is a dilemma here! The EA is intent on saving Tom's face but may be confusing Anna by condoning a flout of the rules of convention.
These principles provide a framework for considering samples of conversation that take place in a variety of interactive environments for two of the case study children in the same school.

2. Case Studies: Cases A,B [school 1]; Cases C,D [school 2]: Assessment & Intervention

Assessment and intervention is described in the management of four children with communication difficulty in two schools.

School 1

Cases A and B received an interactive approach based on the COGS model that has been previously reviewed. This is based on the principle of giving children facilitatory opportunities to learn and taking account of their specific needs along with others in the class context. It also depends on adults involved with children being aware of human interaction.

School 2

Cases C and D were given an individual intervention method based on developing language form. This has previously been reviewed in the group studies’ section [LARSP]. The teacher wanted support work to operate on a withdrawal basis with the aim of improving levels of talk [sound and sentence structure]. The aim is to improve language skills when linguistic development appears delayed. The approach sets out to teach a child to understand and use a range of different types of sentence which become progressively longer and/or more complex as he/she moves through the scheme. The child is taught aspects of grammar, such as the use of different verb forms, pronouns and some concepts [e.g.: big/little]. The content and sequence of teaching is based on published studies of language development in normal children. The method concentrates on problems within the child and targets on helping him/her to alleviate difficulties to cope more successfully with learning.

The Schools

The two schools in the study are both situated in villages on the outskirts of the same town, one to the East and the other to the West of it [note these are not the same schools as N & W discussed in previous sections]. School 1 and 2 had pupil rolls of 75 and 79 respectively. Each school had three classes with full-time teachers including the head who taught the top form with a 0.5 additional member of staff. There were visiting members of staff for special needs and instrumental music. The infant class had an educational assistant who was full-time. Both schools had similar facilities and were pleasant, friendly and relaxed environments. Teaching styles were alike. There was
some instructional teaching and pair / group work.

Assessments

The four children were tested as follows:

1. The Ravens Progressive Matrices - to give an indication of non-verbal ability.
2. The Utah scales - to assess levels of development in speaking, listening, reading and writing.
3. The Renfrew Action Picture Test - to ascertain informational and syntactic levels of language development.
4. The PACS - a phonological assessment of child speech (Grunwell, 1985).
5. The C-Profile 1 & 2 - to log dialogue and information processing.

Tables 50a & b summarise the results for all four children and record base-line assessment [test 1] and monitoring after a year of mediation [test 2] and will be discussed under individual case presentation.

3. Description of Intervention Methodology: Cases A & B

Child A

A is 5.6 years and the eldest of four children aged 5, 4, 3 and 2 years. He lives on a council estate of 150 houses in an isolated area 3 miles from town. There is a high level of unemployment and transport to areas of work proves difficult because of poor public transport services. Father is a painter and decorator who works intermittently. He is a charming Irish man but tends to go and stay with his mother nearby if things are difficult at home. However, he is a loving parent and the children find him fun and he provides for them adequately.

A was referred to the Child Development Centre because of failure to learn at school. He showed little interest in school activities and caused problems by regular wetting and soiling. This resulted in tension amongst those in daily contact with him. Children had started to reject him in school.

Mother managed her home and family well. The house was well cared for and the children looked clean and healthy. There was good support from grandmother and two maternal aunts and uncles living on the same estate.

Child Development Centre Findings

Only summary reports were available for scrutiny. The Educational Psychologist stated that A's mental ability was normal but language skills were 2.6 years below his chronological age. These observations were based on play sessions using the Piagetian stages as a framework. There were no
formal tests completed. Tests of physical ability were normal and no difficulties detected in hearing or vision. The Doctor's investigations did not suggest any physical reasons for wetting and soiling. The only comment on the report referred to A as healthy but of small stature. However, all the adult family were below 1.5 metres. The Health Visitor indicated that the three younger children were normal on developmental screening tests. There was no family history of language learning problems. Scores on the Utah and Renfrew Action Picture Test showed a 2.6 year lag in language skills although the Ravens Progressive Matrices indicated average thinking ability on non-verbal tasks. Findings on the C-Profile 1 & 2 showed depression of all skills. A demonstrated little enthusiasm or interest for people or things in formal settings.

Case B
B was the second eldest child in a family of four, living on a remote council estate only a few doors away from case A. He was a boy of 4.6 years with an elder brother of 6 and two sisters aged 3 and 1.6 years. B had just started school as there was a local policy of admitting rising fives. Father was a semi-skilled building labourer who worked in the town. He was off work with a broken arm at the beginning of this study.

B was referred by the Health Visitor as developmental screening had shown language skills to be delayed. In table 49 a lag of 1.6 years is displayed on the Utah and Renfrew Action Picture Test. The C-Profile 1 & 2 also indicated below average performance. However, the Ravens Progressive Matrices suggested that non-verbal intelligence was within normal limits.

**Intervention Methodology: Communication performance in different contexts**
The single case study gave opportunity to study a child's performance in several communicative contexts. This would have been difficult for a large number of children [as in the group studies] because of the disruption to class routine over a period of time. However, it was possible to audio-tape A over one school day in five different conversational contexts:
1. A plus teacher.
2. A plus one other child of similar language ability.
3. A plus teacher and another child of dissimilar ability.
4. A in a small group discussion.
5. A and class discussion.
The transcripts are available A - E.

**Transcript B**
This is relevant when considering the issue of language for learning. In this conversation there are the beginnings of collaborative talk enabling the participants to achieve a goal - planning out the play of Jack and the Beanstalk. The commitment to collaborate obliges the boys to recognise the
DIFFERENT CONTEXT PUPIL COMMUNICATION

A: MARK PLUS TEACHER

(teacher been on sick leave and catching up with Mark on what has been going on)

1. Teacher: Did you do a little play with Mrs Sage last week about cowboys and Indians?
3. Teacher: What did you do in the play?
4. Mark: Stood behind the chief.
5. Teacher: What happened in the play?
7. Teacher: Did they! The cowboys won!
9. Teacher: Did you show it to the other children?
10. Mark: We lay down dead.
11. Teacher: Did the other children in our class see your cowboys and Indians play?
13. Teacher: What did the others watching think about your play?
14. Mark: Dunnow

A: MARK PLUS TEACHER

The teacher begins the conversation with closed questions but Mark shows no inclination to expand on yes/no responses (1,2). As the sample progresses maintenance moves are made by the teacher to little effect (7). It appears she is asking what happened in the play (3) from her next response (5) but Mark reinterprets this intent to state one of his activities (4). Is this a deliberate withdrawal strategy and an attempt to control autonomy rather than an example of inadequate information processing? Responses (10,12) support the notion of deliberate withdrawal. Mark is violating principles of quantity, relevance (Orice, 1975) and face (Brown & Levinson1978).
B. MARK PLUS ONE OTHER CHILD OF SIMILAR LANGUAGE FACILITY

(looking at some photographs of the cowboys and Indians play)

1. Mark: That's me. I got two guns.
2. Tom: Mine's big.
4. Tom: I like you cowboy hat.
6. Tom: I like the dressing up.
7. Mark: Yeah. Mrs Sage says we can play Jack & the Beanstalk. We can make a big giant.
8. Tom: Mr Barker's (school caretaker) big boots. The giant borrow them?
9. Mark: Yeah. we ask if he let us. We ask at dinner.
10. Tom: Pop Brian (grandfather) has black, big boots. We get them Saturday.

B: MARK PLUS ONE OTHER CHILD OF SIMILAR LANGUAGE FACILITY

Mark takes the initiative here when partnered with another boy of similar language facility (case B). The conversation goes well with both boys contributing ideas, expressing feelings (4), expanding information (5,7,9) and picking up on each other's comments. Limitations in grammatical structure are seen. Mark uses the present tense when past is appropriate (3) and does not yet use full verb completion's (9) omitting "can" and "will". However, this demonstrates that explicit grammar is not necessary for communication and since Mark and Tom use language form at a similar level there appears to be no embarrassment or concern over this aspect. Mark shows ability to follow principles of communication in this context.
C. MARK PLUS TEACHER & ANOTHER CHILD OF DISSIMILAR FACILITY

(Looking at Cowboys & Indians play photographs)

1 Teacher: Tell me about these pictures, Mark.
2 Mark: I dunnow
3 Richard: Our play, "Carry on Cowboy".
4 Teacher: The play looks really good. Tell me about it, Mark.
5 Mark: Er-yes.
6 Richard: The Indians stole the Cowboy's horse. We had to get it back. Look! Ben's dressed up as a horse. That's Mrs Fox blanket.
7 Teacher: Mark, you look very important with that big hat and badge.
8 Mark: Umm.
9 Richard: He was deputy sheriff. He had two guns and shot the Indians. Bang! Bang! Dead!
10 Mark: K-K-K-dead!
11 Teacher: You all look as though you enjoyed playing cowboys and Indians.
12 Richard: We did, we did. It was great!

The teacher takes the lead with open questions inviting Mark to comment about the play photographs but in this context he is unwilling (1.2) although the previous sample shows he is able to do so competently. In this situation Mark withdraws from the dialogue and allows Richard to answer (2.5.8). On one occasion Mark makes a contributory comment (10) in response to Richard's statement about shooting the Indians.

Mark is violating principles of quantity and face in this context.
D. MARK & SMALL GROUP DISCUSSION
(sorting out some dressing up clothes)

1. Matt: Look! Here's a Batman mask.
4. Mark: (puts everything on) Me, Batman, Whee, I'm away.... Whee-whizzzz-whooshsh. Are there things for under?
5. David: Here, wait. Red tights
6. Matt: And a T-shirt and here's a belt.
7. Mark: (puts everything on) Me, Batman, Whee, I'm away...Whee-whizzzz-whooshsh. Who's going to be Robin?
8. Matt: Me, me.

D: MARK & SMALL GROUP DISCUSSION

Mark co-operates fully in the dialogue (2) taking on the ideas of others with enthusiasm (2,4,7) and showing initiative by asking his own questions (4,9). There is a tendency to perseverate response (2,4,7,9) which is a typical pattern of language disorder showing difficulty in changing mental set in response to new stimuli. However, he is able to take on the comments of others and build on them with suggestions. (4,9).
Mark shows ability to use principles of communication in this environment.
E. MARK & CLASS DISCUSSION

(Talking about forthcoming drama sessions)

1  Teacher: Mrs Sage comes today. Can you remember how she said she was going to arrive.

2  Lindy: A cat! A cat!

3  Ben: With an injured paw.

4  Teacher: Yes, that's right

5  Kevin: We're going to help her. Can I go?

6  Teacher: We're going to have a chance to help the cat - some this week, some next. Mark, the cat was your idea. Are you going this week?

7  Mark: (silence - averts gaze)

8  Teacher: Mark you go this week with Matt, Richard, Kevin, Jim, Tom, Ben, Melanie, Frankie, Shula & Lizzie. Mark, Collect some props from the play corner.

10 Teacher: What do you think the cat will need?

11 Mark: Dunnow.

12 Ben: A saucer, some milk.

13 Kevin: Something to play with.

(Names are changed. Transcript taken from tape recordings)

E: MARK & CLASS DISCUSSION

In the large group Mark opts out (7.9.11) showing a persistent non-cooperative strategy even though he has demonstrates an interest in drama (the topic under discussion) in other contexts. The teacher's strategy to involve & encourage participation is unsuccessful (16) and she resorts to a didactic approach (8).

Mark is violating the principles of quantity and face in this sample.
<table>
<thead>
<tr>
<th>Test</th>
<th>Ravens</th>
<th>Utah</th>
<th>Renfrew</th>
<th>Haptic</th>
<th>Auditory</th>
<th>Visual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub: A Test 1</td>
<td>12</td>
<td>15</td>
<td>17</td>
<td>18</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>Sub: B Test 1</td>
<td>16</td>
<td>18</td>
<td>20</td>
<td>22</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>Sub: C Test 1</td>
<td>14</td>
<td>16</td>
<td>18</td>
<td>20</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>Sub: D Test 1</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>16</td>
<td>18</td>
<td>19</td>
</tr>
</tbody>
</table>

Key: R = recognition; A = association; Re = retention; I = integration

Table 50

CHILDREN A, B, C, D: ASSESSMENTS BEFORE & AFTER MEDIATION [test 1 & 2] on RAVENS PROGRESSIVE MATRICES, UTAH, RENFREW ACTION PICTURE TEST & C-PROFILE 2 [PROCESSING]

Communication Profile 1

<table>
<thead>
<tr>
<th>S</th>
<th>ST</th>
<th>TI</th>
<th>TC</th>
<th>R</th>
<th>O?</th>
<th>C?</th>
<th>C</th>
<th>M</th>
<th>P</th>
<th>N</th>
<th>M+</th>
<th>M-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub: A Test 1</td>
<td>74</td>
<td>78</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Sub: B Test 1</td>
<td>67</td>
<td>68</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Sub: C Test 1</td>
<td>64</td>
<td>71</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Sub: D Test 1</td>
<td>69</td>
<td>68</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Key:
S = sounds
ST = sentences
TI = topics initiated
TC = topics continued
R = request
O? = open question
C? = closed question
C = contributory comment
M = maintenance comment
P = positive face
N = negative face
M+ = meaning conveyed
M- = meaning not conveyed
relevance of each other's expertise and where necessary realign it [eg: discussion on finding boots for
Jack]. It is this balancing of the social and personal that enables learning to occur and the transcript
shows how the shared ideas are helping to clarify a plan of action for the play.

Langer (19901) describes this as using literate thinking skills "when people discuss alternative
actions and resolutions, I would say they were using literate thinking skills even though they had
neither read nor written". If this argument is accepted then the process of becoming literate can take
place through speech as well as through engagement with written language. It is not the mode of
language use that defines literate thinking but the manner in which it is employed. Thinking is literate
when it exploits the symbolic potential of language to enable thought processes to become the object
of contemplation.

Therefore, it would seem important to promote the development of literate thinking and this
has been of fundamental concern to those having responsibility for helping children with problems
achieve academic success. As a result of this analysis every effort was made to provide A & B with
opportunities for exploratory talk. Previously, the importance of narrative discourse has been
discussed [diagram C]. It lies structurally midway between the oral and literary tradition, as the primary
mode of thinking developed through play, story telling, show and tell and drama. The two boys were
able to experience these activities in a COGS group in school in which four other children participated
on a once weekly basis. This approach has been reviewed in the section on group studies.

There were thirty 45 minute sessions throughout the year. The speech and language
therapist attended school for these and other performance was monitored by the class helper. A short
progress meeting of half an hour was held before afternoon school on the day of the session. The
therapist visited the children's homes on the way back to the clinic each week to keep the parents
informed about progress. No specific homework was required but the parents were encouraged to
reinforce the targets when possible. Show and tell entailed bringing objects in from home. This was
popular resulting in monsters, maps, magic tricks, pogo sticks and even a turkish coffee pot appearing
in class. These objects were often linked to curriculum project work. The speech and language
therapist became known as 'the show and tell lady'!

4. Results and Discussion: Cases A & B

Results of re-testing after one year of mediation [thirty 45 minute sessions] are available in
table 50a & b and suggests that on all assessments both A & B are now functioning within normal limits
when compared with controls.

In describing the comparative success of different strategies for promoting oracy-literacy the
contexts can be summarised as follows:
This does not mean that children with language difficulty should never be placed in groups A or E. The determining factors for the teacher in deciding which contexts to deploy will depend on objectives for each teaching session. When the aim is to stimulate intellectual development or allow individuals to listen to others exchanging ideas A and E are appropriate. However, when the main objective is to allow children opportunity to develop their own spoken language and learn effectively through their own talk contexts B and D are likely to be the most beneficial to children. This fact has been established from other similar analyses in school contexts with children demonstrating difficulties in communication.

Observation did show that Mark and Tom [cases A & B respectively] conversed more easily when they were involved in physical action [eg: sorting photographs/dressing up clothes]. Maybe ‘hands on’ experience is essential to developing thinking when information processing assessments indicate problems in across modality support in learning. It is less abstract than two-dimensional visual and transitory auditory input.

Finally, event sampling of five different possible classroom communicative contexts indicates that children with language difficulty [ie: cases A & B] appear to violate maxims of quantity, relevance and face more often than their partners in certain contexts. The fact that this does not happen in all interactions suggests that is is not always lack of skill but the fact that partners adopt a more didactic stance perhaps remembering previous difficulties [eg: A5, 11; C3, 6, 9; E6, 8] so restricting opportunities.

Mark and Tom show systematic withdrawal strategies in certain communicative contexts and were labelled by others as uncooperative and emotionally disturbed. Such behaviour is not just an individual phenomena but extends into the social environment which may keep it from extinction after any initial cause has been removed. This issue is complex but although the case studies do not do justice to it, language difficulties are clarified as being both individual and socially interactive phenomenon.

The COGS approach was used to give both boys the opportunity of developing a range of communicative skills in structured/semi-structured situations which were then reinforced in the more spontaneous classroom context. Thus, there was direct carry through of targets and close monitoring of the classroom context where problems of communication had interfered with learning. In these two cases this approach was successful. However, it was dependant on full cooperation and commitment of school staff.

5. Description of Intervention Methodology: Cases C & D
Case C

C was the eldest of four boys. He was 5.4 years when first seen by the speech and language therapist. His brothers were 4 and 2 years and the baby 9 months old. C lived on a council estate just 2.5 miles away from the centre of a large town. Father was a semi-skilled worker. He had two jobs - one as a railway porter and the other helping a friend with a scrap metal business. Therefore, there was little time available to take an active part in child rearing. The home and family were well cared for by mother, who nevertheless suffered continual exhaustion from the demands of her young family. However, the family was well supported by the maternal grandmother and aunt who lived nearby.

C failed to make progress at school, during his first term, and because he proved difficult to manage in class was referred to the Child Development Centre for advice on aggressive behaviour.

Child Development Findings

Summary findings were available. The British Ability Scales indicated an intelligence in the low average range [85]. No breakdown was attainable. Physical ability was adequate and no visual or hearing problems detected although C was a mouth breather and had continual problems with catarrh. He was never free from an infected running nose. The G.P. did not judge this a matter for ENT investigation as hearing tests had not detected significant difficulties.

Scores on base-line testing [table 50a & b] suggested that on the Ravens Progressive Matrices C functioned within the average range on non-verbal tasks. On the Utah test he attained a 2.9 year level and on the Renfrew Action Picture test a -3 year rating at his chronological age of 5.4 years. Scores on the C-Profile 1 & 2 showed similar depressed levels.

Case D

D was the brother of C and second in the family of four boys. He was 4.3 years when referred by the Community Medical Officer to the Speech and Language Therapy Service. D had entered school under rising five policies. However, he had previously had problems in the local play group. This took place in a community hall, with 34 children, on two sessions a week. D had proved difficult to manage and used to hurl play equipment and pinch other children and adults when he felt inclined. Family details are the same as for his elder brother C.

Scores on base-line testing showed that on non-verbal assessments [Ravens Progressive Matrices] D scored within average levels. However, on the Utah and Renfrew Action Picture test he attained age level scores of 2 and -3 years respectively. These below average results were confirmed on the C-Profile 1 & 2.

Intervention Methodology

Both boys were seen in school for individual support for 45 minutes each week. This was followed by a visit to mother at home to discuss progress.
The Phonological Assessment of Child Speech [PACS] (Grunwell, 1985) and the Language Assessment, Remediation & Screening Procedure [LARSP] (Crystal, Fletcher & Garman, 1977) was used as a framework for the intervention sessions. The PACS aims to make an inventory of a child's sound system to compare with adult patterns. It is based on a child's production of a minimum of 100 different words elicited spontaneously from picture stimuli. A choice of explanatory or ad hoc interpretation of the sound patterns is afforded by the data, incorporating phonological process analysis and its attendant claim that these reflect 'mental operations' (Ingram, 1976; Stampe, 1979). Recording sheets are available in the appendix and are designed to match up with the stages described in the LARSP assessment.

6. Results & Discussion: Cases C & D

Details are described and discussed for C only but both cases are considered in the discussion. Table 51 summarises the phonology system.

Table 51 Phonology System for Case C

<table>
<thead>
<tr>
<th></th>
<th>Initial</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stops</td>
<td>p-&gt;b</td>
<td>p-&gt;</td>
</tr>
<tr>
<td></td>
<td>t-&gt;d</td>
<td>d-&gt;</td>
</tr>
<tr>
<td></td>
<td>k-&gt;g</td>
<td>k-&gt;</td>
</tr>
<tr>
<td></td>
<td>t-&gt;d</td>
<td>t-&gt;</td>
</tr>
<tr>
<td></td>
<td>d-&gt;g</td>
<td>d-&gt;</td>
</tr>
<tr>
<td>Fricatives</td>
<td>s-&gt;w</td>
<td>s-&gt;d</td>
</tr>
<tr>
<td>Continuants</td>
<td>h-&gt;</td>
<td>-&gt;d</td>
</tr>
<tr>
<td>j-&gt;l</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Although C's phonemic system was restricted consonantly with some associated vowel distortion he was comprehensible and it was possible to concentrate on syntax. As profiles indicate the sound and syntax system were of a similar developmental level.

The profile 1 and transcript 1a for case C is a summary of utterances by the therapist on questions to elicit language from Garry. Over 80% of therapist utterances to which Garry responded are questions. In some cases he did not appear to be paying full attention and the tape recorder was initially distracting. General conversation was about play objects on the table in front of Garry. Other examples show the structure of the question was at a discourse level beyond him. In the first case structural difficulties can be excluded because he responded to a particular form [what is this?] appropriately at one time but not at another. In the second case comprehension difficulties may be assumed because a particular question-type is used by the therapist frequently in the session but does not get a response. For example, questions of the what-doing type. Garry was asked what am I doing? or what are you doing? and failed to respond [data from another session and not transcript]. These questions have to be answered by a verb and he often showed difficulty at this stage. For
example, the question what are you drawing? has the question word as the object of a transitive verb. These type of questions usually produced a nil/unintelligible response.

There were a number of unintelligible features. This is partly unfamiliarity with Garry and his phonological restrictions. However, he was generally intelligible and made his needs known in class. The number of minor responses [yes or no] was also high. Generally they were appropriate to context. In some cases they were not and may have signalled difficulty with comprehension. There are three extracts to illustrate this. The therapist and Garry are looking out of the window of the clinic room:

- who's that / - - - 
  - is that Mum / 
  - no / 
  - who is it / . I think it's Jen / 

The context here reveals that Garry responds appropriately by denying the person [out of the window] is Mum. Immediately following this comes an inappropriate use.

- who is it / . I think it's Jen / 
  - no / 

An example of a situation where it is difficult to tell whether the minor response is appropriate or not comes when Garry is being asked whether or not he would like to play with the garage:

- shall we look inside / here / 
  - yes / 

The object of such analysis is to make sure that Garry is not simply responding randomly with yes or no.

There are over 50 single-element responses, which can be exemplified in the transcript. For example in line 2 the word cow is an instance of a noun. Further on, in line 31 sit is a verb. It is on the basis of this single element utterance feature that Garry is assigned to stage 1. The question is whether his ability has been realistically estimated. Base-line testing [Utah and RAPT] would suggest that he might be within stage 3 and indeed he demonstrated a use of pronouns at this level. As a practical concern, this is important since a decision to intervene with stage 2 or 3 procedures has to be made. Examples are available to suggest responses by Garry are recently produced by the therapist. For example, in line 6 Garry's response consists of an item appearing in the stimulus sentence [up]. Garry imitates the forced alternative [FA] and not the final item of the stimulus. As other examples in the text may be interpreted as imitation [sit, stand, lie, scarf]. However, there are counter examples of the imitation hypothesis which suggest that Garry is not using this strategy all the time. In line 2 Garry gives the response cow which has not previously been uttered by the therapist. Similar examples are blue one and me. Many of the single utterences throughout dialogues are of this type. However, in the classification terms of adult grammar they are nouns or pronouns. Garry does not produce single-element responses which are verbs unless they have been
introduced by the therapist. In several cases he produces the final item of the stimulus sentence [stand]. In other cases he produces an earlier item [up].

Where the therapist's question requires a verb in reply, Garry does not give it. For example, there is no response to what is he doing? As already discussed, no what-doing question at this stage gets a response from Garry. It is the spontaneous production of verbs rather than what-questions in general that cause difficulty. Another example, from a session with Garry, illustrates this. Some small chocolate eggs are being arranged in a basket that Garry has made.

T    how do we fill it /------
    oh / what are you doing /
    is that -
    what are you doing / aren't you /
    what are you doing /
G    uhm /

Analysis of other encounters yielded a good deal of information. Although Garry's productive capacity was largely limited to a single lexical item so fixing him at stage 1 he was heard to use verbs, adjectives [ big / little] and pronouns in other contexts. However, his nonrepeated single-element utterances were mainly limited to nouns in formal exchanges. This information was relevant for the design of intervention procedures intended to implement stage 2 structures regularly in fixed contexts. There was no point in working on SV structures if they were not being produced at the single-item level. Using verbs regularly became an immediate priority and this could be done while implementing stage 2 structures. For example, the therapist concentrated on AdjN where the verb did not matter. Other phrase level structures could also be used [ see profile].

Intervention

Specific pointers to stage 2 structures have been provided by the profile. However, procedures for remediation need to be described. The profile does not indicate what order the stage 2 structures are to be presented nor does it help in deciding what input structures are valuable in achieving the desired output from the child. The most efficient way of supplying these structures to the recipient has to be considered. The issue between language input and the situation - the resources used when a particular structure is being worked on - must be thought about. Control of situational variables [ things talked about in the session ] which means restriction of vocabulary items is a relevant factor in child performance. In the first stages the use of opposites such as long and short, primary colours and numbers were successful and useful for school activities. Nouns were not a problem providing they were limited and relevant to the context. Garry's performance on AdjN structures was good when the task involved just one piece of equipment [ putting shapes in their relevant places in a box ] and the vocabulary was restricted in comparison with freer situations such as playing with the farm or garage with model people and buildings. The latter was potentially more
interesting and allowed greater possibilities but the language models could not be closely tied to it and the manipulative and visual interest intervered with concentration on a particular language response.

This comment only refers to the high structure teaching situation as earlier data [transcriptions of different communicative contexts - case A] suggested that children indulge in more collaborative talk when seeing, doing and feeling.

Issues - such as the application of structures within a given stage, type of supplied structure and method of eliciting it as well as situational variables - will vary from child to child and therapist to therapist. However, procedures can be widely applicable although more information is needed on whether there is an order in which structures should be tackled and the implication of internal complexity of each stage. This may not be possible as it is likely that contextual influences are fundamental to a child's need to develop language and these will primarily influence the order of acquisition.

The main intervention methods used are structural elicitation with the forced alternative [FA] and modelled imitation [MI]. One of the problems in using these techniques is the introduction of them in a natural and unobtrusive way. It is necessary to avoid the overstructured drilling in which the child mechanically repeats the language patterns presented. The other extreme is the rich contextual language approach which is totally unstructured and does not highlight desired targets. A compromise is to put the child into a position where he / she has the required patterns modelled for him / her and the conventions of language and situation help to produce approximations as a response.

The utility of structured elicitation is seen by examples of questions and answers. For the AdjN structures, the therapist is unable to get a two element phrase from Garry without prompts.

T Garry / what's this one /  
G red /  
T red / -  
G car /  
T yes / that's right /
With regard to verbs, the difficulty of what-doing questions has been discussed. Here is another example from a session:

T: what's the man doing / Garry /
G: on there /
T: what is he doing / Garry /
G: on there /
T: what's the horse doing / Garry /
G: [no response]

The FA, as an eliciting structure, seems to have been more successful than the simple question. Possibly the direct model given to the child is the reason for this. Perhaps the inconsistency of the therapist's use of the tag should be noted as this is an important alerting strategy and may be crucial to the response required. In the middle example, the therapist alerts with Garry's name before putting the question. In the latter one the question is asked and Garry's name is tagged last. It is quite normal for us to use language patterns inconsistently but it may be an issue that needs addressing when working with children who have difficulty in communication.

Modelled imitation is illustrated in session 5 when the target pattern was NN, possessor + noun. This involved a student [Jo] as well, who was taking part in the activity where all were expected to take turns. Objects [farm animals] were distributed to all participants and the therapist began the modelling by saying I want Garry's cow. The animal changed hands and then the student modelled the appropriate pattern. The example shows Garry's turn:

T: now it's your turn / Garry /
G: Jo / - duk(t)

This activity proves useful for the purpose of producing the NN pattern. It has the essential features of modelled imitation techniques:

a) a previously determined pattern which is used for modelling by the therapist and any other co-facilitators [eg: student or parent].

b) a game activity which forces the child to produce a response whose syntax is as near to that of the model as possible.

Most of the vocabulary in model and imitation will be the same but there will be some differences necessitated by context demands.

Table 52 presents the most important stage 2 structures worked on with Garry in the thirty sessions between the two profiles. The structure aimed at, the method of introduction and an example of output is given. The notes column gives added information which is discussed in the commentary. The progression is clear. First, verbs are worked on at the same time as AdjN structures in stage 2. Examples of the latter are introduced with a restricted set of word items such as the polar
adjectives long / short and nouns like table, chair referring to furniture in the room or fence, shed describing some models in the farm set. Colour was used initially in collocation with shape since one of Garry's school activities was sorting and matching these. The NN structure was represented by possessor + noun [man's coat] and reduced by Garry to man coat. He learnt the structure easily and it was introduced on session 5 and the following sequence occurred:

T what's this / Garry /
G car /
T whose car /
G man car /
T yes / what about this one /
G farmer car /

Table 52 Stage 1 to 2

<table>
<thead>
<tr>
<th>Session</th>
<th>Structure</th>
<th>Method</th>
<th>Example of output</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,3,4,5,6</td>
<td>AdjN</td>
<td>FA</td>
<td>little ball</td>
<td></td>
</tr>
<tr>
<td>7,8,9</td>
<td>V</td>
<td>FA</td>
<td>run</td>
<td></td>
</tr>
<tr>
<td>10,11,12</td>
<td>NN</td>
<td>FA/Ml</td>
<td>blue car</td>
<td></td>
</tr>
<tr>
<td>13,14,15</td>
<td>SV</td>
<td>Ml</td>
<td>man walk</td>
<td>intransitive verb in reply to questions</td>
</tr>
<tr>
<td>16,17,18</td>
<td>PrA</td>
<td>FA</td>
<td>down there</td>
<td>produces SV sequence</td>
</tr>
<tr>
<td>19,20,21</td>
<td>V</td>
<td>FA/Ml</td>
<td>move / moving</td>
<td>imperatives modelled</td>
</tr>
<tr>
<td>22,23,24</td>
<td>SV</td>
<td>Ml</td>
<td>sheep eat</td>
<td>progressive confusion</td>
</tr>
<tr>
<td>25,26,27</td>
<td>PrN</td>
<td>FA/Ml</td>
<td>on (er)box</td>
<td>potential determiner</td>
</tr>
<tr>
<td>28,29,30</td>
<td>VO</td>
<td>FA</td>
<td>filling car</td>
<td>transitive verb</td>
</tr>
</tbody>
</table>

Garry was dealing with the verb problem in the first few sessions using FA in addition to patterns consisting of two elements of phrase structures. Results from this were satisfactory. There were single instances of V and SV responses in reply to simple questions. MI was used to elicit SV patterns in view of Garry's responses to two-element structures. Toy models performing actions were used. For example, the sheep are eating the grass. However, when Garry's turn to describe the animal occurred there was no response. Perhaps the use of SVO model structures was unhelpful. It was assumed he would reduce them to SV. There was little success even when such patterns were modelled directly. At this juncture the therapist moved back to PrA, a preposition + adverb sequence at phrase level.

At this point, more attention needed to be paid to single verbs in isolation before returning to SV structures. In session 16 imperatives were modelled using MI. The imperative routine had the therapist telling the student [Jo] to sit, stand, walk, jump and stop. Garry took over the game and enjoyed controlling an adult. Then SV was used again using MI sentences - my dog is jumping.
did not respond. His attention began to wander and he was spotted looking out of the window. The therapist took advantage of the shift of concentration to model the SV patterns:

T  look / Garry / Mum’s talking to Mrs Beale /
look /
can you see / Garry /
Mum’s talking / — —
Mum’s talking / — —
G  Mum’s talk / — —
T  Mum’s talking /

Garry attempts the SV structure with a pause suggesting uncertainty about it. This may have been confusion between imperative and progressive due to:

a) the imperatives he had been working with did not have subjects whereas recent models did.

b) SV structures that were modelled had -ing endings on the verb.

T  Jo is writing /
G  Jo - writing

An important attribute of the therapist was the ability to be flexible. This may seem a paradox in an approach that demanded planning but structuring and some flexibility must not be incompatible.

Although this recent example demonstrated interference problems that might arise in modelling similar but different structures within the same session it was apparent that Garry was using an early SV structure. Further sessions continually reinforced the two-element clause structures containing verbs. SV structures with intransitive verbs were used [the sheep is eating] which Garry initially reduced to sheep eating in response to FA and MI. Only when the pattern was well established were three-element structures introduced using transitive verbs. Models such as is Garry moving the cat or stroking the cat were reduced to VO stroking cat.

The remaining structure listed in the table is the PrN. The notes refer to the intrusive ‘schaw’ [er] which started to appear in the determiner position.

T  where shall we put the girl /
G on [er] chair /

The item appeared in a number of PrN structures for it to be assumed that it was the determiner. It did not appear in other noun phrases nor was there a demonstration of other three-element patterns so it was not included on the profile.

After thirty sessions the second profile was made [see appendix]

Profile 2

This again logs exchanges between the therapist and Garry. The transcript records part of a normal session. Garry was using longer utterances than before [wheel / come up there/]. The main
features are listed below:

a) There is a higher ratio of other stimuli to questions and reflects a more normal adult-child distribution.
b) There are less nil responses. This is probably due to improved language ability and control of the structures used in the session as a result of difficulties with question-types.
c) There are fewer unintelligible responses but may reflect familiarity with Garry's speech although this did seem clearer although continual ear, nose and throat problems regularly interfered with clarity.
d) There are limited spontaneous utterances. However, the structured format with the adult in control of the context may have influenced this factor.
e) The number of unexpanded minor responses is large in proportion to the whole.
f) The non-minor responses form two categories 1) Stage 1 single-item utterances. 2) Stage 2 clauses - SV, AX, VO and phrases AdjN, PrN, VPart, IntX and PrA. These reflect patterns introduced in the intervention sessions.
g) There is the appearance of stage 3 clause and phrase structure [eg: wheel out there ++ ]

Garry has still not fully mastered noun phrases containing more than one adjective:

G What's this / Garry /
G long blue / - - long pencil / blue /

However, it is not certain whether this is a mistake in word order as there are two tone groups here.

h) The - ing form is represented at word-level on verbs and plurals. Even when speech was not too clear an extra syllable was detectable in words like houses, horses and mowers.

At this juncture there are two courses of action that might be followed. Stage 2 patterns could be extended to include all those listed on the profile or they might be taken as sufficient and stage 3 structures tackled. In this case, it was decided that a compromise would be worked and some extension of stage 2 was promoted as well as progression to stage 3 in order to speed development.

Approaches

The aim of the individual grammatical/phonological approach is to follow normal developmental sequences in a controlled way. In deciding on the appropriateness of any action questions of motivation, availability of resources, general performance and outside support are important. There are positive and negative issues that have to be considered.

Positive

Analyses of both Cases C & D sessions have shown that the therapist takes the initiative in interaction and that stimuli can be classified into basic functional types:
a) **Imitation tasks**: ‘Elicited’ or ‘rote’ imitation requires the child to repeat the whole or part of an utterance. It has been suggested ([discussion of auditory sub-tests of C-Profile 2 (processing)] that child performance, in particular the changes introduced into an imitated sentence, can indicate the level of grammatical development. This theory needs to be fully tested in clinical contexts. The response does not specify how far the child is using his linguistic system - it might be reconstruction or replication.

b) **Modelled Imitation** is useful as a teaching method and the data proves it can lead to the use of spontaneous utterences in the clinical context.

c) **Incremental drills** refer to the strategy where the learner has to complete a sentence begun by the therapist. Frequently a *prompt* is used ([it's a green - with expectant rising intonation]). However, not every sentence is amenable to prompting so use is restricted.

d) **Substitution drills** are sentences repeated by the learner with one or more items replaced ([therapist - I can see a cow --> child - I can see a dog]). Chain replacements can be used (*X* can *Y* the *Z* --> *X* can W the *Z* - etc.). This can prove a useful technique and helps the child to think.

e) **Expansion drills** ask the learner to add items to a stimulus sentence. Therapist - I come on Thursdays --> child - I sometimes come on Thursdays - following a discussion of why the child did not come to the clinic on the last occasion.

f) **Contraction drills** ask the learner to shorten the sentence (replacing a noun phrase by a pronoun).

g) **Embedding drills** require the learner to combine sentences by incorporating one within the structure of another ([Tom is here. Tom is a boy --> Tom, who is a boy, is here]).

h) **Transformational drills** introduce structural changes into a sentence ([the dog is here --> the dog is not here]).

The **question - answer** drills need separate attention as these usually comprise the major interaction pattern between therapist and child. The therapist must be aware of demands made upon the child by the choice of one question pattern over another. It is easier to respond *[head nod]* to SV - inversion ([Is the boy running?]) than to question-word structures which normally require a verbal reply ([What is this?]). Open questions - *what's happening* - are a common type of question used by the therapist but give no syntactic help to the child. Forced alternatives [FA] - *is this a dog or a cat?* - is a successful technique which the data confirms.

The advantage of the FA over other strategies is that it puts minimal load on auditory memory which data from the C-Profile 2 ([processing] suggests is weak. It can also focus on any part of the sentence structure. Some examples are detailed to illustrate its use.

i) **Verb Elicitation** ([using pictures or toys])

Example: Therapist - is the girl walking / or is the girl jumping. Child - running / run or jumping / jump

- various possible intonations are shown. Rising or level variants may indicate child uncertainty.
- Elliptical patterns [is the girl running or jumping] hinder a correct response as they place too great a comprehension burden on the child.
- Pattern should be used with a variety of verbs with constant intonation [rising-tone - first verb; falling-tone - second verb]
- Correct choice of inflection by the child is not important.
- Repetition of the FA may occur at varying speeds and volume.
- When child response is consistent further structures are elicited.

ii) Object Elicitation
Example: Therapist - Is the girl wearing a skirt / or [is the girl] wearing shorts / Child - skirt /....
- The ability to name objects is different from the use of a noun as object of the verb. The child must be aware of O as a functional element of clause structure.
- As elements increase the FA gets longer and may put too much load on a child's memory. Some ellipsis may be introduced [indicated in the example by parenthesis].
- Verbs with transitive and intransitive uses ensure continuity. For example, the verb eat can be used for i) & ii) but walk can only be used for i) and see for ii).
- O patterns are approached before S because of developmental evidence (Limber, 1973).

iii) Verb Object Elicitation
Example: Therapist - is the man sweeping the floor / or painting a door / Child - sweeping floor / or sweep the floor /....

iv) Subject Elicitation
Example: Therapist - is the boy eating / or is the girl eating / Child - boy / or boy eating /
If the child produces the verb as well the next step of elicitation can be made.

v) Subject Verb Elicitation
Example: Therapist - is the man walking / or is the lady swimming / Child - man walking / or lady swim /...

vi) Subject Verb Object Elicitation
Example: Therapist - is the boy painting a picture / or is the girl building a house / Child - boy paint picture /...

This schematic structure was used to get from one-element to three-element structures. This progression is an important principle of LARSP procedure but normal life would interfere with this precise regime. In this study a reasonable spread of structures within a level was established before moving on.

Negative
Certain actions cause problems for the development of syntactic abilities in a structured way.

i) Using questions presupposing linguistic ability
Example: weak on clause structure and verbs - avoid what's the man doing? - expected answer verb + ing.

ii) Reinforcing the wrong answer
Example: Therapist - pointing to a picture of a man sitting on a chair - what's the man doing? Child - chair
Therapist - yes / it's a chair / isn't it / etc.

iii) Using baby talk
Example: doggie, quacky. There is evidence that children respond to levels a stage ahead of them (Shipley et al. 1969).

iv) Assuming errors indicate disability
Sefer & Shaw (1972,88) suggest that an increase in association errors is a sign of improving abilities, but that retrieval is defective. Many errors will self-correct if positive reinforcement occurs.
Example: Child - Mum be going /. Therapist - yes / that's right / Mum is going /
This is the normal parental correction pattern (Crystal, 1977).

v) Not varying the stimulus sentence too much
This is important if the child has severe attention and comprehension difficulties. Rhythm and intonation should also be constant.

vi) Dealing with pronunciation as well as syntax
Focus on pronunciation after syntax has developed. It is tempting to overemphasize parts of the sentence when teaching an element but the rhythm and intonation of the sentence must not be disturbed otherwise the child has problems gaining the meaning. Syntactic and sound therapy should be kept in tandem to ensure that phonological abilities which may expound a grammatical contrast are present (eg: the -s ending in morphology).

vii) Eliciting a structure after checking comprehension
Semantic abilities must be kept abreast of sound and grammar structure so that comprehension of the content of sentences must be established by means of checking names of objects, events etc.

viii) Avoiding side-tracking
The method is based on hypotheses about language development and it invites confusion to follow up incidental occurrences of structures at another stage of development.

ix) Avoiding long gaps between sessions
Children forget their targets if not regularly introduced. Irregular attendance does mitigate against satisfactory improvement.

All these cautionary issues, as well as the positive ones illustrate briefly the strengths and weaknesses of the approach.
This section has documented two different approaches to management - individual and interactive. The children involved with interactive procedures made satisfactory language and academic progress and at the end of the study needed no further support. However, the children undergoing an individual programme, although making progress, did not reach the standard of their peers. In fact, the two boys [C & D] in the single case studies [school 2] failed to maintain improvement after therapy had ceased and eventually were sent to a special school for children with moderate learning difficulties.

In evaluating this situation it may be that the intervention style was less important than the teacher attitudes. It is possible that school 2 did not want the boys in class if they did not happily meet the system and so were seeking their removal. The difference in teacher philosophy is a crucial variable that this study was unable to measure satisfactorily.

The group study did not clarify this issue, but the significant differences in performance were a positive signal that the interactive approach should be viewed as evidence of good practice. Although the children undergoing this method had less benefit of direct contact with a speech and language specialist this had not affected their ability to develop well with active, positive, consistent, continuous and collaborative approaches from school staff working with support and monitoring of the therapist. The fact that the school staff had major control of operations may well be an important aspect in the success of the children, as help for them was activated within their normal routine and had the advantage of continual reinforcement and staff attention. This integrated approach used professional time more effectively and did not mean that children had to miss valuable school activities.

However, such an approach is crucially dependent on the awareness of what makes collaborative enterprises work. It means that people have to develop as a team and not as a group of individuals and structures must be evolved giving them chance to communicate. This may mean a re-examination of traditional roles - as therapists are educated and trained in individual models of practice based on medical rather than educational philosophies and there may be resistance to radical changes in approach. However, the fact that children need help in the context where problems occur [language for learning] demands a re-think of present service delivery.

Recent research by Viney and Swinson (1990) documents teachers' understanding of communication problems using a questionnaire to schools in London and the West Country. These small studies established lack of teacher knowledge of children with communication difficulties. They viewed speech & language therapists as only experts in pronunciation problems with little interest in communication difficulties in the classroom. This suggests that teachers may not make the connexion between language difficulties and learning problems. It also indicates the lack of existing contact and joint practice between therapists and teachers. For these studies, areas were chosen where speech and language therapy services were thriving and well organised. To achieve better relationships in normal practice will require radical changes to professional training and a move from medical to
educational models of work so that common approaches are possible.

The present study confirms the effectiveness of this joint approach. Although a programme such as the LARSP may be helpful in developing a child's language abilities unless attention is given to the implementation of these in different communicative contexts success is limited. It appears that the child's social esteem in his/her working group may well be a primary factor in establishing language for learning. Children must have social confidence and be able to assert themselves. Data confirms that successful learners ask questions, clarify information, and have high levels of topic initiation and continuation moves, compared with their communication impaired peers, so giving them control over communication and learning.

Data to support the need to develop the teaching of oracy-literacy is available from a small questionnaire to parents of the children involved in the group studies [school N & W]. Questions are available along with statistics in the appendix. These results can be compared with those from the same questionnaire given to 100 parents of children attending COGS groups [1990] and those attending speech and language therapy [1965]. Parents were not matched on any dimension so that any conclusion should be broached with caution. However, the pattern of communication in homes shows a radical change within twenty five years in this small sample. It tentatively suggests that today's parents do not read or talk to their children with the same frequency and that youngsters fail to engage in speaking and listening activities as much as they did. Changes in social patterns [mothers at work and television, video and computers becoming favourite occupations] may account for this. It does indicate a need to include more oral opportunities in schools and the National Curriculum has provided for this.

In summarising the issues that emerge from the data it is useful to go back to the latin root of the word 'communication' which as communicate means 'to talk together, confer, discourse and consult one with another'. It is intimately related to the latin word communites which means not only community but also fellowship and justice in men's dealings with one another. The emphasis is on social exchanges based on the possibility of men living and working together for common ends - in one word, on cooperation. Without communication, cooperation is impossible and this study has suggested that without the committed cooperation of professionals good communication development is not possible for those experiencing difficulties.
### APPENDIX

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TEACHER/CHILD INTERACTION & DISCOURSE LEVEL

4 LEVELS OF DISCOURSE

LEVEL 1: Matching Perception.

Language matched to HERE & NOW.
Eg: Tell me what this is, point to the book, give me the box.

LEVEL 2: Selective Analysis of perception.

Language focuses on particular aspects.
Eg: What colour is the pencil? What's happening in the picture?

LEVEL 3: Reordering perception.

Language focuses on thinking beyond the HERE & NOW
Eg: What part off the egg don't we eat?
    What do I put in the bowl with the eggs?

LEVEL 4: Cause & Effect Relations

Language focuses on cause and effect
Eg: Why is the boy wearing a Mac?
    What will happen to the cake when it goes in the oven?

TEACHER MUST MATCH LEVEL OF DISCOURSE TO CHILD.
BUT: CHILDREN MUST BE EXPOSED TO COMPLEX LANGUAGE TO ACQUIRE IT.

EXPOSURE VERSUS DEMAND

OBLIGES: Why did Columbus sail from Spain? LEVEL 4 OBLIGES
        requiring response from child.

COMMENT: Columbus sailed from Spain to find a sea route from India.
        LEVEL 4 COMMENT does not require child to respond/fail.

Oblige 1 - What are the names of Columbus' Ships?
           What is Columbus doing in the picture?
FOUNDATION LEVEL (8 minutes)

1. Using Effective Delivery (1 minute)
   Choose a short verse, memorise and interpret with appropriate pronunciation, pitch, pace, pause and power (emphasis).
   Introduce with title and author.

2. Sharing Information (3 minutes)
   Briefly tell the listeners about yourself.
   Structure
   Introduction: Summarise the areas you wish to talk about (e.g., home / family / interests).
   Development: Give brief information under headings.
   Conclusion: Thank the listeners for attending and invite questions when the presentation is finished.

3. Communicating Written Text (1 minute)
   Read a prepared passage (100 words) from a book / paper / magazine.
   Introduce with the title and author.

4. Listening and Responding (3 minutes)
   Conversation arising from any sections.

5. Written Communication: Record (to be handed to the assessor before the presentation)
   Design / write a personal profile. Include any aspects you wish (e.g., name, address, interests, achievements).
   Write short notes only.

FOUNDATION LEVEL (Specific Competencies)

1. Using Effective Delivery
   Accurate recall
   Interpretation of mood

2. Record: Sharing Information
   Structured Presentation: introduction; development; conclusion.

3. Communicating Written Text
   Clear introduction (title and author) with pause before beginning the reading.
   Effective interpretation of the content

4. Listening and Responding
   Attention to questions / comments
   Appropriate interpretation of questions
   Relevant answers

5. Written Communication
   Accurate content
   Appropriate range of information given
LEVEL I (10 minutes)

1. Using Effective Delivery (2 minutes)
   Choose a short poem / prose / dramatic text. Memorise and interpret with appropriate pitch, pace, pause, power (emphasis).
   Introduce with title and author.
   Say why you like your choice.

2. Communicating Knowledge : Recite (2 minutes)
   Describe a favourite object / picture that you have brought with you.
   Structure:
   Introduction: State the context (how you got it).
   Development: Describe parts: shape; size; colour; parts; material; function.
   Conclusion: State the reasons why you made the choice.

3. Making Inferences : Refer (2 minutes)
   Tell a joke, riddle or amusing story.

4. Communicating Written Text (2 minutes)
   Read a prepared passage (150 words). Introduce with the title and author.

5. Listening and Responding (2 minutes)
   Conversation arising from any sections.

6. Written Communication : Recite (to be handed to the assessor before the presentation)
   Design / write a programme for your presentation giving appropriate details (eg: book; title; author).
   Include your name.

LEVEL I (Specific Competencies)

1. Using Effective Delivery
   Accurate recall
   Interpretation of mood
   Statement regarding personal appeal

2. Recite
   Full description of object attributes
   Structured presentation: introduction; development; conclusion
   Effective handling of the object for audience viewing

3. Refer
   Effective delivery to enable the listeners to make the appropriate inference

4. Communicating Written Text
   Clear introduction (title and author) with appropriate pause before beginning the reading
   Effective interpretation of content

5. Listening and Responding
   Attention to questions / comments
   Appropriate interpretation of questions
   Relevant answers that give additional information

6. Written Communication : Recite
   Accurate recording of detail: titles, authors
LEVEL 2 (Specific Competencies)

1. Using Effective Delivery (2 minutes)
   - Accurate recall
   - Interpretation of mood
   - Relevant comment

2. Replay
   - Appropriate structure: introduction, development, conclusion
   - Balanced content, appropriate weight to each part of the presentation
   - Appropriate use of visual aids/resources

3. Role Play: Request for Help
   - Ability to use opening/attention to request
   - Clear outline to request/appropriate response
   - Appropriate closing (expression of thanks)/appropriate reciprocation

4. Communicating Written Text
   - Clear introduction (title and author) with pause before beginning the reading
   - Effective interpretation of content
   - Clearly expressed reasons for enjoying the text

5. Listening and Responding
   - Attention to questions/comments
   - Appropriate interpretation of questions
   - Relevant, reflective answers that give additional information

6. Written Communication: Replay
   - Correctly titled entries—(date)
   - Note style recording
   - Balance of fact and comment

---

LEVEL 2 (12 minutes)

1. Using Effective Delivery (2 minutes)
   - Choose a short poem/prose/dramatic text. Memorise and interpret with appropriate pitch, pace, pause, power (emphasis).
   - Introduce with title and author. Comment on why a particular line is memorable.

2. Communicating Knowledge: Recount (3 minutes)
   - Retell some past experience (event/trip/holiday). Use visual aids.
   - Structure:
     - Introduction: Set the scene; outline your talk.
     - Development: Describe what happened in the correct order.
     - Conclusion: State what you felt about the experience.

3. Role Play: Request for Help (2 minutes)
   - The assessor will give you a situation involving making a request to a partner.
   - Outline your needs clearly and pleasantly, express thanks. The partner must respond appropriately, clarify information given, check details, and give a clear answer.

4. Communicating Written Text (2 minutes)
   - Prepare a section from a book. The Assessor will choose a short passage to be read aloud.
   - Introduce the reading with the title and author and say why you have enjoyed the book.

5. Listening and Responding (3 minutes)
   - Conversation arising from any sections.

6. Written Communication: Reply (to be handed to the assessor before the presentation)
   - Write a diary of one week in your life. Make brief notes of daily activities in the appropriate style. e.g., Went to Ben's party. Had too much to eat. Felt sick. Missed the disco.
ASSESSMENT ACTIVITIES AND ASSESSMENT CRITERIA

**LEVEL 3 (12 minutes)**

1. **Using Effective Delivery** (2 minutes)
   Choose a short poem / prose / dramatic text. Memorise and interpret with appropriate pitch, pace, pause, power (emphasis).
   Introduce with title and author. Make a brief comment on the subject matter of your choice.

2. **Communicating Knowledge : Recount** (3 minutes)
   Explain how you have achieved something. Use visual aids.
   Structure:
   Introduction: Set the context; outline the talk.
   Development: Describe the order of activities.
   Conclusion: Evaluate your achievement and what you gained from it.

3. **Role Play : Giving and Receiving Directions** (2 minutes)
   The assessor will outline a situation involving giving directions to a partner.
   The speaker will give directions clearly, checking for understanding.
   The listener must summarise information given and ask for clarification of details.

4. **Communicating Written Text** (2 minutes)
   Prepare a chapter from a book. The Assessor will choose a short passage to be read.
   Introduce with title and author. Briefly describe your favourite character.

5. **Listening and Responding** (3 minutes)
   Conversation arising from any section(s).

6. **Written Communication : Recount** (to be handed to the assessor before the presentation)
   Produce a list of instructions for carrying out a task (a sport's exercise or recipe).
   State equipment needed.
   Number each step of the activity.

**LEVEL 3 ( Specific Competencies )**

1. **Using Effective Delivery**
   - Accurate recall
   - Interpretation of mood
   - Relevant comment

2. **Recount**
   - Appropriate structure: introduction; development; conclusion
   - Balanced content; appropriate weight to each part of the presentation
   - Reflective evaluation
   - Appropriate use of visual aids / resources

3. **Role Play : Giving and Receiving Directions**
   - Outline to task / attention to details
   - Clear outline of directions, checking partner's understanding / ability to restate and check directions
   - Monitoring of task – (retracking if necessary) / ability to clarify details
   - Ability to provide feedback / confident response to directions

4. **Communicating Written Text**
   - Clear introduction (title and author) with pause before beginning the reading
   - Effective interpretation of content
   - Adequate character description expressing age, appearance, personality, interests and role played in the story

5. **Listening and Responding**
   - Attention to questions / comments
   - Appropriate interpretation to questions
   - Relevant, reflective answers that give additional information

6. **Written Communication : Recount**
   - Clear heading
   - Numbered steps to the activity in correct sequence
   - Recording of resources needed
1. **Using Effective Delivery** (2 minutes)
   Choose a short poem / prose / dramatic text. Memorise and interpret with appropriate pronunciation, pitch, pace, pause, power (emphasis). Introduce with title and author. Make a brief comment on the mood of the chosen piece.

2. **Communicating Knowledge : Report** (3 minutes)
   Describe, discuss and evaluate something / someone. Use visual aids.
   - **Structure:**
     - **Introduction:** Set the context and outline your talk.
     - **Development:** Describe and discuss selected areas.
     - **Conclusion:** Evaluate your discussion. Present your own views.

3. **Role Play : Persuasion** (2 minutes)
   The assessor will outline a situation where a reluctant partner is persuaded to attend an event (party, game, cinema). Use strong arguments to persuade. The partner should resist with counter argument. Negotiation must take place.

4. **Communicating Written Text** (2 minutes)
   Prepare a chapter from a book containing dialogue. The assessor will choose a section to be read containing dialogue. Introduce with title and author. Place the passage in the context of the story.

5. **Listening and Responding** (3 minutes)
   Conversation arising from any section(s).

6. **Written Communication : Report** (to be handed to the assessor before the presentation)
   You are asked to produce a brief written report of an activity (100 words) for a newspaper, journal or meeting. Briefly describe, discuss and evaluate your topic.

### LEVEL 4 (Specific Competencies)

1. **Using Effective Delivery**
   - Accurate recall
   - Interpretation of mood
   - Relevant comment

2. **Report**
   - Appropriate structure: introduction; development; conclusion
   - Adequate description
   - Adequate discussion: positive and negative views
   - Reflective evaluation of the evidence
   - Appropriate use of visual aids / resources

3. **Role Play : Persuasion**
   - Friendly opening / friendly response
   - Use of strong arguments to persuade / effective use of counter argument
   - Ability to negotiate / willingness to negotiate

4. **Communicating Written Text**
   - Clear introduction (title and author) with pause before beginning the reading
   - Relevant interpretation of content
   - Effective characterisation
   - Appropriate placing of the passage in the context of the story

5. **Listening and Responding**
   - Attention to questions / comments
   - Appropriate interpretation of questions
   - Relevant, reflective answers that give additional information

6. **Written Communication : Report**
   - Effective description of activity
   - Effective discussion of activity
   - Reflective evaluation of activity
ASSESSMENT ACTIVITIES AND ASSESSMENT CRITERIA

LEVEL 5 (15 minutes)LEVEL 5 (Specific Competencies)

1. Using Effective Delivery (2 minutes)
   Choose a short poem / prose / dramatic text. Memorise and interpret with appropriate pronunciation, pitch, pace, pause, power (emphasis).
   Introduce with title and author.
   State a technique the author uses for effective expression (eg. alliteration / imagery).

2. Communicating Knowledge: Relation (4 minutes)
   Narrate a factual or imaginary experience with setting, event, action, result, reaction. Use visual aids.
   Structure:
   Introduction: Set the context. Outline the content.
   Development: Narrate the action / event.
   Conclusion: State the result and reaction.

3. Role Play: An Apology (3 minutes)
   The assessor will outline a situation where something borrowed has been lost.
   This will be carried out with a partner. The speaker will prepare the listener for bad news; allow time for their response; give an honest explanation; deal calmly with anger; show understanding of their feelings; make a recompense. The partner will express anger and dismay.

4. Communicating Written Text (3 minutes)
   The assessor will choose a short reading from your favourite section of a book.
   Introduce with title and author.
   Briefly summarise the whole story before putting the passage into the context of events.

5. Listening and Responding (3 minutes)
   Conversation arising from any section/s.

6. Written Communication: Relation (to be handed to the assessor before the presentation)
   Relate the story from your book (Section 4), or relate a story of your own invention or experience.
   In a summary (150 words) state the setting, event, action, result, reaction.

1. Using Effective Delivery
   Accurate recall
   Interpretation of mood - explanation of author's technique used for effective expression

2. Relation
   Appropriate structure: introduction; development; conclusion
   Balance of content; appropriate weight to each part of the presentation
   Ability to narrate - setting, event, action, result, reaction
   Appropriate use of visual aids / resources

3. Role Play: An Apology
   Effective preparation for bad news / genuine expression of feeling
   Clear, honest explanation / ability to attend and understand the situation
   Ability to empathise / reciprocal ability to empathise
   Ability to make recompense / ability to accept situation

4. Communicating Written Text
   Clear introduction (title and author) with pause before beginning the reading
   Effective summary of the story
   Appropriate placing of the passage in the context of the story
   Relevant interpretation of content

5. Listening and Responding
   Attention to questions / comments
   Appropriate interpretation of questions
   Relevant, reflective answers that give additional information

6. Written Communication: Relation
   Effective summary of story; sequence, setting, event, action, result, reaction
   Appropriate balance to content
LEVEL 6 (15 minutes)

1. **Using Effective Delivery (2 minutes)**
   Choose a short poem / prose / dramatic text. Memorise and interpret with appropriate pronunciation, pitch, pace, pause, power (emphasis).
   Introduce with the title and author.
   Be prepared to answer a question on why you need to vary pace in delivery.

2. **Communicating Knowledge : Practical Demonstration (4 minutes)**
   Present a practical demonstration of a personal interest or skill. Use visual aids / resources.
   **Structure:**
   - **Introduction:** Set the context: outline the content of the talk.
   - **Development:** Select two or three parts for demonstration.
   - **Conclusion:** Summarise own interest and involvement.

3. **Seeking Information (3 minutes)**
   The assessor will outline a situation where an enquiry is made by telephone.
   The speaker must state who they are and the reason for calling; clarify if the listener is the right person to give information before detailing the enquiry. The listener should respond with appropriate elucidation of the details. Each speaker should check each other’s understanding of the information given and received before ending the call.

4. **Communicating Written Text (2 minutes)**
   Bring an informative book (non-fiction). The assessor will choose a passage to be read.
   Introduce with title, author and a brief summary of the text. You will be asked to explain one of the terms in the passage.

5. **Listening and Responding (4 minutes)**
   Questions and discussion arising from any sections.

6. **Written Communication (to be handed to the assessor before the presentation)**
   Write a letter asking for information. State the reasons for writing.
   Be specific about information required. Convey thanks.

---

LEVEL 6 (Specific Competencies)

1. **Using Effective Delivery**
   - Accurate recall
   - Interpretation of mood
   - Understanding of use of pace in delivery

2. **Communicating Knowledge : Practical Demonstration**
   - Appropriate structure: introduction; development (suitable arena for demonstration); conclusion.
   - Balance of content
   - Ability to demonstrate and explain simultaneously
   - Appropriate use of visual aids / resources

3. **Seeking Information**
   - Suitable opening; greeting; name; information required / appropriate response stating organisation and personal position
   - Appropriate recording of information given (written only) / relevant expression of information
   - Applicable closing review of information received; friendly response / expression of thanks

4. **Communicating Written Text**
   - Clear introduction (title and author) with pause before beginning the reading
   - Adequate summary of the text
   - Effective interpretation of content
   - Adequate explanation of an important term used in the passage

5. **Listening and Responding**
   - Attention to questions / comments
   - Appropriate interpretation of questions
   - Relevant, reflective answers that give additional information

6. **Written Communication**
   - Use of correct letter format; address; telephone number; opening; closing
   - Clear, logical expression of reasons for writing
   - Expression of thanks
ASSESSMENT ACTIVITIES AND ASSESSMENT CRITERIA

LEVEL 7 (15 minutes)

1. Using Effective Delivery (2 minutes)
   Choose a short poem / prose / dramatic text. Memorise and interpret with appropriate pitch, pace, pause, power (emphasis).
   Introduce with the title and author.
   Be prepared to answer a question on the use of pause.

2. Communicating Knowledge (4 minutes)
   Present a famous character that you have researched. Use appropriate visual aids and resources.
   Structure:
   Introduction: Set the context: outline areas to be developed.
   Development: Describe the character with relation to physical and personality attributes. Discuss their importance.
   Conclusion: State why you have chosen the particular person.

3. Teaching and Learning a Skill (3 minutes)
   Teach a partner a simple skill (e.g., tying a fancy knot / bow).
   Orientate the learner to the activity with any necessary explanation.
   Model the steps and ask the learner to repeat. Adjust teaching according to learner's response and give positive feedback. The learner will evaluate success by instructing the teacher in the task.

4. Communicating Written Text (3 minutes)
   Select a book of fiction with dialogue. The assessor will choose a short passage with conversation.
   Characterise the different people in the reading. Afterwards briefly discuss their roles in the story.

5. Listening and Responding (3 minutes)
   Questions and discussion arising from any section(s).

6. Written Communication (to be handed to the assessor before the presentation)
   Describe the character in your talk and discuss their appeal (300 words).
   Give a bibliography of the sources used in the talk with a short note by each reference to indicate the information gained. Assess its utility.

LEVEL 7 (Specific Competencies)

1. Using Effective Delivery
   - Accurate recall
   - Interpretation of mood
   - Understanding of use of pause in delivery

2. Communicating Knowledge
   - Appropriate structure: introduction; development; conclusion – balance of content
   - Ability to convey the character of the person effectively
   - Appropriate use of visual aids / resources

3. Teaching and Learning a Skill
   - Ability to pre-teach and set the context of learning / ability to attend and make necessary clarification
   - Ability to divide tasks into small steps for learning / ability to absorb instruction
   - Ability to adjust teaching to learners' response / learners' commitment to task
   - Knowledge of the teaching sequence demonstrated:
     i. Whole task demonstration
     ii. Outline of steps: words with actions; learner repeating after teacher
     iii. Learner carries out task alone with appropriate teacher support
     iv. Review and repeat

4. Communicating Written Text
   - Clear introduction (title and author) with pause before beginning the reading
   - Relevant interpretation of content
   - Effective characterisation of dialogue
   - Adequate discussion of character roles

5. Listening and Responding
   - Attention to questions / comments
   - Appropriate interpretation of questions
   - Relevant, reflective answers that give additional information

6. Written Communication
   - Adequate description of person to convey the character
   - Clearly expressed reasons for the character's appeal
   - Correct format of bibliography
   - Adequate evaluation of information from referenced texts
LEVEL 8 (16 minutes)

1. Using Effective Delivery (3 minutes)
   Choose a poem / prose / dramatic text. Memorise and interpret imaginatively with appropriate pitch, pace, pause, power (emphasis). Introduce with the title and author. Be prepared to answer a question on the use of pitch and power changes.

2. Communicating Knowledge (5 minutes)
   Give a talk about a place you have visited. Recommend it to the listeners. Use appropriate visual aids.
   Structure:
   - Introduction: Set the context: introduce place and location (use map); outline aspects to be covered.
   - Development: Describe and discuss selected features that are relevant for your recommendation.
   - Conclusion: Briefly summarise main points with personal view.

3. Giving an Opinion (2 minutes)
   The assessor will provide you with an interesting object. Allow the audience to view. Briefly describe, stating the various attributes. Give an opinion of it.

4. Communicating Written Text (3 minutes)
   Bring a short report from a paper/magazine. Summarise and say why it interests you. The assessor will ask you to read a short section.

5. Listening and Responding (3 minutes)
   Questions and discussion arising from any section/s.

6. Written Communication (to be handed to the assessor before the presentation)
   Make a brief written report on a place (Section 2). Recommend it to the reader (200 words). In addition write a paragraph explaining some communicative differences in talking about a place compared with writing about it.

LEVEL 8 (Specific Competencies)

1. Using Effective Delivery
   - Accurate recall
   - Interpretation of mood
   - Understanding of use of pitch and power (emphasis) in delivery

2. Communicating Knowledge
   - Appropriate structure: introduction; development; conclusion; balance of content
   - Effective recommendation of place to the listeners
   - Appropriate use of visual aids / resources

3. Giving an Opinion
   - Clear description of attributes of object: size, shape, colour, parts, functions, materials
   - Effective presentation of the object for audience viewing
   - Clear, concise expression of opinion

4. Communicating Written Text
   - Clear introduction (title and author) with pause before beginning the reading
   - Effective summary of the subject matter
   - Effective interpretation of content
   - Clear reasons stated for personal interest in the report

5. Listening and Responding
   - Attention to questions / comments
   - Appropriate interpretation of questions
   - Relevant, reflective answers that give additional information

6. Written Communication
   - Concise description of place
   - Suitable reasons expressed for recommendation of the place
   - Adequate explanation of differences between talking and writing
LEVEL 9 (18 minutes)

1. **Using Effective Delivery (4 minutes)**
   Choose an author / poet. Give brief biographical details. Present two short contrasting selections of their work with explanation. These may be read but the commentary must sound spontaneous.

2. **Communicating Knowledge (5 minutes)**
   Present an issue that needs change. Use visual aids.
   - **Structure**:
     - **Introduction**: Set the context: explain the issue clearly.
     - **Development**: Outline the reasons why change is needed: support statements with factual evidence.
     - **Conclusion**: Summarise main ideas.
   (NB. Charts, statistical evidence and use of the Overhead Projector (OHP) are encouraged at this level).

3. **Presenting a Problem: Advising on its Solution (3 minutes)**
   The assessor will present a situation for discussion between two people (e.g. a problem in saving money). One partner will present the problem. The other will be expected to question and negotiate a solution.

4. **Communicating Written Text (2 minutes)**
   The assessor will present a short newspaper/journal article on a topical issue (150 words). You will be asked to read it and give a personal view to the audience. Introduce with title and author.

5. **Listening and Responding (4 minutes)**
   Questions and discussion arising from any section's.

6. **Written Communication (to be handed to the assessor before the presentation)**
   Discuss the advantages and disadvantages of a situation you are involved in (e.g. course work versus examinations; flexible working hours); (1000 words).

LEVEL 9 (Specific Competencies)

1. **Using Effective Delivery**
   - Appropriate biographical details expressed
   - Reflective explanation of contrasting selections
   - Spontaneous commentary
   - Interpretation of mood

2. **Communicating Knowledge**
   - Appropriate structure: introduction; development; conclusion
   - Balance of content
   - Clear explanation of issue
   - Fully justified reasons for change given
   - Appropriate use of factual evidence
   - Appropriate use of visual aids / resources

3. **Presenting a Problem: Advising on its Solution**
   - Clear outline of problem / attention to information
   - Moves to canvass listener views / use of questions to clarify information
   - Involvement in collaborative talk
   - Appropriate negotiation of solution

4. **Communicating Written Text**
   - Clear introduction (title and author) with pause before beginning the reading
   - Effective interpretation of content
   - Clear personal views expressed

5. **Listening and Responding**
   - Attention to questions / comments
   - Appropriate interpretation of questions
   - Relevant, reflective answers that give additional information

6. **Written Communication**
   - Clear outline of advantages and disadvantages
   - Balance of content
## ROBERT: PROFILE 1

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© D. Crystal, P. Fitchet, M. Garmen, 1975 University of Reading
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#### Total No. Sentences: 111

Mean No. Sentences Per Turn: 0.95

Mean Sentence Length: 7
Transcript 1

Context: Robert (R) and Therapist (T) are looking at a model fire engine and playing with model firemen.

Transcript 2.

Context. Robert (R) and Therapist, (T) are looking at pictures from the Edinburgh Articulation Test.

T. 'where is the fire engine Robert /
R. 'down there /
T. 'down there / - yes /' where is it /
R. 'down there /

What's the lady doing / —
R. / girl / -- sleeping /
T. it's a little girl / is it /
R. Sleeping / -
T. sleeping / -
'These /
R. ' on a bird /
T. yes / they're on a bird / it's what the bird uses to fly with /
do you know what we call them / -
R. / feather /
T. Wings / yes/two wings for flying /
R. wing / wing / - I two wing / - feathers /
T. ' what has the aeroplane got / birds have got them / and the aeroplane has two /
as well / hasn't it Robert /
R. Yes / wing /
T. wings / yes they make it go faster /' what's this / 
R. a car / - car park /
T. well / yes / you park the car / what's it called /
R. - (no response) /
T. - it's a special kind of house / for a car / you can use the word to also say where you get petrol for the car. It's a gar-
R. garage / two garage are open /
T. ' you've got those / - mhm / at home for the car /
R. uhmm / - uhmm /
T. what else /
R. ' it is a jet /
R. ' those are propellars /
R. - I 'peller / - got them /
T. you haven't got them / - no /
R. (shakes head) - -
T. what else did we have /
R. three christmas tree /
T. three christmas trees /
R. yeah /
T. what else did we have /
R. paper / some paper / - chain / - paper chain /
T. where did you have the paper chains /
did you have them on the wall / -
R. no / - not wall / on christmas tree /
T. anywhere else /
R. - cr / on the / - in the ceiling /
T. oh / on the ceiling / from corner to corner /
R. ' put them in / - on the ceiling /
T. who blew up the balloons /
R. mmm /
T. did you /
R. yes I blow them up /
**GARRY : PROFILE 1**

**A Unanalysed Problematic**
1 Unintelligible
2 Symbolic Noise
3 Deviant
4 Incomplete
5 Ambiguous

Response Types | Normal Response | Abnormal Response |
--- | --- | --- |
**Symbolic Noise** | 115 | 10 |
**Other** | 12 | 9 |

**B**

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**Total No. Sentences** 125

**Mean No. Sentences Per Turn** 0.55

**Mean Sentence Length** 1.0

© D. Elmes, P. Fletcher, M. Cameron, 1973 University of Reading

Profile chart: developmental stages
Profile chart: developmental stages

### A Unanalysed

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### C Spontaneous

| 3 | 1 | 2 |

### Sentence Structure

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(Crystal, P. Plache, M. German, 1973 University of Reading)
Transcript 1a [Context - playing with Farm set]

1 T. Look/Garry/What's this/-
2 G. Cow/-
3 T. ‘Yes it's a cow/
4 ‘what shall we do with the boy/
5 shall we 'stand him up/or 'sit him down/
6 G. up/-
7 T. Ok/let's put him here/
8 G. up/up/
9 T. yes/what's that for/-
10 G. girl/-
11 T. the girl/-
12 G. yes
13 T. is she going to sit on this bench/or stand/
14 G. sit/
15 T. uhm/ok/
16 G. sit/
17 T. sit/here/
18 G. yes /-
19 T. there/what about the farmer/-
20 he's the dad/ is he going to sit/or stand/-
21 G. sit(?)and
22 T. stupid/here/-
23 G. stand/
24 yes/
25 T. oh dear / I've bent the legs the wrong way/
26 'what is he doing /-
27 he's standing /
28 what about mum/the farmer's wife/
29 G. (no response)
30 T. is she going to sit/or stand/-
31 G. sit/;
32 T. mum/-
33 G. and the baby/shall we make him/sit/or lie/in this pram/
34 T. lie/;
35 T. lie/;
36 alright/-
37 that's good/-
38 T. look/Garry/-
39 'what's the dad /'got on there /
40 'can you see/
41 G. yes /-
42 T. it's a scarf / isn't it /
43 G. yes/-
44 T. what is it /-
45 G. (scarf)
46 T. his scarf /yes/;
47 have you got one /-
48 G. no/yes /
49 T. yes /- have you got one at home /-
50 G. yes /
51 T. yes/what/
52 G. bu bu up [blue blue one]
53 T. a blue one /
54 G. no /
55 T. mum / a blue scarf/to keep you warm
56 G. yes /
57 T. and dad's got a big /-
58 G. [3 syllables - not intelligible]
Transcript 2a [context - playing with cars and garages]

T. Gary / 'what does this car do? /-
G. [ga] /-
T. where does it go /-
G. 3 syllables /-
T. 'where does it go? does it go on the road /-
G. yes /-
T. 'what does it do / when it gets to this garage
G. petrol /-
T. there's a petrol pump / yes / what does the nozzle do /
G. go in /-
T. go, go in the petrol tank / in the side of the car / here / what does the man do /-
G. petrol. in / 2 syllables /-
T. He puts the petrol / in the car /-
G. 'oh /-
T. 'what does the petrol do /-
G. go, car /-
T. 'yes it makes the car go /
G. yes, go car /-
T. the petrol / makes the engine work /-
G. uhmmm /-
T. 'what does this man do / Gary /-
G. in the car here /-
T. in the car /-
G. 'yes /-
T. 'what is he doing in the car /-
G. men(d) it /-
T. yes / he mends or services the car /-
T. yes / he lies down to look under the car /
G. what does he do / when he's finished
  uhmm / jump up /
T. yes / no / come out()
G. yes / he comes out / from under the car /
  out from under the car /
T. no / syllables
G. who broke it / --
* a little boy or a little girl /
T. * uhm / yes / a little girl / it's easy to break / bits off the car /
  when you're playing
  where's the wheel
G. there /
T. is that a wheel /
G. yes /
T. it's a big wheel / isn't it
G. yes / --
T. where's the other wheel / for the front /
G. 2 syllables / there /
T. on there /
G. yes / 2 syllables / wheel come up there [2 syllables]
T. the wheel comes up there / yeh / on the side /
G. yes / there /
T. what have you got /
T. what are you doing /
G. 1 wheel out here / 2 syllables /
T. turning the tyre / round /
G. air / 2 syllables /
T. I think the air comes out of the nozzle / Garry /
G. no / 4 syllables / no /
T. air comes out of there /
G. air / air /
T. uhmm / uhmm
G. air / 3 syllables [2 syllables]
T. where is the other tyre / Garry /
G. down there /
T. down there /
G. yes / down there /
T. where /
G. there /
## APPENDIX

### Developmental Assessment (Phonics) PACS (Phonology)

<table>
<thead>
<tr>
<th>Stage</th>
<th>Labial</th>
<th>Lingual</th>
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<tbody>
<tr>
<td>(0-3)</td>
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<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
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<tr>
<td>Plosive</td>
<td>p, b, t, d</td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>f, v</td>
<td>s, z</td>
</tr>
<tr>
<td>Approximant</td>
<td>w</td>
<td></td>
</tr>
</tbody>
</table>

Protowords and First Words:
- Show phonetic variability and all phon processes.
- Examples
  - Nasal
  - Plosive
  - Fricative
  - Approximant
  - Reduplication
  - Consonant Harmony
  - Final Cons. Deletion
  - Cluster Reduction
  - Fronting
  - Stopping
  - Gliding
  - C.S. Voicing
  - Fronting
  - Stopping
  - Gliding
  - C.S. Voicing
  - Clusters used: obs. + approx.
  - /s/ + cons.
  - Stopping
  - Fronting
  - Gliding
  - C.S. Voicing
  - /t/ d/ e /
  - s/ + cons.
  - /l/ d/ e /

Comments and Notes:

- For a: show pronunciation typical of stage IV but clusters are not consistently used.
- For b: show pronunciation reaches normal pattern but individual process (s) not yet consistent.

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# Developmental Assessment (phonology)

**PACS**

**Name:** B

## Protowords and First Words:
Show phonetic variability and all phon processes.

### Examples

<table>
<thead>
<tr>
<th>Nasal</th>
<th>Labial</th>
<th>Lingual</th>
</tr>
</thead>
<tbody>
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<td></td>
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</tbody>
</table>

### Comments and Notes

**Stage I:**

- Reproduction
- Consonant Harmony
- Final Cons. Deletion
- Cluster Reduction

**Stage II:**

- Reproduction
- Consonant Harmony
- Final Cons. Deletion
- Cluster Reduction

**Stage III:**

- Reproduction
- Consonant Harmony
- Final Cons. Deletion
- Cluster Reduction

**Stage IV:**

- Reproduction
- Consonant Harmony
- Final Cons. Deletion
- Cluster Reduction

**Stage V:**

- Reproduction
- Consonant Harmony
- Final Cons. Deletion
- Cluster Reduction

**Stage VI:**

- Reproduction
- Consonant Harmony
- Final Cons. Deletion
- Cluster Reduction

### Clusters used:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Obs. + Approx.</th>
<th>Vowel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/s/ + cons.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/h/ + [l]</td>
<td></td>
</tr>
</tbody>
</table>

### Remarks

1. Consistent pattern for Stage IV although pattern was /f/.

2. Normal pattern bar labial /v/ which was used for.

---

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CHECK LIST OF LANGUAGE SKILLS 1-8 YEARS WITH REGARD TO:
LISTENING, TALKING, WRITING AND READING.

1-2 Years
1. Attends to any activity of own choice.
2. Responds to NAME and NO.
3. Recognizes names of objects familiar to him: e.g. Show me the - cup/ball etc.
4. Recognizes parts of the body on self & others: e.g. doll - Show me hair etc.
5. Matches common shapes - circle/square/triangle/rectangle/diamond.
6. Recognizes representations of common objects: e.g. -
   Toy - car, bed, chair, dog, cup.
   Picture - car, bed, chair, dog, cup.
7. Marks with pencil/crayon - circling motion, up and down, side to side.
8. Understands relations of 2 objects in correct order: e.g. put the spoon in the...
9. Uses 2 word combinations spontaneously: e.g. Mummy gone.
10. Uses sounds - p, b, m, w, t, d, n.

2-3 Years
1. Attends to adult activity choice for short spells.
2. Recognizes objects/pictures by function/action: e.g. Which one do we sleep in?
3. Groups objects/shapes/colors/size/thickness. Which one is eating?
4. Copies 1 and 0 from imitation.
5. Repeats 2 numbers: e.g. 4-7, 6-3, 2-7.
7. Names common objects/toys/pictures - people, animals, objects that are handled (ball/brush), body parts, clothes, fit, furniture, real world things (car/clock etc.) and actions.
8. Uses 3-4 words spontaneously in subject object expansion in a variety of sentence types. e.g. He put (his) shoe. (statement)
   Where (that) lady gone? (question)
   Give Mummy (that) cup. (command)
9. Talks to self mostly about immediate present.
10. Uses sounds - p, b, m, w, t, d, n, k, g, ng, h.

Use of Check List:
1. Select items for child's chronological age.
2. Tick those he/she can do. Cross those he/she can't do. Circle 2 unsure items.
3. If the child gets more than 3 blanks for the 10 items for his/her age group, contact the Speech Therapist for discussion/advice/further testing.
3-4 YEARS

1. One channel attention only (i.e. cannot carry on what he is doing and attend to something else at the same time).
2. Understands commands including abstractions:
   - Colour - give me the red brick
   - Size - show me the little doll.
   - Position - give me the brick on the table.
   - Negatives - give me the doll that is not in the box.
3. Repeats 3 numbers 5-2-5, 6-9-4, 8-2-6.
4. Claps out simple rhythm to song/rhyme: eg. Ba, Ba, Black sheep
5. Says full NAME.
6. Says at least 1 Nursery Rhyme.
7. Copies a cross
8. 4 + word sentences: eg. Luke's kicking the ball now.
   - Regular use of questions, statements, commands.
9. Carries out associations between objects/pictures: eg. knife & fork/cup & saucer
10. Uses sounds p, b, m, w, t, d, n, k, g, ng, h, j, l, s, sh.

4-5 YEARS

1. Integrated attention for short spell: eg. while playing with something can take in short verbal instruction.
2. Carries out 3 commissions in the correct order: eg. -
   - Put the pencil in the box, shut the door, and bring me the book on the table.
3. Repeats 4 numbers 2-9-6-5, 1-3-2-7, 9-4-2-1.
4. Copies a square
5. Draws 2 or more recognisable forms: eg. man, house, cat/dog etc.
6. Repeats a 12 syllable sentence -
   a) Ann wants to build a big castle in the play house.
   b) Luke has lots of fun playing ball with his brother.
7. Using an integrated picture: eg. home/school scene.
   - Can abstract the central meaning: eg. This is a picture of playtime at school. Uses language to explain, report detail, predict, hypothesize and express feeling.
8. Uses 5+ attributes to describe an object: eg. Ball - name/colour/shape/size/

9. Uses co-ordinating (and/but/so) & subordinating connective devices etc
   (because/where) in speech.
10. Uses - p, b, m, w, t, d, n, k, g, ng, h, j, l, s, sh, f, v, ch, dg.
5-6 YEARS

1. Integrated attention sustained.
2. Assimilates a number of concepts in sentences requiring sequencing in some length: eg. Put the white horses on the outside of the field. (toy farm pl
3. Understands beyond the immediate situation and so can:
   a) Predict - If the baby falls down what would Mum do? (Use toy people/pl
   b) Order in Time - construct a 4-6 card story sequence and tell the story.
4. Copies a
5. Writes NAME and copies simple words of 1-4 letters.
6. Understands concepts SAME/DIFFERENT, and verbalises groups of attributes: eg. apple/ball/pear - apple & pear are the SAME because they are fruit and you can eat them.
7. Gives full NAME & ADDRESS, and names FAMILY & FRIENDS.
8. Can distinguish words with minimum contrast: eg. cap/cat, pea/bee, bitter/bidder - when sounds are in initial, medial and final positions.
10. Uses previous sounds plus th and r.

6-7 YEARS

1. Integrated attention sustained & controlled: ie. can cope with interruption - return to task
2. Recites numbers to 50+ & records numbers 10x
3. Repeals 5 digits 5-5-1-6-6, 6-8-8-7-2, 9-1-1-1-1.
4. Names common coins.
5. Word recognition - 20+ words (use flash cards from reading scheme).
6. Tells back a familiar story: eg. The Three Bears - with half the details correct, and using discourse features: eg. then/after/before/however etc.
7. Recognises pictures from a small part revealed/words when sounds deleted: eg
8. Knows sound/symbol relations & can blend sounds to form words - da-vy - daddy when given in isolation: eg. c - n - t.
9. Can give a verbal plan of activity: eg. going shopping. Solves a physical problem with words: eg. How to get an object off a high shelf.
10. Uses all consonant sounds plus simple blends - tw, tr, dr, pl etc. and complex blends - str, shr, sp etc.
LEARNING TO LISTEN

INTRODUCTION
For years and years, I have been looking for a short cut to teaching children with learning problems. Alas! There is none! Only a methodical, logical approach reaps success, which takes nothing for granted.

Children who do not learn generally have difficulty processing information from eyes (visual), ears (auditory), touch and sense of position in space (haptic). They fail to organise information from more than 1 channel (visual, auditory and haptic) and, therefore, have problems in LISTENING, SPEAKING, READING & WRITING, which depend on linking patterns of sound, vision and movement. Diagram A illustrates this. In the total process of communication, these visual, auditory & haptic patterns of information have to be recognised and understood and related to existing frames of knowledge before an appropriate response is chosen. This is put into a form that will be comprehended by the listener, and presented well enough to hold attention. Diagram B shows this total model of communication.

The programme to be described, is based on these fundamental assumptions and begins by organising auditory input as a base to develop listening, attention, concentration and understanding. In learning, the auditory channel rapidly attains dominance in mediating incoming experience and developing thinking and creativity. We translate what we see, hear and feel into word forms which are the basis of abstract thinking behaviour. Interest in the development of the auditory channel is, therefore, essential.

The method described is adaptable to all age groups and has been well tried with many who have problems with learning. It must, of course, be backed up by a frame of suitable movement, thinking and language experience.

Included is:-
1. A general listening programme.
2. A speech sound programme leading to correct phonological strategies for reading and spelling.
A programme to help children listen

Children with learning difficulties always have problems with ....

Listening     Attending     Concentrating

There are 3 developmental levels and 4 aspects to sound processing.

Levels ~~~SOUND~~~ Aspects

1. Awareness
2. Meaning
3. Discrimination and Retention
4. Sequence

Children need help to organise what they hear.

This means a structured approach to teaching, moving through the 3 levels and including the 4 aspects.
LEVEL 1  -  SOUND AWARENESS

QUESTIONS  -  Can the child localise sound ?
            Can the child hear a range of sounds ?

OBSERVE  --  Reactions to the following :
1. Appears startled by sudden sounds.
2. Stops activity when hearing sudden sounds.
3. Turns to look for sound - near at hand. * Use drum, whistle, bells, tissue paper rustle as a distraction exercise while the child is absorbed in play.
4. Turns to look for sound - in the distance (at 10-20 ft.). Use drum, whistle, bells, tissue paper rustle etc. while the child is absorbed in play.
5. Shows interest in objects that make noise.
6. Attempts to reproduce sounds which objects make.

CHECK FOR THESE RESPONSES BEFORE CARRYING OUT LEVEL 1 ACTIVITIES.
* Distraction exercises are more successful using 2 adults - one playing with the child, and the other, at some distance behind, making a sound at intervals and noting the child's response.

LEVEL 1 ACTIVITIES

1. LISTEN AND LOCALISE SOUND.
   1) Take - a) An object making a sound - eg. whistle(high sound)/drum(low sound
      b) A speech sound - eg. s(high sound)/g(low sound)
   2) Ask the child to close eyes, or blindfold him/her.
   3) Move to different positions in the room, and make the sound.
   4) Each time ask the child to point in the direction of the sound.

2. LISTEN AND MAKE A RESPONSE - MOTOR
   1) Introduce sound boxes/cannisters containing a range of different substances making a variety of sounds. eg. rice, dried peas, buttons, sugar, paper clips etc.(N.B. used passes can containers(cottage cheese) are idea, or plastic pill cannisters available from chemists if you ask.(boxes and cannisters must all be/look the same).
   2) Make sure that the child recognises different sounds by letting him/her shake the different containers.
   3) Take 1 sound - and teach the child to make a response when he hears it, eg. press a buzzer/put a peg in a hole.
   4) Make sure your hand, shaking the box, is screened by a card, so the child cannot recognise sound by visual cues.
   5) Produce the sound to be listened for in a sequence of 2 others.
1. **SOUND - VISUAL LINK.**

Children with learning difficulties have problems LINKING information received by 1 channel (e.g. ears) with that received by another channel (e.g. eyes). This link needs continual reinforcement and must be started early in a remedial programme.

I have found the following equipment very useful. It was made for me, to my specifications, by the Audio-technician in the Leic. Area Health Authority Speech Therapy Service. It is a sound-light box.

**SOUND-LIGHT BOX**

Press the button and a coloured light and sound appear. At Level 1 the box can be introduced for play. At later stages it is a useful piece of equipment to teach sound pitch differences and sound sequences.

---

**LEVEL 2 - SOUND MEANING**

At this stage a child must learn that sound means something in the context where he/she works.

**LEVEL 2 ACTIVITIES**

1. **LINKING SOUND WITH ACTIVITY**
   1) *Listening Walk*

   Take the child/ren on a walkabout and encourage identification of sounds heard round about. e.g. orrises, cars, birds, machine noise etc. If response is slow prompt with questions. What can you hear in the sky?

   2) *Stop and Listen*

   Get the child/ren to be quiet for a moment and tell you the sounds they hear around. e.g. voices, door banging, cars passing etc.

2. **LINKING SOUND WITH OBJECT**

   **Materials:** 3-6 musical instruments, making a range of sounds. e.g. drum, shaker, chime bar, maracas, bells, triangle etc.

   1) At first, choose 3 instruments with maximum sound contrast. e.g. drum, bells

   2) Make sure the child/ren recognises the sound each makes be giving an opportunity to play with them.

   3) Produce 2 sets of matched instruments: one set in front of the child/ren and one set behind a screen.
4) Play 1 instrument from behind a screen so the child has no visual clues for the task.

5) Ask the child to indicate from the 3 in front of him which you are playing (N.B. Children with poor retention must have continual stimulus of sound being played while making their choice. At this level retention is in low loading and is not specifically taught until Level 3).

6) Reverse Roles (which aids understanding of the task) so the child plays and you make selection.

7) When the activity is fully understood and the child has a mature attitude towards the task, the screen can be taken away and the child asked to close his eyes instead, and listen to the sound being played. This aids concentration, but children need trust and confidence to close eyes first.

3. LINKING SPEECH SOUND PATTERN WITH OBJECT.

Materials: Use 3-6 animal models of dog, cow, sheep, duck, cat, pig etc.

1) Start with 3 objects only - making sounds of maximum contrast. e.g. cow-moo
   duck-Quack, pig-hor.

2) Make sure the child recognises the sound each makes, by means of the teacher picking up the animal, getting the child to focus on this visually, and then feeding in the sound stimulus.
   (N.B. It is very important to focus attention on one channel before feeding in information from another channel. Children with learning difficulties have problems in integrating information across channel, so that if you expect them to process the visual presentation along side the auditory stimuli, you are usually making the task beyond their processing capacity).

   JUDICIOUS FEED-IN OF STIMULI IS THE BEST WAY OF ENSURING INFORMATION PROCESSING. FAILURE TO LEARN IS FREQUENTLY DUE TO THE FACT THAT CHILDREN WITH LEARNING PROBLEMS CANNOT HANDLE MULTI-SENSORY PRESENTATION.

3) Cue the child to look at your face while you say the animal sound. Keep on repeating it while directing him to the visual display for selecting the correct animal.

4) When the task is stabilised, name the animal and ask the child to point and make the correct sound.

5) Reverse roles.

4. LINKING SOUND WITH PICTURE.

Use Language Development Aids: "LOOK HEAR" sound/picture matching games. There are 6 exercises containing sounds from familiar situations.

5. Environment sounds. 6. Animal sounds.

Use individually or in a group situation.

1) Each child has a picture (or set of pictures)
<table>
<thead>
<tr>
<th>Clock</th>
<th>Fish</th>
<th>Drum</th>
<th>Child</th>
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</thead>
<tbody>
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</tbody>
</table>
When he/she hears the sound on the tape the correct picture matching card is selected.

2) Later the child is expected to name the picture/sound and imitate it after he hears it.

3) This can be played using all cards in the set arranged in a visual display for the child to select from a group the one heard on the tape. The visual choice situation demands good visual/auditory integration skills. If this skill is difficult, make sure the child has only a choice of 2 cards and not the whole group. Sound Lotto 1&2 and Sound Lotto Stories are more difficult versions of the same task.

5. LINKING SPEECH SOUND WITH PICTURE.

Linking sound and visual symbols forms the basis of reading. Children with learning problems have difficulty in linking information across sensory channel and need a firm link between sound and visual symbol. This can be established using a system of 13 English consonant sounds associated with picture symbols.

I now use a system standardised by Ann Turner, Chief Speech Therapist St.Helen’s District Health Authority. Initially we worked together with a sound/picture symbol approach in pre-school groups in Leicester. Ann Turner went on to work full-time in a Language Unit, where this system, now described, was standardised by her for use in educational programmes.

The sound/pictures are introduced in 3 sets.

SET 1.  p, b, m, t, d, n.

SET 2.  k, g, f, v, s, z.

SET 3.  sh, t(ch), d(dg), l, r, w.

Sequence of Activities.

1) Identifying the correct symbol for each sound.

2) Selecting the picture symbols by their names. eg. m= lovely to eat sound. sh= quiet sound, etc.

When the child knows the first three sounds of SET 1 eg. p,b,m, bingo games can be played. The teacher makes the 'talking sound' and the child has to match it with the right picture. Reverse roles so the child plays teacher and you/others guess which 'talking sound' is made for matching with the correct picture.

NOTES ON THE INTRODUCTION OF SOUND/PICTURE SYMBOLS.

1) Build sound/picture link with clues. eg. 'p' - say: "This is called the 'fish sound' because we look like fish when we say it. Watch me:" (make 'p' movement with the mouth and compare this with fish mouth movements). For 'n' say: "This is the cleaner/hoover/vacuum sound." Act out the activity of cleaning."
2) Repeat the sound frequently.

3) Encourage the child to say the sound.

4) Encourage a NAME for the sounds. eg. (m) = lovely to eat sound.  
    (w) = wind sound. (l) = licking sound. (ch) = train sound etc.

LEVEL 3 - SOUND DISCRIMINATION AND RETENTION.

At this stage, attention is drawn to teaching the 4 Aspects of listening to sound, in specific contexts.

TIME, PITCH/TONE, RHYTHM, STRESS & PITCH MOVEMENTS, SEQUENCE.

1. TIME

1) Fast/Slow
   Using clapping or a musical instrument get the child to listen to
   FAST AND SLOW PATTERNS. When clapping exaggerate with arms wide apart
   for slow clapping and near together for fast clapping. If you are using
   an instrument (eg. chime bar) hold beater high for slow sound and low
   for fast sound.
   The Let's Move Music and Movement Series provide music with fast/slow
   patterns.
   Use SLOW - Walking music  - get the child to run/walk depending on
   FAST - Running music  - what the music tells him.

2) Long/Short
   Teach the idea of long/short sound. I use a door bell buzzer mounted
   on a plinth to get over the idea of sound length. When this is
   established, introduce visual symbols:-
   .. = short sound
   --- = long sound
   Present long/short sound sequences on separate cards.
   eg:
   [Diagram of sequences]

Get the child/ren to clap/tap out the sequences shown on the cards.
Increase the number of symbols on the cards SLOWLY.
2. **PITCH**

Introduce HIGH/LO W sound.

1) **Use Sound/light box** to present the idea of sound pitch differences.

   Make a suitable visual display.

   eg: Ladder
   
   0 RED - high sound
   0 GREEN - middle sound
   0 BLUE - low sound

   Use coloured discs on the ladder to represent the 3 sound levels.

   Play the note on the sound/light box (behind a screen) and get the child to put the disc on the correct rung of the ladder.

   (N.B. Although it might appear easier to relate 2 contrasts, in practice it is often easier to understand with 3).

2) **Use Chime Bars**

   Start with 3 bars of maximum sound pitch contrast. eg. middle c, f, top c.

   Introduce the chime bars and play the notes, saying: "Listen while I play. This is a low note, etc." Reverse roles so the child plays and tells you what the note is. Use a screen. You play a note and the child has to put the low/middle/high disc on the ladder.

3. **TONE**

   Introduce soft/quiet - loud sounds.

   Use an introduction to the idea. eg. Play an instrument quietly and then loudly. Ask the child to indicate whether the sound is quiet/loud.

1) **Use a Train Story** with instruments. "A long way away, I can hear a train - very quiet - listen - (play the instrument quietly). Now it's coming closer and getting louder - (play the instrument louder). It stops. All the people get off. The train starts again. (play loud).

   It goes away - further and further - quieter and quieter. (play quietly) until it is gone and we can't hear it. (stop playing).

   Trains are popular, but planes are just as good.

2) **Hiding Game**

   Hide an object in the room while 1 child is outside. All other players have instruments. When the child enters - quiet sound playing means he is far away from the hidden object. Loud sound playing means he is close. Get children to take turns.

4. **RHYTHM**

   Introduce the idea of patterns when we talk or sing. eg. When we talk/sing - words have beats (patterns) that we can clap, tap, or stamp.

1) **Introduce song with music** first. Children find it easier to process musical patterns before speech patterns.
The Language Development Aids: 'Sing as you grow' songs on tape are very suitable. The music is lyrical and gentle. Loud marching songs do not always help to establish listening in children who have problems. Encourage the child/ren to clap out the rhythms. You may need to have them on your lap and clap with them at first. It is very difficult for many children with learning difficulty to process rhythm.

2) Proceed with Nursery Rhymes or simple verses, initially with 4/4 beat pattern. eg. 'Baa, Baa, black sheep. Encourage the child/ren to beat/clap/stamp out the beat pattern.

3) Clap out word patterns. Use the names of children in the group. eg. 'Mark = 1 clap. 'Mary = 2 claps. 'Margaret = 3 claps. Arrange the children in groups according to their name patterns. eg. all 1 beat - 1st. all 2 beats = 2nd. etc. Use a circle formation and clap names out in a circle, starting with the 1 beat names first. This encourages a rhythmic flow to the activity. Proceed with any words. eg. Mum/bug, tab/tish, dog, cot, sausages, Choose 1 word and repeat the pattern. Walk round as you do it.

eg. 'dog, 'dog, 'dog, = slow beat = slow walk.
but - sausages, sausages, sausages, = fast beat = running.

5) SEQUENCE
This is the idea of sound in a time scale.
Materials - sound boxes/ musical instruments.
Make sure children recognise which sound each instrument makes.

1) Beginning sound
Ask the child to close eyes. Say: "I'm going to play 3 instrument sounds. I want you to listen for the FIRST one - the beginning one. When I say: 'open your eyes' - you find me the first one."
This may be difficult. Give necessary clues at first. eg. Let the child watch at first - let the child play and you find the first one. Play the sound for a long time - the others quickly. Reverse roles frequently.

2) Last sound
The child closes eyes. You say: "I am going to play 3 sounds. I want you to listen to the LAST sound. When I say: 'Open eyes' - you find me the last sound."

3) Same/different sound
Use instruments. Choose 1 sound. You say: "I am going to make this sound 3 times. All the sounds are the SAME. Choose another sound and say: 'some times I might play this sound LAST, and then the LAST sound will be DIFFERENT. Listen, and see if the LAST sound is SAME/DIFFERENT."
4) **Same/different - using speech sounds.**
   - **Animal Sounds**
     - *moo, moo, moo - same*
     - *moo, moo, baa - different*
   - **Speech Sounds**
     - *p, p, p - same*
     - *p, p, sh - different*

5) **Words with Visual Symbols**
   - Eg. Use rubber stamps - 'Put the counter on the last picture if it is different.'
     - *cat, cat, cat - same*
     - *cat, cat, house - different*

**Incorporating ideas into the Speech Sound System**

1) **Listen for a Sound**
   "I am going to say 'a talking sound'. When you hear it in a list of words, put:--
   - eg. - a peg in a hole, or a leg on a caterpillar (or some thing similar)
   - LIST - pig, leg, lip, big. (listen for b). Use very short words at first.

2) **Listen for a beginning Sound**
   - I am going to say this talking sound (eg. s) at the beginning of words.
   - When you hear it - do this. (select from various activities) eg. the peg in the hole/brick in a container etc.
   - Use pictures - 'see how many things we can find beginning with...(eg. b).'
   - At this stage encourage the child to say the words himself and make the sound discovery from his OWN speech rather than yours. Here the child is beginning to match his speech to yours, but at a controlled level of perceptual/conceptual organization.

3) **Concentration on sound attributes**
   - Using pictures beginning with the same sound and including some beginning with other sounds, sort for eg: beginning with b/not beginning with b.
   - Use Venn diagram rings to sort into the sets b/not b.
   - At this stage the child has only to perceive the attributes of the consonant sound in question. He can discard sounds that do not fit the set without full analysis of the whole word.

4) **Listen for final sounds**
   - Use ideas in section 2 & 2 for focus of attention on listening for the final sounds in words.

5) **Listen for middle sounds**
   - Repeat the previous ideas with words having the sound in the middle.
Focus of attention is now on the child's own feedback mechanism to carry out the tasks. Using pictures - encourage the child to verbalize the word himself and sort words for the set criteria, eg. beginning with 's'/ ending with 'b' etc.

*CHART 1* is included and contains a list of English sounds. Follow the order given if possible. The grouping of articulatory features follows a natural developmental progression.

6) **Listening for minimal sound contrasts**

The ability to make fine discriminations between consonants and vowels is necessary for speaking, reading and writing. This can be practiced in games where words are put in *minimum contrast*. That is, words are the same except for 1 sound difference.

eg:- pin/bin

*Picture - pointing game*

Make individual picture cards of the following:-

**Consonant sounds varied/vowels constant**

<table>
<thead>
<tr>
<th>bat/back</th>
<th>tray/train</th>
</tr>
</thead>
<tbody>
<tr>
<td>net/met</td>
<td>sheet/seat</td>
</tr>
<tr>
<td>pin/bin</td>
<td>f'ly/cry</td>
</tr>
<tr>
<td>pot/dot</td>
<td>go/toe</td>
</tr>
<tr>
<td>hug/mug</td>
<td>shoe/two</td>
</tr>
</tbody>
</table>

**Vowels varied/consonants constant**

<table>
<thead>
<tr>
<th>cat/cut/cot</th>
<th>tail/tile/tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>pin/pen/pan</td>
<td>boat/beat/bite</td>
</tr>
</tbody>
</table>

Go through the pictures first, putting them into a sentence context so the child knows the *picture-word link*, eg. shoe - we wear a shoe on our foot. (demonstration)

**THE CHILD MUST KNOW THE PICTURE - WORD LINK BEFORE THE GAME BEGINS**

Take pictures showing minimal contrast, eg. bat/back. Put them in front of the child and say:" Point to the one I say ". When the child can cope with the 2 card level - introduce more cards for greater confusability, eg. bat/back/cat/pan/pen/pin.

**Listen for same/different pairs of sounds**

The child is presented with pairs of words spoken by the teacher. Some are the same and the others different, but all are in minimal contrast. The child indicates which *pairs* are the *same* and which are *different*. The child MUST know the concept same/different in this context.

The teacher must cover the mouth with a card so that no visual clues are available.

**WORD PAIRS**

(NEXT PAGE)
Some children need a great deal of help with learning to discriminate sounds. They frequently miss the contrast in end consonants, because the final sound lacks volume and emphasis. Vowel sounds are often more difficult than consonants because they do not have acoustic boundaries. This is an important stage and must be stabilised before going on to the Speech Sound Programme.
SPEECH SOUND PROGRAMME

At this stage children are ready to associate the consonant sound with its letter symbol, although if you have used the sound/picture links they will still utilise these associations at times. At this level, although they will have acquired the knowledge that letter symbols stand alone or work together to represent speech sounds, and are able to discriminate sounds in words, there are often difficulties building consonant/vowel/consonant. (c.v.c.)

At this stage, the medial short vowel has to be given special emphasis and is given attention at this level of the programme.

This approach to teaching is LINGUISTIC, following patterns of sound and language acquisition.

It is recommended that Teachers familiarise themselves with phonetics and linguistics by reading 'Child Language, Learning and Linguistics', by David Crystal, published by Edward Arnold (1976). This is a short text and provides the background to this area.

The sound patterns of spoken English have to be linked to the letters of the Roman Alphabet in order to learn to read and write. They are first acquired in a one to one relationship - 1 sound = 1 letter. This is built up to include combinations of letters required to produce 44 sounds from the 26 letters. There are 17 vowel sounds and 27 consonants.

CONSONANTS appear in initial positions, then medial and final. As mentioned in the sound discrimination section, final positions are the most difficult to distinguish, particularly voiced and voiceless pairs - p/b, t/d etc. (see chart 1).

VOWELS are taught initially by short sounds (see chart 1) and their names (also their long sounds). When teaching vowels be aware of their placement, and choose first those in maximum contrast, eg. /a/ & /o/ - /æ/ and /u/ & finally /u/.

DIACRITICS

/ / = phonetic sound
○ = short sound
- = long sound
+ = stressed syllable

LANGUAGE STRUCTURE

Words are ways taught in the structures appropriate to the child's level of development and follow normal patterns of acquisition.
1. **CONTENT** words - nouns, verbs, adjectives.
2. **FUNCTION** words - (little words), prepositions, particles etc.

As soon as a child can:-
1. **SYNTHESISE** sounds into words.
2. **ANALYZE** words into component parts

Words are used in **sentences** in the following order:
1. The Simple Active Affirmative Declarative. (SAAD) eg. The cat sat on the mat.
2. The Question. eg. Where is the cat?
3. The Negative. eg. The cat is not sitting on the mat.
4. The Compound Sentence. The boys and girls talked to the man with glasses.
5. The Complex Sentence. eg. The girl, who lives next door to me, is going to town with my aunt from London.
6. Cause and Effect. eg. I am tired because I went to a party last night.
7. The Passive. eg. The girl was chased by the boy.
8. The Passive Negative. eg. The girl was not chased by the boy.

**LANGUAGE STRUCTURE**
1. Parts of speech - nouns, verbs, adjectives, adverbs, pronouns, conjunctions etc.
2. Punctuation.
3. Tense.
4. Personal/possessive/relative pronoun replacement.
5. Short forms.
7. Reported Speech.
8. Language styles - informal and formal.
9. Precis, notetaking and essays etc.

**LETTERS**

**READING** is the translation of written symbols into sound which has meaning.
The strategy adopted is: **SHOW** the written symbol, **TRACE** it and then **SOUND** it out. ie. a visual/haptic/auditory input mode is used separately.

**DO NOT EXPECT THE CHILD TO COPE WITH 3 INFORMATION CHANNELS AT ONCE.** Get him/her to focus on the visual symbol, trace and then sound out in 3 separate stages.

Letters **MUST** be written in correct movement sequence (Galt tracing cards are useful), to develop movement hierarchies. Use starting dots and arrows.
1. This concentrates on 1 syllable words eg. bin, tin, pan, pet.

2. Prefixes & Suffixes are introduced when they can be added without changing the root words.
   PREFIXES -a-, be-, de-, en-, mis-, in-, te-, to-, un-, ad-, dis-, pre-
   SUFFIXES -ed, -er, -est, -ing, -ous, -able, -ly, -s,-ment, -y, -age, -ful
   eg. introduce as word sums.
   eg. root word do + prefix 'un' - undo - meaning change.
   root word do + suffix 'ing' - doing - tense change.

3. Vowels that are short are introduced first. eg. pat, pet, pit, pot, p
   In open syllable words ending in a vowel - the sound will be long.
   eg. a, be, he, we, she, the, to, do, no, go, so, I, by, my. Teach magic lengthen:
   'e', which re-opens the syllable - LONG VOWEL. eg. make, these, pipe,
   rope, tune.

   Semi-vowels = w and y behave like consonants at the beginning of a word, and like vowels at the end.

4. Consonants

   qu
   a b c d e f g h i j k l m n o p q r s t u v w x y z - LETTERS
   a b c d e f g h i j k l m n o p q r s t u v w x y z - SOUNDS

5. SPELLING GUIDES

1) Regular plurals - add s - dogs + s = dogs
2) q is always written as qu.
3) No word ends in j or v except spiv!
4) Generally double f,s after a single vowel at the end of short words. eg. call, tell, toss, miss, stiff, stuff, - exceptions - us, bus, gas, if, of, this, yes, plus, nil, pal. Pull/till drop l after root syllable. eg. until.
5) Digraphs (2 letters = 1 sound)
   sh, ch, th (voiced as in the), th (voiceless as in thin).
   Teach wh, ph(f), gh(f), later.
6) Consonant blends - (2/3 letters = 2/3 sounds in 1 unit)
   b, br, cr, dr, dr, fr, gr, pr, pl, sl, sm, sp, st, sw, tr, tw,
   sh, sk, skw, spl, spr, str.

   Later Spelling Guides

   W Rules
   wa = /w/ as in was, want, wash
   qua (kw) = /k/ as in kick, squash
   war = /wr/ as in warm, wash
   wor = /er/ as in word, work
Silent Sounds

/b/ and /g/ are not sounded in 1 syllable words finally - eg. thumb, lamb
/t/ is not sounded before ch finally - eg. catch, match.

Vowel Sounds - /sh/ or /ør/

/sh/ is spelt ar in car, bar, etc.
/or/ is spelt or in born, sort
/or/ is spelt ar in her, term

Hard and Soft Sounds

Letter c says /s/ when the next letter is e, i, y. eg. city (beginning)
Letter g says /j/ when the next letter is e, i, y. eg. magic

But u stops going soft in guess, guy etc.

Long Vowel Sound with a Short Vowel Spelling eg. kind, gld, post

LEVEL 2

1) This deals with 1 syllable words plus pre/suffixes where the root spelling changes.

Spelling Guides

Doubling Guides

Words ending in a single vowel and a single consonant - double the last consonant. eg. root word stop + suffix 'ed' = stopped

Final 'e'

This:- DROPS from the root word before adding an ending beginning with STANDS before a consonant. eg. love, loving, lovely.

Word ending ce/ge KEEP 'e', when followed by o or a. eg. gorgeous,oran

Final 'y'

When a word ends in 'y', it usually changes to 'i' before adding the ending. eg. baby - babies.

'y' STANDS 1) When the word ends in ing/ish/ist/ - eg. try - trying.

2) When a vowel precedes. - eg. play - played.

Plurals

Most nouns get their plurals by adding 's' - pen, 2 pens

Irregular Plurals

Words ending:- 1) in s, x, sh, ch, ss, or c add es. eg. bus=s, pot

(exceptions - pianos, solos, Eskimos.)

2) in f/fe, change the 'f' to 'v' and add 'es'. eg. knife

Other Irregulars - men, women, children, oxen, mice, feet, teeth, geese, sheep, deer.
When 2 vowels go out walking, the first one does the talking.

i.e. The sound you hear, will be the first letter of the pair.

Each long vowel has 2 spellings. 1 medially (middle) & 1 finally (end)

Long /a/ - ai (pain) medially - ay (pray) finally.
Long /o/ - oa (boat) medially - ow (bow) finally.
Long /i/ - igh (bright) medially - y (dry) finally.
Long /u/ - oo (food) medially - ow (few) finally.
Long /e/ - ee/ea - medially and finally - seem/see seam/sea.

3) Vowel Digraphs

The 'come here' sound - /oi/ - /oy/ - boil (medially), boy (finally)
'touch' sound - /ou/ - /ow/ - loud (medially) cow (finally)
'or' sound - /au/ - /aw/ - sauce (medially) saw (finally)
'er' sound - /ir/ - ear/ear - fir, fur, learn.

LEVEL 3

1) Introduce POLYSYLLABIC words (words of more than 1 syllable)

Vowel Length

N.B. OPEN SYLLABLES (ending in a vowel) have a LONG SOUND.

CLOSED SYLLABLES (ending in a consonant) have a SHORT SOUND.

Stress

This is generally on the FIRST syllable unless the word begins with a PREFIX.

Final Syllable

This is usually centralised to 'er' sound (schwa) which is confusing
for spelling, e.g. our saying /er/ in labour, and beggar.

Patterns of Syllables (clap out)

1st syllable - closed/short sound - eg. inf/ant, den/tist
1st syllable - open/long sound - eg. corn, 'l'or/dy

Last syllable stress - when a word is preceded by a vowel in the suffix

the consonant doubles. e.g. be'gin - begin, beg/ning.

If the stress changes to the 1st syllable - do NOT double. e.g. pre'fer, pre'fer/ed, but preference.

N.B. 'l' always doubles regardless of stress.

Final Syllables beginning with 'ti' and 'ci' make 'sh' sound. e.g.
station, special. In the final syllable 'sion' the 'si' makes /sh/ sound.
2) The 'l' Family
A consonant + l in the final position produces a 'dark' + (tongue lower), spelt with 'le'. eg. table, apple, handle, battle, angle, uncle.
Initial 'l' produces a 'light' l (tongue higher).
Exceptions - m, n, r, w need a vowel before l.
eg. dismal, panel, April, travel, towel.
Others - crystal, hospital, label, petal, pistol, pupil, rascal, rebel, sandal, scandal.
Homophones - (the same sound - different spelling/meaning )
eg. meddle/medal, peddle/pe'dal, idle/idol, brid'le/bridal.

3) Different Sound/Letter Patterns
a) 'k' sound with :- 'ch' - Christmas, school, anchor
   'que' - cheque, antique
   'ic' - picnic, metric.
b) 'f' sound with :- 'ph' - photograph, telephone
   'gh' - laugh, cough
   ('gh' is silent when 't' comes after. eg. night.)
c) 'ch' sound with :- 'ch' - machine, chef.
d) 'sh' sound with :- 'ch' - machine, chef.

e) 'i' sound with :- 'ie' ( 'i' before 'e' except after 'c'. )
   thief, receive
f) 's' sound with :- 'ei' - eight, weight
   exceptions - either, height, neither, leisure.
g) 'y' sound with :- 'i' - million, radio, onion
h) 'er' sound with :- 'or' - actor, editor, visitor
   N.B. agents usually spelt with 'er'.eg. teach - teacher. When
   the root word ends 'ct','it','ate',or'ssion', the 'er' of the
   agent is spelt 'or'.eg. inspector, solicitor,isor, professor
i) 'ery','ary','ory'
   'ery' is usually a suffix added to a 'root' word:- nurse - nursery.
   exceptions - ce er:, cemetery, monastery, mystery, surgery, very.
   'ary' & 'ory' are usually an essential part of the 'root' word:-
   January, story etc.

4) Silent Letters
b - debt, lamb, limb
   exceptions - either, height, neither.
c - scene, scent
   n - autumn, columns
r - iron

g - gas, sign
   t - listen, often
h - hish, whisper
   uae - fatigue, league
k - knob, knot
   w - answer, who, sword, write
   - caf, cam
<table>
<thead>
<tr>
<th>LEVEL</th>
<th>LEARNING FOCUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. EXPLORING SELF</td>
<td>MIMING &amp; MOVEMENT</td>
</tr>
<tr>
<td>2. EXPLORING OTHERS</td>
<td>PLAYING ROLES</td>
</tr>
<tr>
<td>3. EXPLORING THE WORLD</td>
<td>USING DIFFERENT DRAMATIC CONTEXTS</td>
</tr>
<tr>
<td>4. INTERACTING WITH AUDIENCE</td>
<td>LISTENING &amp; RESPONDING</td>
</tr>
<tr>
<td>5. INHABITING A CHARACTER</td>
<td>CHOOSING APPROPRIATE BEHAVIOUR</td>
</tr>
<tr>
<td>6. DELIVERING A PUBLIC PERFORMANCE</td>
<td>PERFORMING CONFIDENTLY</td>
</tr>
<tr>
<td>7. BORROWING LANGUAGE</td>
<td>INTERPRETING MEANING</td>
</tr>
<tr>
<td>8. OWNING LANGUAGE</td>
<td>USING CHARACTER TO COMMUNICATE NATURALLY</td>
</tr>
<tr>
<td>9. TRANSFORMING SELF</td>
<td>TAKING ON ALTERNATIVE VIEWS (DECENTRE)</td>
</tr>
<tr>
<td>10. MASTERING STRUCTURAL COMPONENTS</td>
<td>INTERACTING EFFECTIVELY WITH ACTORS, PROPS &amp; ACTIONS</td>
</tr>
</tbody>
</table>

ROSEMARY SAGE, DRAMA IN EDUCATION (SPECIAL NEEDS) 1990
**QUESTIONNAIRE: CHILDREN TALKING AT HOME**

**TALKING** is the means we use to communicate, build relationships, find out information, organise ideas & solve problems. Good **SPOKEN** language forms the basis of good **WRITTEN** language & research shows that **REGULAR OPPORTUNITIES** are needed to develop & retain talking skills.

The following QUESTIONNAIRE aims to find out patterns of **CHILD TALK AT HOME**.

PLEASE READ THE STATEMENT & UNDERLINE THE RELEVANT RESPONSE.

STATE YOUR CHILD'S AGE HERE: ________________________________

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My child talks over the day's activities at meal times.</td>
<td>daily</td>
<td>sometimes</td>
</tr>
<tr>
<td>2. My child has a 'talking time' with an adult.</td>
<td>daily</td>
<td>sometimes</td>
</tr>
<tr>
<td>3. My child is read to each day.</td>
<td>daily</td>
<td>sometimes</td>
</tr>
<tr>
<td>4. My child takes part in story reading (eg. invited to comment, describe pictures etc.)</td>
<td>daily</td>
<td>sometimes</td>
</tr>
<tr>
<td>5. My child has the story discussed BEFORE it is read.</td>
<td>daily</td>
<td>sometimes</td>
</tr>
<tr>
<td>6. My child retells the story line after it is read.</td>
<td>daily</td>
<td>sometimes</td>
</tr>
<tr>
<td>7. My child talks spontaneously about experiences.</td>
<td>daily</td>
<td>sometimes</td>
</tr>
<tr>
<td>8. My child plays group games involving talk.</td>
<td>daily</td>
<td>sometimes</td>
</tr>
<tr>
<td>9. My child is asked opinions on family matters.</td>
<td>daily</td>
<td>sometimes</td>
</tr>
<tr>
<td>10. My child takes part in silent activities (eg. watching TV) more than talking activities.</td>
<td>daily</td>
<td>sometimes</td>
</tr>
</tbody>
</table>

MAKE ANY COMMENTS YOU LIKE ABOUT YOUR CHILD'S TALK AT HOME.
Results of Percentages of Parents' responses to Questionnaire about Communication in the home (1965 compared with 1990).

<table>
<thead>
<tr>
<th>Year</th>
<th>Daily</th>
<th>Sometimes</th>
<th>Never</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>1965</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>1990</td>
<td>8</td>
<td>79</td>
</tr>
<tr>
<td>2</td>
<td>1965</td>
<td>62</td>
<td>33</td>
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<td></td>
<td>1990</td>
<td>7</td>
<td>56</td>
</tr>
<tr>
<td>3</td>
<td>1965</td>
<td>63</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>1990</td>
<td>0</td>
<td>46</td>
</tr>
<tr>
<td>4</td>
<td>1965</td>
<td>54</td>
<td>39</td>
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<tr>
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<td>1990</td>
<td>0</td>
<td>65</td>
</tr>
<tr>
<td>5</td>
<td>1965</td>
<td>47</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>1990</td>
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<td>12</td>
</tr>
<tr>
<td>6</td>
<td>1965</td>
<td>52</td>
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<tr>
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<td>1965</td>
<td>36</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>1990</td>
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<td>0</td>
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</tbody>
</table>
Results of Percentages of Parents' responses to Questionnaire about Communication in the home (School N & W).

<table>
<thead>
<tr>
<th>School</th>
<th>Daily</th>
<th>Sometimes</th>
<th>Never</th>
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</thead>
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<td>7</td>
<td>81</td>
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<td>W</td>
<td>11</td>
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<td>N</td>
<td>5</td>
<td>58</td>
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<td>N</td>
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<tr>
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<td>N</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>
4. POLICY ISSUES: THE QUESTION OF FUTURE DEVELOPMENTS

This section reviews the main topics that have emerged from the report and reflects on what they might mean for future policy. Personal, parental and professional issues are considered following the content of the three main investigations.

1. Personal Issues: The Nature of Language & Communication Difficulty

Studies compared 40 normal children and 40, described as having language and communication difficulty. A Communication Profile was used as a measuring instrument. This consisted of two parts. C-Profile 1 [production] was designed to observe the individual in interaction and record aspects of clarity, content, convention and conduct. This was to enable an assessment of 'talk' and evaluate whether it would be effective for learning. The initial review had established some reasons why 'talk' is central to learning. Data from this research highlights three areas where talk promotes it.

1. Talk aids collaborative learning

When children develop topics through talk they are sharing the content of many minds [knowledge and experience] and ideas are discussed, evaluated and amended so enabling a breadth and depth of learning that is not possible in individual, passive one-way activities such as reading a book. As pupils grow to regard learning as a shared responsibility they are able to support and challenge each others' understanding. Also, they can express respect for achievement where it occurs.

It was noted that good learners initiated topics and continued them in dialogue, showing an ability to think round issues and develop them. In addition, they frequently questioned and were not afraid to ask for clarification when they did not understand. They displayed confident behaviour and had strong self-concepts reinforced by acceptance of their views by others confirming peer esteem. In contrast, the poor learners, identified in this study as having communicative difficulties, rarely initiated topics or continued them. They demonstrated turn-taking behaviour in their use of contributory comments, which, however, generally did not continue the item under discussion. They rarely asked questions or for clarification of what was said. High levels of inappropriate/unclear answers or lack of responses produced a poor image of themselves within the group so what they did say was unlikely to be taken up by others as worthwhile ideas to be explored. Thus, the LCD children were disadvantaged as they appeared unable to contribute conversationally at the same level as their peers resulting in them achieving less control over the learning experience and losing their chance to influence the curriculum.
2. Talk aids motivation in learning

It was evident, from the data, that opportunities to talk in small groups gave children a chance to become involved so engendering their enthusiasm for learning tasks. It enabled them to take control of events and sparked off ideas that gave rise to action. Those children, who were unable to participate in conversation to the same extent as others, rapidly lost interest in what was going on and easily became distracted so throwing away their opportunities to learn from peers.

3. Talk aids understanding for learning

Transcripts showed that talking about topics/tasks created valuable opportunities for children to express what they knew and understood. They then became aware of what they did not know and needed to find out. Therefore, conversation was a forum to monitor comprehension providing them with a yardstick to measure self achievement and target further learning. Children who did not participate in talk, failed to give themselves the chance to find out what they knew and so it was difficult to assess their own learning progress. They may have been overwhelmed by others' knowledge and so less likely to contribute. It was a common pattern for LCD children to start contributing to conversation but then drop out so that by the end of the sequence they were saying nothing. As already discussed this may be due to the fact that others view them as poor reporters within the group so that what they say is generally ignored continually reinforcing the notion of “poor conduct”.

Some following examples illustrate these points:

a) Four children [3 N & 1 LCD] were sitting playing with farm animal finger puppets. The children were excited and interested in the possibility of acting out a story. The LCD child actively concentrated on what was happening at the beginning and made some 1/2 word comments. After a while he began to lose interest and started to gaze out of the window rather than follow what was going on. This may suggest that poor concentration is a causal factor in communication difficulty.

b) Four pupils [3 N & 1 LCD] were recording their news onto the tape and understood that each had to contribute to the activity. The LCD child was not happy with his piece because ‘it wasn’t as good’ as the others, and did not want it included. The teacher pressured him to agree, feeling he must be given equality of representation. There was a dilemma here of how to give pupils’ talk respect and status without subjecting them to pressure.
c) Four children [3 N & 1 LCD] were looking at some holiday photographs that the LCD pupil had brought to school. Even though he knew more about them than anyone else he appeared on the edge of what was going on. The other children started to talk about him rather than to him. The dominant issue here concerned not so much the LCD child himself as the attitudes and behaviour of other pupils towards him. This notion is referred to in section 3 above.

d) Four children [3 N & 1 LCD] were following the life story of the Queen through a sequence of photographs. Parts of her life were not there. There were pictures of her as a baby and not as a young girl of school age. The children were asked to choose an episode of her life, to make a still picture and explain it to another group. They decided to act out packing her case to go on holiday. The LCD child showed little understanding of role play [in contrast to the others]. The other children started to become impatient when he showed inability to behave and talk as if he were someone else.

These examples, and others, enable a summary of LCD children's learning needs, evolved from observation of them in interaction with others. They are children:

* who lack the range of strategies needed for them to participate in co-operative learning;
* who need help in making links in learning;
* who have specific blocks in their progress which demand support to overcome;
* who pick up and remember things less quickly than others;
* who tend to be disruptive in group activities;
* who have difficulty relating to others, perhaps because of talking problems;
* who need more time and reinforcement to arrive at understanding;
* who frequently become marginalised, remaining on the periphery of learning activities;
* who are perceived by their teachers as having particular learning difficulties;
* who consistently remain quiet and are dominated in talk by others.

These descriptors focus attention on the role that language plays in concept formation and the ability to generalise ideas and connect up experiences. Lack of adequate communicative ability interferes with the processes of self-monitoring and the development of meta cognitive, linguistic and social skills. Therefore, academic and social development is hampered and in determining learning success both aspects need equal attention.

The format of the C-profile [production] was useful for making observations of LCD children in comparison with others and allowed the assessor to evaluate how lack of communicative skill affected learning both socially and academically.
The C-Profile 2 [processing] enabled observation of individual abilities within the child and was devised to assess information processing on haptic, auditory and visual channels. Table 53 summarises results in a graph.

Table 53: A Comparison of Mean Scores for N & LCD children on C-Profile 2 [processing]

<table>
<thead>
<tr>
<th></th>
<th>Mean Scores for Normal Children</th>
<th>Mean Scores for Language Disordered Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAPTIC</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>AUDITORY</td>
<td>10</td>
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<td>VISUAL</td>
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As well as not performing as well, the LCD children were slower completing tasks [mean 70 minutes] in comparison with N participants [mean 53 minutes]. Attention control was less sustained showing an average stage 4 (Reynell,1977) with fluctuating performance for LCD children whereas N participants averaged stage 6 and stable performance.

Therefore, the LCD children demonstrated an overall difficulty in observing critical features, relationships and patterns in information presented whatever the channel. Auditory material proved most difficult, possibly because of its transient nature or more complex form. Difficulties can be summarised under the following three headings:

**Critical Features**

In haptic, auditory and visual recognition tasks the LCD children showed less success in matching forms. This may be associated with less ability to interpret instructions and enrich visual input to make it more meaningful / memorable. Evidence suggested the LCD participants lacked mature coding strategies. For example, persisting problems with visual orientation may indicate lack of, or slow development of relative and spatial coding procedures (Bryant,1977).

In haptic tasks, the LCD children demonstrated less developed investigative movements of tongue and hands. Perhaps there was poor integration of hearing, listening and attention resulting in poor performance on auditory activities. There were difficulties in coding rhythm and the time pulse of...
speech sequences. Questions were reproduced as statements and unstressed syllables omitted in word repetition tasks, although subjects demonstrated articulatory ability to reproduce such sound sequences.

**Relationships**

There was strong evidence of the LCD children's problem in linking information presented to them. This was seen in visual ordering, sorting, and complex picture tasks; auditory sentence repetition and story telling, and in the haptic integration activity, involving folding paper and placing in an envelope. The non-processing strategy of sentence repetition, where just the last two words of a sentence were repeated, indicated inability to relate physical, structural language and semantic characteristics. In contrast, the N group were able to extract meaning, even when the length of sequence was too long for their memory processing capacity.

**Patterns**

Ability to perceive initial elements of a pattern, whether haptic, auditory or visual is essential to anticipation of other components and the hierarchical structure of a task. This refers to a skill that is not just a label or verbal response to input and is demonstrated in the Ravens Progressive Matrices Test. Without this pattern prediction ability, an element by element strategy has to be employed which restricts retracking and prediction, impeding flexible thinking and linking. The LCD children displayed a 'string of beads' [element by element] strategy, whereas the N group appeared to have adopted a hierarchical approach, with several sub-routines, enabling quicker identification of the central concept of a task and a faster route to meaning. They demonstrated economic visual scanning, verbal chunking and rehearsal routines which were not overt in the performance of the LCD group.

Therefore, the LCD children had less appreciation of the overall context and lacked ability to deal with more than one perceptual skill. Even in the simple auditory matching task a child has to be able to discriminate sound, retain and sequence the stimuli in order to make a correct response. The LCD group showed problems in integrating perceptual and cognitive components. Their overall depressed performance indicated that it was unlikely that one single deficit could account for the many aspects of the learning problem.

In the present state of medical knowledge it can not be assumed that any specific central nervous system lesion is involved. Studies of developmental patterns of children with initial language difficulty are needed to decide whether there is lesion or merely delay in maturation of the relevant neurological systems or perhaps mismanagement of the teaching and learning context.

In summarising the evidence, it can be concluded that on the C-Profile 2 [processing] normal children [4-8 years] were able to code critical features, identify patterns in stimuli and organise tasks with greater efficiency when compared with those of the same age, socio-
economic level and non-verbal intelligence but experiencing language and communication difficulty.

Successful children appear to chunk [gather together], elaborate, rehearse and arrange information efficiently for correct responses. They know how to do this and so easily grasp meaning of the whole task.

Therefore, evidence questions whether the label "language disorder" is appropriate for children who display obvious difficulties in visual and haptic as well as auditory processing. Such a diagnosis has tended to place them under a linguistic management regime. Thinking is muddled. For example, does cross modal development depend on language as a connecting link between entries? This has been suggested by O'Connor & Hermelin (1963), Blank & Bridger (1964) and Ettlinger (1967). Bryant (1977) felt that the language hypotheses about cross modal organisation was not tenable, on the basis of work with chimpanzees and orang-utans, which showed cross-channel links were possible without the help of language. However, the data of this research would suggest that it is dangerous to make behavioural inferences from animals. Even in tasks where the stimulus is non-verbal [Ravens Progressive Matrices] children who use a verbal strategy [ie. transform input] do better. Obviously, more knowledge of intra and cross-modal development is needed in order to understand intersensory patterning and styles of learning. Evidence of this research suggests a wider approach seems indicated, to meet the depth and breadth of educational needs.

As a basis for considering future policy, it is pertinent to briefly highlight some of the work of other researchers mentioned in the review. Many have put down LCD's problems to peculiarities of attention (Reynell,1977). Mark & Hardy (1959), in studies of primary school children, described these as disturbance of the orienting reflex [OR] interfering with establishment of meaning. The built in startle and orientating reflexes are normal and strengthened in the role of attention centering mechanism for new stimuli in other sense modalities (Ellis & Young, 1988). As the young language impaired child reacts to other sense modalities the function of the attention centering mechanism is reduced and reinforcement is less frequent. Simultaneously, the child continues to be provided with stimulation through a malfunctioning auditory system to which he/she cannot associate. This remains meaningless and unenforced resulting in disordered learning processes and a general inhibitory effect.

Therefore, a theory of inhibitory defect directs clinical attention to processes rather than symptoms. It may be that inhibitory processes, involving the central auditory system [CAS], are detectable in other sense modalities. Studies of visual and tactile perception (Mark et al,1966) suggested that general functional properties of the CNS may be altered and critical to the CAS involved in rapid rate processing.

The practical consequences of viewing OR disturbances as inhibitory rather than subtractive loss is that early detection may prevent deterioration of sound awareness by educative techniques. An example is the 'listening programme', which formed part of the management in the case studies described in the previous section.

In this present discussion, the studies of Dr. Gray Walter on developing brains are of interest. These were reviewed earlier and concluded that the 'set to attend' or 'expectancy response' is not
present in children below 3 years [ie. before the age of integrated levels of attention, Reynell,1977]. This view was based on the contingent negative variation being absent from EEG's before this age and in brain patterns of many children with language problems. Edwards (1973) stated this expectancy response can develop by differentiating the modality and rate and order of stimuli applied.

These ideas interlock with the C-Profile 2 [processing] model and its emphasis on the development of processes. Berry's (1972) work is important here, as it has been concerned with the underpinning of language in order to develop attention for speech. This corresponds to Lenneberg's (1967) basic time pulse. Children need to learn rhythmic activity, involving the whole body, in order to catch on to the pattern and develop concentration and attention. Berry describes "all co-eval movement patterns as being integral parts of the total communication situations from which speech patterns cannot be subtracted".

If one observes LCD children, their general motor activities such as hopping, kicking, catching/throwing a ball and imitation of actions in songs may be as delayed as verbal abilities. In teaching, elements of all activities have to be differentiated and brought to consciousness. For example, in ball catching it could be necessary to high-light object memory [passing round a ball in a ring and then pretending to do this after its removal] in order to focus on hand posture and space relations. All components of the task of catching often need practice and reinforcement. This behaviour is often described by doctors as 'soft neurological signs of brain disturbance'.

Similarly with speech, changes in pitch, stress and time have to be introduced and differentiated in order to raise consciousness and understanding.

Studies have suggested differences in brain pathology in children of the same age (Orton,1937; Hecaen & Sauget,1971; Genesee,1988). A lack of clear cut dominance has been postulated. Dennis & Whitaker (1976) reported diverse configurations of language skills, developing in the two hemispheres, with the left one concerned with conceptual and semantic features and the right, with organisational, analytic, syntactic and hierarchical aspects. These indicate a large network needing vast number of systems to be integrated.

The C-Profile [processing] identifies active input systems and allows professionals to consider their status in learning development. It is not a diagnostic tool that answers the question why a child has a learning difficulty. It attempts to make an audit of avenues of learning and consider spoken and written language as a linked process. The aim is to provide information that will be useful to planning a learning context, and consider the quality and quantity of stimuli offered to any particular child. The intention is to measure children by criterion rather than norm reference. It supplies a thinking base for mounting the management operation involving child, parent, teacher, therapist and others.

However, the assessment is lengthy to perform [about one hour]. It depends on a professional trained and experienced in administering psychological tests. As a standard assessment, it uses arbitrary tasks and materials, which, although generally reflecting class room practices, are not the actual resources in daily use by schools. Therefore, it is limited in application but has the possibility of providing an in depth study of a child's performance in each processing channel if this is required.
Data obtained in the investigation suggests big implications for the role of language in the development of thought processes. It is possible to provide a checklist of haptic, auditory and visual performance as an initial guide to a child's processing status that could be used quickly and informally. A suggested format is available in the appendix, along with one for C-Profile 1 [production].

Comment

Both parts of the C-Profile have useful research potential as they have been sensitive enough to compare differences in child performances and provide useful data for discussion. However, both depend on an assessor who is trained and experienced in testing. It has been possible to adapt both for a simpler everyday use by inexperienced people. The appendix provides transcripts of first year speech therapy and teacher students' use of the C-Profile 1 [production] categories on teaching practice. Two transcripts are provided in the appendix, one using the C-Profile and the other free observations, suggesting that the former provides a framework for wider evaluation. It is possible to use it without full transcription and teacher students have tended to employ it with event sampling providing them with enough information for deciding working groups of children.

Any measuring instruments have weaknesses arising from their structure and selective construction. Therefore, they eliminate facets which are not possible to consider but may be important. Nevertheless, providing a model on which to base assessment and practice is a practical response to a need to find a way forward for children whose learning appears blocked. This research has aimed to find a wide base in which to place observations and taken as its position the need to identify within and without the child factors. The C-Profile 2 [processing] does suggest that there are differences in selecting and interpreting information between normal children and those with communication problems that may or may not be due to brain variances.

However, it could be argued that an audit of relative strengths and weaknesses in various subskills has low practical value in the planning and implementation of an effective programme. It is a measure of learning deficit rather than need. Need depends on context thus supporting assessment in 'real situations'. This is not to suggest that such an assessment is useless. Indeed, some appraisal is necessary to identify children in most need of special instructional programmes. Attempts to identify the underlying source of learning difficulties are made on the grounds that unless problems are located and remedied they cannot be overcome. This approach is referred to as the 'medical model' and has been much favoured by practitioners. The modalities usually investigated are visual and auditory functioning but Prior (1989) has pointed out that conclusions may equally apply to other areas and the results of the present research support this.

Larsen & Hammill (1975) reviewed 60 studies on the relationship between visual perception and school performance. With a median correlation of 0.24 between visual perception and reading they concluded that optic problems were not the cause of failure. Rosen (1966), Hammill (1972),

Similar reviews were conducted by Hammill and Larsen (1974) on auditory discrimination, reporting a median correlation of 0.26 which is substantially the same as their results for visual perception. Conclusions for other auditory sub-skills were lower.

In contrast, research on surface dyslexia (Goltheart, Masterson, Byng, Prior & Riddoch, 1983; Masterson, 1984, 1985; Masterson, Laxon & Stuart, 1992) assembles wide-ranging evidence to suggest visual and auditory correlates in reading problems. At present, these researchers are investigating the application of a "parallel distributed processing" model to children's reading acquisition and skilled reading which has powerful implications for practice.

As the review section mentioned, tests including electroencephalographs, computed tomography scans and visual evoked responses may provide more accurate information about brain status but so far have yielded conflicting results. Therefore, to seek a single neurological explanation of learning problems may be an unproductive endeavour. Likewise, intelligence quotient (IQ) scores seem a poor indicator of potential. Stanovich (1991) reviewed reading ability and IQ scores and concluded that intelligence tests cannot be used as a measure of potential or to predict progress.

All of this suggests there is no clear-cut evidence of weak sub-skills, alone, causing learning failure. Controversy continues about neurological and intellectual correlates. Rost (1989) reviews the evidence, particularly in relation to reading, and states there was "no sufficient reason to assume that several clearly distinguishable and meaningfully interpretable subskills exist". What this means is that children are likely to perform much the same on all the so-called subskills.

However, the C-Profile has attempted to put other sub-skills in low loading, when making assessment of a particular area, and there is no contamination of other channels. Factor analysis established the validity of sub-skills in this assessment. This has not been the case in all other research and was discussed in the description section of the profile.

Vinsonhaler et al (1983) have pointed out that experts do not agree on interpretation of results [average agreement = 0.10]. Also Wixon (1979) and Hood (1982) discovered that conclusions of diagnostic reading procedures varied from one text to another suggesting that problems will never be the same. Assessments of children in different communicative contexts [management section] replicate this evidence for oral activities.

All this advises that extreme caution must be used in interpreting specific performance patterns as indicators of total behaviour. However, the evidence of this research is overwhelming in suggesting very different levels of performance of N & LCD children when assessed under the same conditions. It could be that conflicting evidence of other studies arises from the great variety of populations, different methods, tests and assessors used. Therefore, there may be little utility in making comparisons between different experts' work. It can not be assumed that because there is scant agreement, nothing is gained from assessments aimed at understanding the nature of communication difficulty. Indeed, it is advocated that standard tests have an advantage over other
assessments as their reliability and validity have been established by empirical means and approved by peer review. When used appropriately they can identify with a high degree of accuracy. This may be critical for children who are most in need of effective instruction. Nevertheless, such assessments can make errors in classifying individual children and should only be used in conjunction with other information.

Whilst teachers or others can estimate learning levels of many children they may not do so accurately for LCD pupils. The reasons are easy to understand:

1. Standards of individual schools may not be representative of the community at large.
2. Teachers lack time to assess every child informally.
3. Teachers, like us all, are influenced by extraneous factors such as appearance and behaviour.
4. Children with difficulties are artful in disguising problems and avoiding detection.

In summarising, it may be argued that tests that aim to look at underlying causes of a child’s problem may be futile as they will not be capable of identifying the cause [C-Profile 2 [processing]]. Furthermore, identification of sub-skills may not lead to improved performance by means of their specific training alone. Although they have limited value in the implementation of a successful management programme they are useful to monitor progress and allow planners to consider levels of learning input and type of resources more accurately.

Similarly, assessment of children’s conversational performance should only be interpreted within a single context and may not be indicative of performance elsewhere [C-Profile 1 [production]]. However, both sections of the assessment prove useful for making standard comparisons which can be added to other information as a basis for management planning. Together, they allow an audit to be made of both within and without the child factors and give opportunity for a wide range of observations to be made.

Section 2: Parental Issues - The Attitude of Carers

The review mentioned approaches to the study of language acquisition that argued for a sociocultural or socialisation framework (eg: Schieffelin & Ochs, 1986; Ochs, 1988). This summarised work showing that linguistic and sociocultural knowledge are interdependent. Language development is partly organised by social and cultural processes. Embedded in such an approach is the notion of communication socialisation processes, by which children are socialised to use language and socialised through the use of language. Language users are seen as active rather than passive participants in the process. The sociocultural approach to language acquisition also draws on Leontiev’s theory of Activity (Cazden, 1988). It is through participation in structured social activities that
language learners acquire linguistic and sociocultural knowledge. These social activities are, in turn, socioculturally and linguistically structured and organised (Ochs, 1988). Further, as sociocultural and linguistic knowledge structures activity, so it creates and recreates knowledge in both these domains (Wertsch, 1985).

The presence, behaviour, feelings and attitudes of knowledgeable and significant persons are considered an important part of the activity setting, in terms of providing an environment which promotes learning that is socially and culturally desired. To understand an effective context for language acquisition one needs to develop and maintain a strong sense of both social and cultural dimensions involving valued beliefs and practices. With regard to management of children with language difficulties, the cultures of family and professional groups often seem at odds, and there is a lack of appreciation and support for each other's aims with regard to learning goals. Due to restrictions from the Medical Ethics Committee that approved this research it was only possible to assess parent attitudes in a non-statutory provision, and not professional perspectives of clients that could balance these. Therefore, the data is skewed towards the parent rather than the professional view but is felt to be an important record of family attitudes which are vital to appraise in forming management goals.

In this part of the investigation, a questionnaire was used to ascertain parent views on professional management. Results indicated that parents, on the whole, did not have much respect for professional practices, many of which they failed to understand, and, therefore, did not fully support. It was evident that this set of parents held very different views from the professionals and in so doing found no common ground for positive cooperation. The experts were beholden to both clients and employers and the needs of both were not always in accord, resulting in conflict, uncertainty and frustration.

In this country, we have been used to regarding professionals as 'experts' which has led to reliance on their decisions about child management. This has been particularly so in dealings with medical personnel, as their philosophies and methods are more cloaked in mystery than those of educational practitioners. All of us have undergone educational experiences and we tend to believe we have understanding of pedagogic theory and practice. This frame of thinking may make it easier for parents to co-operate in educational models of teachers rather than medical ones of therapists and doctors with regard to their child's development.

Clearly, a great deal more knowledge and understanding of each other's position is required if parents are to assume a partnership of equal responsibility with professionals in child management. Professionals have to shed their mantle of 'sole expert' and assume the role of adviser and supporter if they want to gain active co-operation of parents. Parents have to appreciate the limitations of professional involvement and not expect problems to be solved by their action alone. Recent legislation supports more active involvement for parents in meeting their child's needs and by implication responsibility in doing so. It also ensures professionals are more accountable for actions in relation to assessment and management of problems. Nevertheless, it will be some time before traditional practices catch up with modern notions. Beliefs are slow to change and Britain has a strong
tradition of separate specialist disciplines which may become diluted if expertise is shared. There is emotional investment in keeping professional techniques mysterious, special and confined by rigorous standards of training.

However, it is unrealistic to expect that each child with special needs will ever receive more than very limited help from experts so that it is important that people who are regular participants in a child's life can attain the necessary knowledge and skills to facilitate learning effectively. The awareness of these cultural issues is vital to devising management that is appropriate. Communication difficulty and its intervention can not be studied in isolation from the sociocultural context in which it occurs. As Schieffelin & Ochs (1986) have noted, various routines and language interactions will occur in different contexts. We need to be looking for how interactions [through such mechanisms as routines and within activities] reflect and construct the concepts, values and beliefs of the language users, rather than making comparisons in isolation from such cultural contexts. Given the interrelationship of communication and culture, judgement and comment about the effectiveness of language socialisation practices need to be localised. Investigation into communication development, especially for children who experience difficulties, must concern itself with what is productive within the social and cultural context of use. Thus, understanding the cultures within and without the family, bringing into focus parental and professional belief systems, becomes important for understanding the management approach that is likely to be successful.

Comment

This section has illustrated the concept of 'trained' people administering their expertise to clients, so creating a 'them' and 'us' situation preventing any real dialogue between professionals and parents. The power lies on the side of the 'expert' and clients are reluctant to criticise or make suggestions in case this reflects badly on them in future. People need strong self-concepts to take criticism and it is unrealistic to suppose that every expert can be objective and not respond emotionally feeling this is a reflection of personal practice. However, because experts are seldom made aware of their impact on clients, there is scant attention paid to professional communication with them and the role this plays in producing successful outcomes. At the moment, feedback is seldom given about professional role and performance and this is not regarded as an issue in child learning. Indeed, it seems part of the duty of professionals to maintain distance between themselves and clients in order to preserve objectivity of judgement. Investigations highlighted this factor and indicated parents' strong views. Unless experts are willing to be involved and receive feedback on their performance they may fail to fully understand the nature of a child's problem and how best it might be solved.

Also, parents were critical about mode and delivery of most child support services. However, these are not under the jurisdiction of professionals but policy makers. This puts experts into a dilemma as they are accountable to both clients and employers and needs of both are not always in agreement. When resources are tight this aspect becomes one of constant contention.
Recent legislation has made it possible for parents to challenge specialist opinions but the move towards professional accountability could mean experts become less willing to expose views for public discussion. Therefore, the mystery of professional practice may be strengthened rather than weakened. However, more open media debate has resulted in greater acceptance of disability and acknowledgement of rights to have needs met. With regard to children this means that policy makers, professionals as well as parents, must establish criteria for judging the boundaries of adequacy.

Identifying child needs is both objective and authoritative. In addition to the basic 'want' of food and shelter children 'should have' a continuous person and daily lives based on somewhere they know (Leach, 1979) as well as praise, recognition, education, socialisation and responsibility (Kellmer-Pringle, 1976). Thus, while 'want' conveys person demands; 'should have' implies an observer is judging what is desirable. Qualities of childhood are timeless and universal and have become the subject of empirical study and close observation by parents and professionals. This has provided the authority of 'need' statements conveying not only descriptive but emotive force as a basis for defining policy. In this context, we are suggesting that the LCD child [X] 'needs' special identification and support [Y] for academic and social development [Z]. An empirical as well as desirable relationship is implied. There is value judgement about what is good and how this can be achieved. Concealed beneath the simplicity and directness of such 'need' statements is a condensed combination of empirical and evaluative claims. This can be explicitly stated “an LCD child needs help. It is desirable for such a child to develop normally. If assistance is not given the child will not be able to learn. Therefore, the child should be given appropriate support”.

This research suggests that parents may hold different judgements from professionals about what is good for their children. The attempt to identify communication needs using the C-Profile reduces the task to an empirical one. However, 'needs' have to be seen as a social construction, superimposed on children 'in their best interests'. One is primarily a matter for scientific enquiry and the other for personal choice and discussion.

Within this perspective, it can be argued that LCD children have to adapt to normal cultural patterns of communication in order to survive. Therefore, a model of child management based on a concept of need has relative even if not absolute validity. Thus, the child could be said to need relevant support to become a good learner in school. However, the claim that the LCD child's needs can be met by appropriate help suggests that if deprived of educational opportunities he/she may be culturally maladapted. This places a social construction on educational need that is different from the quality of the individual or prerequisite for psychological well-being either in absolute or relative terms.

Summary

Examination of parents’ attitudes to professional practice has revealed a complicated array of value judgements and empirical claims about child management. Professional advice and policy recommendations, framed in terms of child need, give an impression of universal objectivity. They
may serve important functions for those who make them, notably the authority that comes from projecting decision-making criteria onto the child regarding educational intervention.

As a consequence, distinct bases for making prescriptions about what is in the best interests of children may not be distinguished. There are four categories of usage of child 'need', identified by Schaffer (1984):

- as a description of psychological nature
- as an inference from what is known about consequences of specific childhood experience
- as a judgement about which child experiences are most culturally maladaptive
- as a prescription about which child experiences are most highly valued in society

Discussion of parent and professional views shows these are not just a matter of emphasis. Usage have different statuses. A statement about need can be a description/hypothesis about psychological processes within the child, which are open to verification through scientific means (e.g., C-Profile 2 [processing]). At the other extreme, a statement about need can be a claim about what is socially valuable for children which is matter for political debate and personal choice (individual as opposed to interactive intervention). If increased rights / involvement of parents in management imply increased responsibility they share culpability for ineffectual outcomes.

This section has addressed parent attitudes in the context of understanding effective management for LCD children. This raises the question of limits of adequacy. It would seem important to be more precise and explicit in specifications of requirements than has been the practice in meeting the plurality of child experiences. Just as important is appreciation of the developing knowledge base on which management plans are founded. Understanding of physical, social and cultural processes is becoming sophisticated. As results of this research percolate into the thinking of those concerned with children's learning so claims about children's needs hopefully will give way to formulations which more accurately reflect both the evidence available and gaps in existing knowledge.

However, sensitivity to research evidence is insufficient. Identifying management needs of LCD children depends on making personal and professional value judgements about what is desirable in relation to the social context. Crucially, it depends on reconciling the various goals for children's development and those responsible for promoting it, including parents, professionals and policy makers.

Section 3: Professional Issues: Studies of Communication Management
This section documented two different approaches to management - *individual* and *interactive*. The *individual* method followed a medical model, concentrating on identifying separate components of language impairment, and selecting areas for improvement, in a clinic context remote from a child's daily routines. In contrast, the *interactive* approach observed an educational model, by identifying child learning needs and supporting these in formal and informal procedures within school.

Both methods have different emphases. The *individual* technique is based mainly on identifying within the child factors and using a developmental framework to facilitate progress based on theory and research. It is a mode that starts from the value-position of the professional, projecting their judgement about what should be learned onto children themselves. Theories of language acquisition, dependent on knowledge of universal qualities [physical, mental and emotional abilities] form the basis for this methodology.

The *interactive* model recognises without the child factors, that depend as much on appreciation of the particular constellation of relationships in the social environment as they do on knowledge of universal qualities of human nature. In terms of professional advice and policy statements, value judgements are strongly implied about what standards of behaviour are expected, what patterns of relationships are thought desirable, what children should grow up to become, and what makes for a 'good' society.

In short, while both methods have general principles relating to child needs for consistency and support which may have universal validity, whatever the management approach adopted, detailed prescriptions for children's learning intervention are normative and depend on a judgement about processes of personal and social adjustment. This conclusion is important as the *individual* method asserts the primacy of personal processes whereas the *interactive* approach emphasises socio-cultural dimensions.

From the point of view of communication difficulties in the classroom there are two areas of concern in management.

1. Those whose problems are severe require specialist help in conjunction with their school work. This may mean *individual* support as well as careful use of *interactive* situations. These require a variety of groupings and audiences, to involve LCD children in the talk of others and help them profit from experiences such as movement, music, drama, science experiments and mathematical surveys.

2. Those who need to utilise strengths in some areas of communication [speaking, listening, reading & writing] to overcome, or compensate for, difficulties in other components. Identification of abilities and disabilities is required. Organising and planning opportunities for oracy into literacy in all aspects of learning can be particularly powerful as the four components can be viewed as supporting one another. The National Curriculum includes both areas as the means of access to learning across core and foundation subjects.
Taking an oracy into literacy approach, as postulated by Westby (1984) earlier in the review, is the way to:

* match new ideas against previous experiences
* develop thinking
* make decisions
* establish rewarding contact with others
* learn to share and take responsibility
* support the needs of others
* develop positive self-concepts
* develop and enjoy using language in a variety of forms and ways

This range of possibilities holds for all, but is particularly important for pupils who have difficulty in communication and education. The oracy-literacy approach can increase control over the pace and direction of learning and give opportunities to draw on the understandings of other pupils. These activities, listed above, become even more important when pupils find reading and writing difficult and when their low views of themselves as learners are becoming negative ideas of themselves as people.

Through interaction such pupils are able to:

* identify the learning they need to focus attention upon
* recall and recount the personal experience they need to relate to learning
* give and receive support and reinforcement for their learning.

These conclusions suggest that an interactive approach to learning will fulfill this wide range of needs. The data supports this, in single and group studies that contrast interactive with individual approaches. The interactive method plugs directly into the factors that influence communication and learning in the real context. These are identified below:

1. Pupils are given opportunities to listen and respond to others in various groupings [see examples in the management section]. This helps them to check and reshape ideas and behaviour.

2. Tasks have a relevant, practical orientation and a chance to share outcomes through talk helps LCD pupils participate alongside more able peers.

3. Giving a real purpose for a task helps pupils to value their work. This might include obtaining information on behalf of others - something they might not know but need to in order to complete the
4. Pupils need the experience of working alongside others of similar abilities [shown in the management studies of different contexts for talk]. This allows them to compete on equal terms and investigations confirmed that with ‘like peers’ the LCD child was able to use collaborative talk which was not demonstrated in mixed ability groups. However, such a child needs the stimulus of different abilities in order to further development. It is important for teachers to realise which groups are facilitating or non-facilitating for each pupil with respect to desired learning outcomes. They must vary the context within which pupils work but be clear about reasons for the groupings they choose.

5. Teachers can give greater reponsibility to pupils to find ways of approaching and completing tasks. With LCD children, tact, patience, support and selective intervention is required.

6. The role of teacher is vital as the provider of resources and information, as an appreciative audience, focuser of thinking and discussion, and a consistent example of respect for all children’s contributions. Teachers set standards for purposeful activity.

7. The ‘real’ social context facilitates generalisation in a way that isolated [i.e. Individual / 1 to 1] approaches do not. It provides greater opportunities for reinforcement of targets and a learning environment that is relevant to academic and social needs.

The role of teacher and other peers seems a vital factor in communication and learning. Along with the child’s parents, they are the ‘significant others’ in daily routines. Experts, who have minimal contact with a child, can not play a major part in affecting successful learning, although they may have an important role as catalyst, resource organizer, supporter and informer.

In the course of this study, the children, who had been audio-taped with Cases A and B [single studies], were asked how they felt about working with them. Examples of what was said are given below:

* I was a bit scared before today. I didn’t know what to expect. You know, but it was alright.
* You need to bring them in. Don’t pretend they’re not there.
* Treat ‘em like everybody else. They’re just the same as us, aren’t they? Just can’t do some things.
* Give ‘em a chance to speak, or they’ll be left out. Let ‘em do things and be part of it.
* Listen and reply to what they’re trying to say.
* I realised I was understanding it better when I had to tell it to the others.
* It’s not just groups. You mustn’t ignore them - when the lesson ends, and it’s playtime.

These examples prove the importance of children recognising they were active participants in
decisions about how learning took place - not only in terms of group structures but also in attitude and behaviour. This perception of pupil support included ways of involving everybody on the basis of equal respect. At the same time, they accepted that differences exist in abilities to learn or express knowledge. They were enabled to use ‘talk’ to address the issue together, and draw on their own ‘ground rules’ to create co-operation. The children also claimed that they had been learners too. This provides a strong argument for educational integration.

Such views can be summarised as:

* appreciating that others have specific difficulties in certain contexts
* signalling that others are group members by eye contact and smiling
* making space for others to talk
* involving others in talk
* listening and building on what others say
* giving time to explain thinking

Although transcripts did not show this activity initially, it was clear that groups involving the LCD child gave opportunities to observe and reflect on behaviour in order to change practices. By the end of the research, the pupils were making positive efforts to help LCD children become contributors. They were able to suggest some useful ‘ground rules’ to help communication.

* Face the person/s you are addressing
* Take and give turns in speaking
* Give others time to talk
* Accept/ use alternative means of communication if this is indicated

Therefore, a LCD child’s peer group appears as a vital resource to support learning. By the end of the investigation, Case A [Mark], aged 6 years, had demonstrated that he could:

* listen and respond to questions [English AT1 (1) Speaking and Listening]
* ask questions for information and clarification [English AT 1(2) Speaking and Listening]
* use words, phrases and sentences to communicate meaning [English AT 1(3) Speaking and Listening]
* comment on what is said [English AT1(3) Speaking and Listening]
* initiate and continue talk with others - adults and peers [English AT 1(1) Speaking and Listening]
* convey a simple message accurately [English AT 1(3) Speaking and Listening]
* show and tell - object [English AT 1(2) Speaking and Listening]
* describe events [real/imaginary] - using articulate structure sequences [English AT 1(2) Speaking and Listening]
* produce simple coherent writing [message note, short description and re-tell sequence] [English AT 3(2) Writing]
* revise and redraft writing in discussion with the teacher [English AT3(3) Writing]

Mark had demonstrated he could do the above on more than one occasion. Relating these skills to National Curriculum statements for Speaking and Listening [English AT 1] he has matched Level 2 and three areas at Level 3. In addition, Mark has shown he can adapt his language to suit his audience, use complete sentences, structure sequences of events, rearrange and redraft ideas. The use of the tape recorder allowed him opportunities to order ideas and formulate them into words. It helped him to listen and reflect on what he had said and amend appropriately. These are skills associated with written language but have been usefully employed to reinforce oral forms and demonstrate the shift between oracy and literacy ability and the roles played by each in supporting development.

Teachers of children with language difficulty, point to weaknesses such as limited ability to structure words into coherent sequences and use them with confidence and fluency. In an attempt to address this issue and build a bridge between oracy and literacy storytelling is advocated in groups. This brings the support of peers and gives a context and audience for work. Such oral activity can later be translated into written forms including picture strips and/or words.

Thus, peer group backing from the interest and enthusiasm of children around is vital to learning. Also, the role of teacher, available when needed to encourage, motivate and refocus helps to see learning initiatives through to successful conclusions. When children receive learning support out of their routine context they are unable to benefit from this circle of reinforcement.

The above factors may be the important issues that define academic success for LCD children. Studies showed that linguistic progress was possible in individual approaches but there was little evidence of it generalising to the learning context. Such confirmation points to a need for a broad approach to solving learning problems based in the 'real' context [i.e. school] so that input is relevant and connections can be made and reinforced. This means that more emphasis should be given to sharing expert knowledge. Training and work structures have to be evolved that allow professionals to learn about each other's roles so that co-operative, consistent and continuous approaches to children are possible. The image of 'sole expert' is not appropriate if children's learning needs are to be met effectively. Professionals are more usefully viewed as 'catalysts' who help make the context work for children.

This sharpens interest in social processes in order to be sensitive to the interaction between child and the task in hand. Swann's (1978) study of a teacher's session with two pupils with learning difficulties, showed awareness of variances between children in the quality but not the quantity of interaction. These differences appeared to be a function of 'relatively static models of children'. Edwards & Westgate (1987) speak of a teacher's 'theory' of the learner as a model directing programmes of instruction. This implies a need for teachers to be aware of their own strategies.
attitudes and ideas affecting input to the learning situation as well as all round knowledge of the child. Inter-professional co-operation could help to make this information more explicit. The focus on the adult approach may help to produce the necessary moment by moment adjustments that are crucial in helping children learn.

Comment

Evidence from the management investigation suggests that the interactive mode, when directly compared with the individual technique, brings greater academic rewards for children, as communication is directly harnessed to learning needs. Interactive procedures demand a change of professional roles, emphasizing non-directive rather than directive approaches, allowing the LCD child space to control his/her own learning. The collaborative framework of 'significant others' [peers, parents & professionals] is crucial to the development of the LCD child's self-esteem and to successful learning progress. Therefore, management targets educational needs in naturally occurring and continually reinforcing daily routines. The modus operandi is not primarily developmentally based but follows the oracy-literacy continuum of the COGS framework.

The studies revealed that children could make spectacular academic progress in an interactive format that did not rely on specific linguistic input by speech and language therapists. This was because the individual technique, working on language components in a controlled structure, was not possible to effect because policy decisions had prevented its implementation. This does not suggest that an individual approach is never to be considered, but advocates that if specific support is applied, it is achieved within the National Curriculum framework and school ethos, following class routines. This is important, because the data indicated that this intervention, alone, achieved some measure of language progress but not substantial academic improvement, therefore, questioning its utility as a suitable method to address academic progress. Therefore, flexible use of a range of provision appears indicated and there is no suggestion that one approach is always the best.

Speech and language therapists may be disappointed in these conclusions. However, they do not debase their abilities to help children achieve better communication, but merely point to the delivery of support within educational models. That the interactive method was successful for this group of LCD children may well have depended, in no small measure, to the catalytic activity, support, advice and information of the therapist involved in this type of collaborative exercise.

In such a complex business as communication development, it is not possible to tease out, with any degree of accuracy, a rank order of important determinants for success. Physical, mental, emotional and social factors are closely interwoven. The uniqueness of the individual suggests a different blend of these characteristics in each person. In no way is human behaviour uniform, although basic patterns will have similar structures. This means that research that taps into all these dimensions will be fraught with problems of interpretation. However, immense care and effort was made to achieve good matched participants in the studies in order that the best, possible data could be
achieved. Statistical results confirm the quality of the information and it is suggested that it makes a reasonable base for present assumptions.

However, taking a broad approach to issues may result in superficial analyses of individual dimensions. This was discussed specifically in relation to the dialogue framework. However, it was concluded that a more sophisticated approach was unlikely to add to the quality of information obtained. It was pointed out that this research had both an empirical and ethnographic focus in a ‘ground theory’ approach and must be accessible for all participants. This was a primary aim underpinning the structure of the investigations. Frameworks had to be relevant to context demands. The dialogue analysis fitted the needs of the educational context working within National Curriculum ideology, whereas the information processing analysis fulfilled the medical model requirements for measuring different components of ability. These particular demands merged in the C-Profiles 1 & 2 which provided the main assessment tool in evaluating different types of management.

In summarising this work, it should be clarified that these particular management approaches were adopted in response to policy and practice demands. In reality, this means that the best approach may not be possible to effect as a number of considerations have to be made which influence the final decision. Interactive approaches depend on collaborative frameworks and the consistent efforts of a number of people otherwise they will not be successful. Similarly, specific approaches may demand a very advanced type of expertise [e.g.: LARSP] dependent on a specialist trained in the method. Therefore, management is not only about quality intervention but whether there are means available to effect it. In the real world assets are in short supply and should be targeted for maximum results. In this context, it should be noted that the Interactive approach appears to make the best use of scarce resources as it brings into play support that already exists in a child’s daily environment. It does not ultimately rely on the services of a specific expert who, anyway, is likely to have scant knowledge of a particular client context and is diverted by a host of other responsibilities, in comparison to staff and pupils familiar with the school routine and working entirely within this.

Within either interactive or individual frameworks there will be a variety of different decisions made depending on the particular problems to be solved. In essence, the dynamic quality of learning will demand constantly changing input so general principles setting out guiding lines are a more useful concept than specific programmes that encourage a slavish routine.
Conclusions

This research has attempted to unravel some of the learning issues for children who experience difficulties communicating in the classroom. Empirical evidence has been gained on within and without the child factors suggesting significant differences in performance between N and LCD children when compared in standard formats. Therefore, the hypotheses that LCD children differ significantly from normal peers in processing and production components of communication appears proved statistically. However, the reasons for this are unclear. Brain differences could be inferred but neurological and psychological evidence from other research appears conflicting. Much of this can be put down to the different bases on which investigations are made so that comparisons between studies are misleading. There was certainly visible evidence that LCD participants demonstrated soft neurological signs as they were less co-ordinated and more clumsy than their N peers.

Nevertheless, successful co-operation in assessment is dependent on the goals which an individual has at the time, prior knowledge of forthcoming content, as well as practical constraints on the situation and the kind of tasks being performed. Given these conditions for every one, one may speculate why the N children succeeded whereas LCD participants failed to achieve in prescribed tasks. It would be ridiculous to suggest a binary distinction of interest or disinterest in activities between groups. There was persuasive evidence to suggest that socio-cultural factors may have played a leading role in reducing performance for the LCD group. That these children progressed less well than their fellows is not disputed. However, discourse analysis showed that ablepeers always controlled activities so lessening the chances of LCD children manipulating the learning context to suit their particular needs.

Responses of LCD participants were often indicative of negative face and feedback from others reinforced poor self-esteem. In addition, their parents did not generally have positive, open relationships with professionals so militating against co-operative, consistent and continuous approaches. When these factors were addressed in an interactive style of management, based on meeting learning needs in the school context, there was significantly more learning success than was the case for individual methods that mainly targeted linguistic and cognitive processes.

LCD children had received individual intervention based on the medical model remediating deficits. This had not resulted in academic success, so it could be assumed that an interactive educational approach may have had more positive backing from those involved in conducting this research. This was probably the case, but since this method was based on the child's real and not perceived need, there was a greater chance of effecting more cooperative, continuous and consistent approaches from everyone.

Co-operation between clients and experts is not easy to achieve. Bureaucratic systems which devise routine ways to deliver professional services are not flexible enough to meet the plurality of human needs. In addition, they bring problems of contact, communication and conflicting viewpoints which may spark off a culture clash between participants. People often fight on a range of battle fronts -
parents against professionals; professionals against the Local Authority and the Local Authority against Government. One feels: “Hang on, where are the children is all this”? The problems of bureaucracy bring them pressures that beat the magic of childhood out of them. We have built a system of power games between various services for children which have inculcated a fear of failure to make requisite levels of development. Working with colleagues and endeavouring to alleviate children’s problems before they reach crisis point are not disputed ideals. Trying to put these into practice is another matter depending on a plethora of policy issues. Nevertheless, co-operation in collaborative frameworks, can be achieved through commitment and continuous effort.

Problems of communication must not torpedo children’s lives. LCD children feel, hear and see but cannot always integrate this information into logical, reliable patterns to absorb and communicate knowledge. It is difficult to explain the wordless walls of silence that often fortress them against the world. Their route to learning requires super-human effort so they easily become covered by a mantle of depression and dejection. Family pain and suffering is intense because problems of communication are more complex to understand than straightforward blindness or deafness.

Success, for such children, brings celebration. The situation heralds a strange amalgam of pain and joy. Catherine Marchant captures this in “The Slow Awakening”:

“There are wonderful things in life, if one could only do them - wonderful things, such as talking. She had never known, before, how much she wanted to talk”.

This research has addressed the particular concern of children’s communication difficulties in the classroom. The overall stance of the National Curriculum is to encourage speaking and listening in parallel to reading and writing. The issue is not one of ‘This child cannot communicate and participate, and therefore I must find alternatives’. It is more to do with ‘This child has the right to communicate and participate, and therefore WE must find ways to make it possible’. Studies have attempted to describe this possibility. Understanding the individual child through interaction and providing a circle of support from peers, parents, professionals and policy makers is advocated.

In conclusion, it is suggested these results find a new balance between structure and stimulation. During the last decade professionals have become much more proficient in individual methods of teaching children. The present investigations have suggested that active and planned use of a child’s school context provide the learning experiences and communicative demands which are directly related to the needs of the individual. This is not the same as merely teaching in the natural environment, nor a call for ‘planned chaos’. It calls for an approach that incorporates specific contextual elements using the natural circle of the LCD child’s peers and teachers to actively facilitate and support their learning in a normal, relevant way. Schools can unwittingly deprive some children of opportunities to learn but with some attention to the detail of educational arrangements LCD children can be allowed space to influence their own curriculum and so benefit from interactions that are the mainspring of academic development.
Therefore, communication difficulties in the classroom can be understood and managed in the social context of interactive learning with others. If this is properly accepted and implemented, specific intervention for LCD children can be minimised so making maximum use of speech and language therapy resources for a wider range of clients than is currently possible.

The demands we make of children, the expectations we have of their capacity to understand and express themselves and our interpretation of their responses are affected by the history of our own experiences. The roots of successful communication for us all lie in our abilities to make relationships and if these can grow collaboratively there is collective success, satisfaction and support for everyone involved in the management of children with impaired communication.
## APPENDIX

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<td>cf. with free analysis</td>
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In a summary of documents 1989 speaking and listening skills for pupils aged 5 to 7 should include activities such as:

i) casual talk.
ii) response to visual and aural stimuli.
iii) collaborative and exploratory play.
iv) imaginative play and improvised drama.
v) listening to well-chosen and well-read rhymes and poems, plays and other writing, including writing of other children.
vi) listening to and telling unscripted stories.
vii) sharing experiences (gained in and out of school) with the teacher, other pupils and parents.
viii) asking and answering questions.
ix) giving and receiving simple explanations and information.
x) giving and receiving simple instructions with opportunities for appropriate response.

Structure of Assessment

Standard assessment tasks (SATS) comprise a mixture of standardized assessment instruments including tests, practical tasks and observations and should (in theory) be capable of being administered by teachers as a natural part of their normal (and frequently cross-curricular) mode of teaching. The SATS should require only those resources that are normally available in a primary school.
COMMUNICATION PROFILE 2 [PROCESSING]

HAPTIC [touch / movement / sense of position in space]

**Recognition:**
Knows objects by feeling
Knows where things / places are

**Association:**
Denotes similarities / differences in a group of objects

**Retention:**
Mimes a short movement sequence [eg: cleaning teeth]

**Integration:**
Carries out a complex touch / movement task [eg: folding paper, placing in envelope & sticking down flap]

AUDITORY

**Recognition:**
Knows how to rhyme

**Association:**
Links ideas in sequence [eg: tomatoes are red, grass is.....]

**Retention:**
Recalls number / word sequence [up to 7 items]

**Integration:**
Retells story / event

VISUAL

**Recognition:**
Matches shapes / colours

**Association:**
Demonstrates similarities and differences in a visual display

**Retention:**
Recalls a visual display [up to 7 items]

**Integration:**
Demonstrates understanding of a complex picture
COMMUNICATION PROFILE 1 [PRODUCTION]

CLARITY
Uses correct / incorrect sounds: vowels / consonants
Uses correct / incorrect sentences: word forms / order

CONTENT
Initiates topics in conversation
Continues topics in conversation

CONVENTION
Uses request forms: for clarification / information
Uses closed questions
Uses open questions
Makes contributory comments
Makes maintenance comments

CONDUCT
Makes positive response
Makes negative response: ignores / responds inappropriately
Conveys meaning successfully
Does not convey meaning successfully
Key to the Use of Subtests.

1 = Correct sounds
2 = Correct sentences
3 = Topic initiated
4 = Topic continued
5 = Request
6 = Open question
7 = Closed question
8 = Contributory comment
9 = Maintenance comment
10 = Positive face
11 = Negative face
12 = Meaning conveyed
13 = Meaning not conveyed
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<th>Chain of Utterances</th>
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<td>(R) I'd take lots of new toys.</td>
<td>He has evaded the conversation when (M) is being asked a question, and although he is not answering hers, he is carrying on from his previous train of thought. Subtests: 1,2,4,8,11,12.</td>
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<td>(R) Batteries.</td>
<td>After (M) has once again been prompted to answer a question, (R) has continued to voice his ideas, ignoring the others in the group. Subtests: 1,2,4,8,11,12.</td>
</tr>
<tr>
<td>(M) Yes.</td>
<td>After being patiently encouraged to join the conversation (M) answers to a closed question. Subtests: 1,2,4,9,12.</td>
</tr>
<tr>
<td>(M) This country.</td>
<td>Once again, after being patiently encouraged to join the conversation, (M) answers to a closed question. Subtests: 1,2,4,9,12.</td>
</tr>
<tr>
<td>(M) I'd take a camera.</td>
<td>Finally, after the pressure has been eliminated from her, (M) whispers the answer to the original open question, but it was inaudible, until noticed on the recording of it, so her comment was ignored, and (R) carries on the conversation. Subtests: 1,2,4,9,10,12.</td>
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The children's speech is in **bold** print, and our speech is in *italics*.
language project

The following utterances are part of a discussion about school rules. The phrases are spoken by two children, both ten years old and in their last year at primary school. The children are from the same class but not particular friends. The boy is Portuguese and has only been learning English for a few months. His language is not perfect but has improved dramatically since his arrival in the country.

Wendy: If there was a threat of being caned for misbehavior at school, do you think pupils would behave better?

G: Yeah because my dad used to come to this school when he was little and there used to be a cane and um once the teacher was going to cane him for something he didn't do so he grabbed the cane off him and snapped it in half. And once the Headmaster, my Dad said he had a load of Headmasters, there was one good one. He knew which people done something wrong and so when you went into his room, he said he

Hence the child is recalling a story of her Dad's experience of canes. However, it becomes uncertain whether she agrees or not with the idea of canes in school. She does not quite answer the question posed. She first presents two conflicting illustrations of the use of canes. Where her language becomes ungrammatical I deem this due to
B: Erm, I like the rules er . . . good cos erm Miss said when you want to talk you put your hand up, don't go like that "er bl bl bl bl" then Miss doesn't understand you.

G: That's cos it gives you a head ache as well.

Student: So you think that a rule about putting your hand up is a good one?

G: Anyway I'm used to the rules here because I've been at this school since I was in the nursery. It seems likely that her haste to speak I'm uncertain here where the child was actually answering the question, simply imparting her knowledge/experience of canes.

This speech here seems to be productive. He anticipates cause and effect in this case the reaction of his teacher to a type of incident.

This is quite a re-assuring phase as it demonstrates an ability to recognise related aspects.

This question seems to be ignored. It is possible however that the children have interpreted it as a statement rather than a response requiring a question.

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B: And er... sometimes some people take the bags and with money.

Student: Some people bring money to school?

B: And some peoples take it home and it's not him bag.

This is a reply which the girl thought of earlier but did not have the opportunity to express it before the next question was asked.

This comment (like the one above) has indirect connection with the subject being discussed, so can perhaps be considered as a topic initiation utterance as it adds a new slant to the topic.

The student's question was again seemingly ignored. However, perhaps the boy was trying to articulate this second phrase and the student did not realise that the boy had not finished making his point.

The children seemed to pay very little attention to what each other were saying. The two were very conscientious about not interrupting each other - thus at turn-taking. Often it seemed that the children spent...
time whilst the other was speaking, planning what he or she would say next. The boy would wave his hand constantly in the air whilst the girl was speaking, but would not speak until Gidden told her to do so. The girl, especially at the beginning, spoke as quickly as she could, almost without taking a breath. This may have been due to nerves or perhaps she was trying to speak her piece before she was interrupted. Both children were eager to please.

It may be that the introduction that the children were given before the interview began encouraged the pair to talk about anything at all, as long as it was vaguely connected to the rules in schools' theme. One main point that this project has indicated is the need to be more sensitive to the intentions of the speaker, especially when interviewing.


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