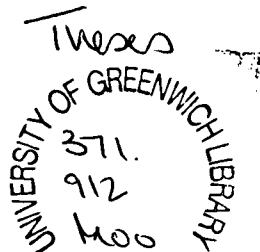# OPPORTUNITIES FOR COMMUNICATION IN INTEGRATED SETTINGS : YOUNG DEAF CHILDREN

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ABSTRACT

The integration of deaf children into mainstream schools was heralded by the 1981 Education Act, but has been dogged by conflict about the appropriateness of two dominant approaches to communication. The oral/aural approach, most often followed, is concerned with teaching deaf children to learn to listen and listen to learn. The emphasis has been on the need to 'normalize' deaf children in order to promote their learning and development. The manual/visual approach has focused on sign usage to promote a child's development as a communicator and learner and can be tailored to the child's prospective membership of Deaf/deaf and hearing cultures.

The aim of this study is to explore both the oral/aural and the manual/visual approach in relation to young deaf children's experiences of integration. Rather than focusing on modality specific aspects of communication, this study examines the wide range of both resources and strategies deaf children have for interaction in a variety of educational environments, using modality independent tools. This permits a broader examination of deaf children's opportunities for communication in integrated settings than has previously been undertaken.

The research involved detailed analysis of direct observation data collected in nursery and reception classes over a period of eighteen months, during which time the experiences of a group of deaf children and matched hearing peers were compared and contrasted. It is argued that the preoccupations of professionals, and their purposes in promoting particular approaches to language and communication need to be challenged if deaf children are not to be disabled by oppressive practices in the name of integration. It is recommended that further research should aim to advance inclusive and empowering education for deaf children through more adequately recognizing the contribution of Deaf/deaf people to processes of enquiry.

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INTRODUCTION : DIRECTION OF THE THESIS

This Ph.D has been compiled in response to the need for information about the practice of integration for profoundly deaf children which came about in response to the 1981 Education Act. Information obtained relates to the advantages, or otherwise, of early integration for young deaf children.

The content of this report is based on extensive observation and consultation of relevant literature, including field reports. The purpose of the research is to describe the experience of young deaf children in terms of opportunities for communication, starting at the point of entry into an integrated classroom environment and continuing for a period of eighteen months. Twelve children, six profoundly deaf, and six hearing, between the ages of two and six-and-a-half were observed, and discussion is focused on this age group. The 'integration career' of the focal children is studied, enabling an authentic picture of opportunities for communication in a variety of integrated settings to be explored.

It will be argued reluctantly that integration and opportunities for communication and learning do not necessarily go hand in hand, and that consideration of mode of communication, the specific nature of learning environments and the preoccupations of service providers is critical for any evaluation which is to have meaningful impact on education policy and practice.

The introductory chapter gives an outline of the legislative framework comprising background to the integration of profoundly deaf children in England and Wales, along with a description of key practical and theoretical debates relating to models of provision. Discussion is related to changing ideas about what are appropriate practices in the education of young deaf children, as well as historical changes in policy and the nature of support.

In the second chapter methodological details are elaborated, providing an account of the research situation and a full description of data collection procedures. A conceptual framework is provided, describing how a child's communication can be analyzed in terms of a wide range of abilities which is more helpful than analysis which maintains a strict focus on conventional oral/aural, manual/visual linguistic competence. Operationalization of the term 'communicative intent' is discussed in the context of a description of the observation coding system developed for the purposes of this research.

The next three chapters are concerned with quantitative data, resulting from formal observations, on opportunities for communication which deaf children in integrated environments encounter. Comparisons are made between the experiences of deaf children, and their same age hearing peers, in a variety of educational settings, and the impact of different communication modalities is examined in depth.

Chapter Three gives a comparison of communication experiences of the group of deaf children and the group of their hearing peers, in integrated nursery provision distinguished by availability of signs that are used within an English language context. Chapter Four considers individual differences by looking at matched pairs of children and assesses the implications of portraying young deaf children as gender and culture free in discussions about their education and development. Chapter Five then broadens discussion out to consider the impact of a variety of different ecological environments on the opportunities deaf children have for communication and learning in the early years. Identification of potential constraints on development is a central theme.

In this way, the thesis analyses opportunities for communication during the implementation of integrated provision for deaf children which took place in a London school following the 1981 Education Act.

The final chapter reflects on the many themes raised by the research. It contemplates improvements in the planning and delivery of educational provision for young deaf children and argues there is urgent need to rethink communication policy if the integration career of young deaf children is to be improved in ways which will make their education more than an inappropriate distraction from their real needs and interests. The significance of these claims is appraised with particular reference to the role of Deaf people's own accounts in informing the issues which are abstracted in this thesis.

Notes about language

As far as possible, the word 'deaf' has been spelt with a small 'd' when it describes the physical condition of deafness, and with a capital 'D' when it refers to the culture of Deaf people. On occasion it is necessary to use the convention 'Deaf/deaf' as a way of making clear that both those who do, and those who do not, aspire to British Sign Language usage and associated cultural heritage are included in the reference.

As Gregory (1993) points out, there are difficulties in employing this convention with deaf children, to whom community membership cannot be easily ascribed, particularly as most deaf children have hearing parents. Thus, deaf with a lower case 'd' is used when referring to children. This convention is not however, unproblematic, as in the case of children with Deaf parents.

As a general rule, the term 'deaf children' has been used in preference to 'children who are deaf'. This decision is made in accordance with the wishes of many (but not all) disabled writers who argue that their physical impairment is a critical determinant of their identity which they want to emphasize rather than deny (see Oliver, 1990).

CHAPTER ONE : ISSUES IN INTEGRATION FOR DEAF CHILDREN : INTER-RELATEDNESS OF EQUAL OPPORTUNITIES, COMMUNICATION, OPPRESSION AND RESEARCH

1.1 Introduction

In this chapter an attempt is made to describe the background to integrated education for profoundly deaf children in the study school, to consider barriers to integrated provision, to clarify what integration practices are and to explain why they are the focus of this study. The main challenges to enabling integration are thus outlined, and related theoretical concerns of the thesis, together with emergent research questions, identified.

The principal aim of the research reported here, has been to explore the communication development of a group of young deaf children, starting at the point of pre-school integration with hearing children. Background to the study consists in the emphasis on integration in the 1981 Education Act, intended to give legislative effect to recommendations of the Warnock Report (DES, 1978). The research relates to the recommendation that opportunity should be made available in the early years for children with disabilities to start their education with other children of their own age in mainstream settings.

This report sets out to describe the experience, and explore the consequences of integration and related ecological factors for young deaf children. The central purpose is to explore opportunities for communication afforded in integrated settings which enable deaf children to enter successfully into the interactive milieu of integrated situations. It will be argued however, that integration of young deaf children into mainstream schools cannot be seen as unmitigated good. It is crucial to recognize ways in which communication policy can render deaf children's experiences of integrated settings an oppressive ordeal in which their abilities and development are subordinated to maintain the apparent expertise of professionals.

Failure to enter discussions about the rights of deaf children sets integration against the child's developmental and educational well-being by permitting advocates of oppressive practices to assume the moral high ground and paralyse the language and traditions of Deaf culture. These are complex and urgent issues which require educationalists to challenge the dominance of ideological determinations which seek to deny a child's deafness, yet at the same time, disable deaf children by prescribing solutions which make no reference to the views of Deaf/deaf people.

It will become clear from investigations presented, that if deaf children are not at liberty to communicate with adults and with their hearing peers in ways chosen freely, then the value of integration is negligible. The findings of this research show the experience of integration can remain a positive one even if a Local Education Authority (LEA) fails to respond to tensions which potentially threaten the success of integration schemes. However, the interests of deaf children in integrated settings are not protected where an LEA insists on "pitching [them] into the oralist wilderness under the guise of 'integration'" (Montgomery, 1986). The single most important factor in the experience of integration for young deaf children is found to be access to communication. It will be shown, however, that this unsurprising contention becomes inestimably complicated when located in the context of the era for special educational needs ushered in during the 1980's and the further constraints becoming customary in the 1990's. These issues will be examined in detail in due course.

Before these arguments can be sensibly examined the research setting needs to be explained and the project set in perspective. This is the focus of the rest of Chapter 1.

1.2 Expansion of Provision to Enable Integration

The 1981 Education Act set out the policy of integration which has been at the core of subsequent trends for deaf children to be educated in mainstream schools alongside their hearing peers, rather than in special schools for deaf children alone. This bid for integration is part of a general initiative towards the placement of children with disabilities in mainstream schools. The policy is not just concerned with deaf children, but all children who have educational needs which require provision that is different from whatever is ordinarily made available within a Local Education Authority's (LEA) schools. Goacher, at al, (1988), and Norwich, (1990), appraise relevant policy and provision in detail.

When implemented in 1983, the 1981 Act established a number of principles which are now well established. They are mentioned here briefly, however, because ultimately they shed light on factors which contrive to complicate models of integration examined in this thesis.

The umbrella term 'integration' refers to the philosophy whereby all children for whom the Local Education Authority decide special educational provision should be made are to be educated in ordinary schools, and included in the activities of the school with other children in so far as is reasonably practical.

Although the notion of integration is widely used as if it were unambiguous and self-evident, a number of social, cultural and political issues confound debates about integrated education for deaf children, and these will be examined in due course.

In addition, the Act made it the duty of local authorities to ensure that a child is educated in a mainstream school provided three conditions can be met :

(i)   the child can receive the provision they require

(ii) this does not compromise educational provision for other children,

and

(iii) resources are being used efficiently.

Thus, economic factors are also ever-present in discussions about integration.

Occasion for the study reported here arose in this context, with the amalgamation of a special school for deaf children into a mainstream primary school. This came about when, due to demographic factors, three schools in close geographical proximity met with falling pupil enrolments which threatened their future viability. Amalgamation of the three schools was instituted as the solution to this problem. A junior and an infant school were therefore joined together, and a special school for deaf children closed and replaced by a unit for deaf children attached to the newly combined primary school. Predictably, as roles were redefined, and some became superfluous, substantial problems emerged in relation to professional identity and careers for the three heads of schools and their staff which will be returned to later.

Following the 1981 Act, amalgamation was seen to offer increased opportunities for integrating deaf children with their hearing peers. Existing nursery provision for deaf children was extended to create an integrated pre-school facility comprising two classes, both for deaf and hearing children. The opening of the new nursery provided opportunity for an evaluative investigation to commence.

At this time I was working in the Special Educational Needs Section of a local teacher training college in which colleagues had a brief to look at responses to change in the context of the 1981 Education Act in a variety of school settings. As I joined this In-Schools Research Team, a programme of collaborative staff development was underway focusing on management of change in the

study school. Involvement in staff development activities enabled me to spend time in classrooms and, through watching and talking to staff, it became clear that potential existed for an independent study to be set up which could focus on developmental outcomes for the children who were the subject of changing provision. Such a project would complement, but be entirely separate from, the staff development interests of the wider In-Schools Research Team. Thus, although my original involvement with the school came about in the context of collaboration with an established project, it was possible to set up a free-standing contribution with sufficiently clear boundaries to comprise the thesis of this Ph.D. In the course of carrying out the research deliberations of the staff development team provided a rich source of contextual material which will be drawn upon in the course of subsequent discussions where this helps to illuminate points of interest.

Background documentation issued to School Governors by the Authority, made it clear that despite the legislative climate described earlier, the principal motivation for amalgamation of the schools under investigation here, consisted in falling school rolls over a number of years. Riseborough recognizes that, in the name of integration, deaf children are often used as part of a 'numbers game' for improving staff/pupil ratios in primary schools. In such situations, Riseborough (1993) claims, deaf children are "*fetishized into things*, a valued additional number from preservational expediency" (Riseborough, op cit, p.140, original emphasis). This was exactly the situation of the children who are the focus of the present study. It was stressed that the merger was not brought about by any commitment to integration but had coincidently been forced upon the LEA due to falling numbers.

Amalgamation was described by the LEA as "a relatively ad hoc solution" to finding alternatives to segregated provision and it was publicly admitted from the outset that successful development of an integrated model of provision for profoundly deaf children

could not be guaranteed (Fish Report, 1985, p.76). Little was known about the practical, social or educational implications of integration for this group of children, which eventually became the focus of the study undertaken.

1.2.1 Responses to changing practice

As Gipps et al (1987) point out, although impetus for integration was established by the 1981 Act, there was little indication of how change would be brought about, and integration in the study school suffered from this. The approach to implementing change in the study school was described as "developmental rather than innovative" in notes of the advisory team monitoring amalgamation (In-Schools Project, 1984). Despite considerable goodwill on the part of school staff, problems to do with role definition and status, procedures for decision making, channels for effective communication between staff, organizational procedures, material conditions and changes in the physical work setting were all factors which threatened prospective integration during the early stages of amalgamation (In-Schools Research Report, 1985). The level of commitment required of the LEA was largely negotiable and enactment of the Act, together with amalgamation of the study school, occurred at a time when the Government was to cut back on spending. Needs were, and have continued to be, determined by cost constraints and provision of integrated environments for deaf children has, from the outset, been a resource led practice.

It was easy to pick up on a sense of scepticism about integration from discussions with staff and through the reports of various consultants involved with the study school at the time. Advisors privately expressed their own feelings of mistrust in reflexive records, posing many questions, for example "should [the school] bend over backwards to make [integration] a success or is it expected to fail ? Is the authority's heart in it ? Are the conditions right ? What are the choices for parents ?" and so on. Teachers were noted to ask "Do the children really need integration ? Is it a cover for doing something on the cheap?"

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Staff said openly that they were fearful for deaf children of "increased self awareness of being different" or that children would "find it all too much and too painful" (In-Schools Project, 1984). A senior teacher felt strongly that deaf children "could be more usefully and educationally employed through non-integrative activities". Thus, imminent integration was viewed with varying degrees of enthusiasm. Increased emphasis on integration was widely seen as an unfortunate by-product of amalgamation, and the venture quickly became characterised by "an over-all sense of grievance and hostility" (op cit).

Corker argues that Deaf/deaf people present particular challenges to "generalised policies of integration" (Corker, 1993, p.145). In the light of escalating conflict and resentment when integration of profoundly deaf children was instigated in the study school, reasons for Corker's circumspection require examination. Why should the prospect of integration for this group of children fill professionals with such dread and apprehension ?

1.2.2 Ambivalence about integration for deaf children

During the past three decades there has been extensive research about the education and development of young deaf children (eg, Gregory, 1976; Quigley and Kretschmer, 1982; Volterra and Erting, 1990; Wood, et al, 1986, '92). Problems in the education of deaf children have been repeatedly documented, particularly related to language, literacy and social cognitive functioning (eg, Conrad, 1979; Webster and Wood, 1989). There has been continual debate over the appropriateness of different models of educational provision for deaf children alongside unrelenting controversy over the oral/aural (speech) and manual/visual (sign) modes of education and self expression for deaf children (Kyle and Woll, 1983). (It should be noted that the reason for choice of these terms is that it reflects those used within the school at the time of the research). Altercation about the

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appropriateness of different methods of communication has become increasingly contentious, both educationally and politically, in relation to the principle of integration for all which was given legislative effect in the 1981 Education Act, and this issue soon acquired a great deal of notoriety in the study school.

Paradoxically perhaps for the Deaf community commitment to the principle of integration for all coincided with increased awareness of the rights of Deaf people as a minority group, and of educationally and politically sensitive issues therein (Booth et al, 1987). At the centre of controversy concerning integration is continual debate over the role of oral/aural (speech) or manual/visual (sign) vehicles in the education of deaf children. The notion that deaf children will need to share a means of communication with their hearing peers in integrated settings and vice-versa may seem uncontroversial, but is in fact, vastly complicated by relentless lack of agreement about what communication methods are feasible and which enable deaf children to establish an easy and effective method of fluent communication.

It is difficult to envisage ways in which equal access to equal opportunities can be guaranteed for children if there is no common language to facilitate their education and development, but this situation is one with which Corker (1993) points out, most deaf children continue to struggle. Consequently, the idea of language as a problem which is inextricably tied to social and learning processes became central to this study. The long, related, history of personal rights in choice of language being denied in the education of deaf children, threatened to prevail in the study school, and the implications of this required close inspection.

1.3 Mode of Communication Debates

In the context of intense and varied debates about the comparable virtues of different modes of communication in the education and

development of deaf children, it was disconcerting, at the outset
of the study, to discover that prior to amalgamation the issue
of developing a mutually agreed communication policy was not
addressed between the combining schools. The school for deaf
children had previously held a policy said to embrace principles
of 'natural oralism' which was widely interpreted as referring
to communication through speaking and listening. Despite frequent
requests, written clarification of a communication policy was not
made available either to staff in the mainstream school, to staff
newly appointed to the unit for deaf children as amalgamation
ensued, or to members of the advisory team and so it was
difficult for insiders and outsiders alike, to overtly challenge
the rhetoric of apparent oralism. Notes from the advisory group
evaluating amalgamation referred to "a marked gulf" between
school staff concerning approaches to communication, and a great
deal of confusion about appropriate practice which it seemed
important to investigate further.

A range of divergent opinions prevailed which are best
illustrated by comments recorded from school staff at the time.
In one breath, for example, a teacher would appear confident that
an official method of communication was advocated in the school,
but in the next, acknowledge that uncertainty lingered : "this
is an oral school . . . except for three pupils for whom signing
has been approved". Other teachers completely rejected any
alliance with oral methods saying, for example, "oral methods are
rather like teaching a child to play cricket with one hand". Yet
another teacher, evidently confused, emphatically advocated the
oral approach, arguing "there is no point signing; language is
the important issue. Total communication wouldn't work", whereas
the next would be far less prejudicial and more open-minded,
saying, for example, "I favour total communication as logical,
all means should be used".

Thus as new facilities for integrated provision for deaf and
hearing children were opened, the issue of communication was
utterly confused. Further documentation compiled at the time

includes a comment written by a school advisor, worried about the lack of opportunity for staff to discuss communication policy; "unless this happens" she had noted, "integration will fail" (In-Schools Project, 1984). Communication policies and practices therefore became pivotal in the research undertaken.

Corker's warning that deaf children and integration policies may not be easily reconciled seems justified in relation to the study school. Feelings ran particularly high in relation to mode of communication debates. Thus, as a naive and inexperienced research assistant with a brief to 'monitor nursery integration', the first obstacle to overcome was working out what conflicts concerning modes of communication were about in an effort to understand various positions held by professionals involved in the education of young deaf children and to make sense of the huge distance between different view points. This attempt is presented next, at some length because it became central to the analysis of young deaf children's communication abilities in the integrated settings studied.

Later, I will be drawing on arguments about mode of communication to urge that supporting the use of oral/aural methods with deaf children in mainstream settings poses a number of challenges to educationalists, which demand critical reflection upon some of the initial premises of integration.

By now, the reader will have noticed that I am using the terms 'oral/aural' and 'manual/visual' as if they were exhaustive and mutually exclusive categories. This perception is far from true, and these terms usually imply specific meanings, as further discussion is intended to convey. The terminology is chosen however, as alluded to briefly before, firstly because it reflects the simplification of issues adopted by managers within the study school at the time of the research, and secondly because it spans the range of approaches to communication which ensued in the study school during the research years. Such a distinction by no means adequately reflects the subtle

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implications of different approaches to communication for the language and culture of Deaf/deaf people, some of which are elaborated below, and Gregory (1993) presents further discussion of these issues. The classification simply provides an accessible description of the events under investigation. Useful overviews of the philosophies and methods employed to enhance the language of deaf children include Lynas (1988); McAnally et al, (1987); Rodda and Grove, (1987). Principal arguments are aired below.

1.3.1 Relative merits of oral/aural approaches to communication

The theory which underpins most communication policy in integrated settings for deaf children in England and Wales, claims that audition can still be used as the most natural means through which a deaf child can learn language (eg, Lynas, 1986). Most specialist teacher training courses continue to presuppose that equipping deaf children with oral communication skills will mean they cope more easily in ordinary classroom environments (Corker, 1993), and there is a lack of emphasis on sign language skills in teacher preparation (Maxwell, 1985).

Those who advocate the oral/aural model of language acquisition, argue that the majority of deaf children have some residual hearing which, when assessed early enough, and properly aided, will permit audition to become the primary mode of speech reception (eg, Hanen, 1985). The goal of such an approach is for deaf children to acquire 'normal communication' using oral/aural abilities from the earliest possible age. At the time of writing however, Gregory points out "the oralist dream that technology will create hearing out of deafness remains unrealised, and deaf children continue to fail to reach their potential" (Gregory, 1993, p. 111). Branson and Miller (1993) appeal for recognition of the danger that hearing distorted via amplification equipment, can be "disorienting and indeed a *barrier* to communication" Branson and Miller, 1993, p. 26, original emphasis).

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Even so, within an oral/aural approach the development of 'natural' communication is promoted through teaching a child to acquire and process language through habitual use of their residual hearing regardless of auditory status. Emphasis is placed on exposure to 'normal' speech and language in naturally occurring communication contexts. An important aim for oralists is for the child to become able to function independently in the hearing world. Thus, the oralist perspective embraces both the desire to minimilize differences between Deaf/deaf and hearing people, and the desire to impose the culture of the larger, hearing, group on the Deaf minority whose own langauge and culture are regarded as obstacles in the education system (eg, Lynas, 1986).

Oralism involves explicit lack of acceptance or respect for different languages and cultures, and implies that all children share the same needs regardless of whether they are deaf or hearing. I felt these propositions demanded careful and conscious reflection on the consequences of oralism for those who experience it. I began to feel oralism and integration might be mutually exclusive because an essentially supremacist approach to communication seemed incompatible with efforts to reduce inequalities for deaf children in classrooms, and this became a central tension in the research.

Traditionally, advocates of the oral/aural approach have argued that intervention which does not focus on audition as the primary source of language acquisition will limit a child's ultimate opportunity to acquire spoken language. Although the reasons for this claim are contradicted by a number of researchers who show that manual/visual strategies are used richly and effectively by young deaf children to promote language acquisition (see Caselli and Volterra, 1990), such a risk obviously requires the fullest examination, and consequently the emergence of language became another focus of the study. Received wisdom has it, that exposure to manual/visual forms of communication denies deaf children the opportunity to use the language of the dominant culture, which,

vis-a-vis Deaf/deaf people, is hearing culture. Clearly these arguments fail to acknowledge that any deaf child who is provided with access only to oral/aural communication methods will be denied important skills for making relationships in the signing world. Oppression of Deaf people's language and culture appeared endemic in the discourse of those proposing oral/aural methods, and I hoped to address the significance of this as part of the research undertaken. It is significant that Deaf/deaf adults who received oral/aural education argue they have been 'disadvantaged by more than their auditory disability' (eg, Phoenix, 1983), and this provided added impetus for my evolving research plans. Of course there are deaf children who succeed through oralist systems, but these are exceptions to the rule (see for example, Briggs, 1991).

In the study school, preconceived 'cultural limitations' of British Sign Language were cited as prima facie evidence against its usefulness, and I wanted to examine the validity of these arguments. Of course, specific interests always determine views. The specific interests and cultural defense mechanisms which underlie arguments put forward by oralist writers such as Lynas (1986), present considerable cause for concern but have been decisively exposed by Booth (1988) amongst others. Unfortunately the specific interests of the Authority and senior school staff were not available for contemporaneous public scrutiny in the same way.

Oralist preoccupations were evident in the views of one head teacher in the study school who wrote a widely circulated letter saying "signing seems to me to be a barrier to integration if only because there is no realistic chance that all [staff] can become proficient" (In-Schools Report 1985). Deaf children's communication needs were construed as potentially presenting difficulties for staff and *therefore* best avoided. This position is not unusual and comprises one reason, amongst others, why arguments about how to establish easy and effective communication for deaf children, using manual /visual modes to facilitate

langauge acquisition are sanctioned only within small pockets of current educational practice in England and Wales (for further discussion see Llwellyn-Jones, 1988). However, awareness of British Sign Language was growing amongst some staff in the study school, and so I was prompted to review the range of manual/visual communication approaches.

1.3.2 *Relative merits of manual/visual approaches to communication*

British Sign Language (BSL) is a visual-spatial language which continues to gain recognition in debates about vehicles for self expression and education for deaf children, largely through the promotional efforts of Deaf/deaf adults anxious to ensure that lessons are learned from their own unsatisfactory experience of oral/aural methods and lack of choice in the matter (eg, Ladd and John, 1991). The linguistic status of BSL as a complete language has been reiterated by many researchers (eg, Brennan, 1976; Volterra, 1986; Stokoe, 1987; Woll, 1987). It is important to note however, that although signing systems are sometimes utilised in educational settings, it is rare for BSL to be used exclusively and completely (see Corker, 1993). This is primarily because teachers and other professionals are, at present, virtually all hearing and do not have BSL as their own first language as was the case in the study school.

In response to growing interest in BSL within the school, members of the advisory team offered to co-ordinate explorations of sign related issues, suggesting members of the Deaf/deaf community could themselves, potentially be a major resource in such a programme, and proposing, albeit with a certain amount of trepidation :

> "Hearing-impaired individuals do not all experience equivalent disabilities in auditory vocal communication, but all hearing impaired individuals are actually or potentially members of the Deaf community, and users of its predominantly manual-visual language" (In-Schools Project, 1983)

The Authority responded to these initiatives with palliatives which turned out to be false; hurriedly offering to pursue issues about BSL "individually" with concerned advisors, agreeing in principle to meet with Deaf adults and to encourage participation of Deaf parents, but in fact, making every effort to suppress the emergence of a public agenda for BSL (op cit).

The advisory team persisted with attempts to raise awareness of the range of sign system variations of British Sign Language which have emerged for use by non-specialists. Despite the Authority's resistance to BSL, advisors and many school staff hoped that an appropriate medium of instruction in an integrated setting might be evolved which made reference to a "continuum . . [spoken] English . . English and Sign . . . Signed English . . .BSL" which could vary as necessary, for different groups and individuals, as well as between different curriculum areas and within different pedagogic contexts (op cit). Therefore sign system variations became important in the school and merit some discussion here.

For a while in recent years a philosophy ambitiously known as 'Total Communication' was taken up in which oral/aural (speech) and manual/visual (sign) abilities and methods are simultaneously combined to facilitate easy and effective communication (see for example, Montgomery, 1986). Initially, there was considerable enthusiasm towards this approach within the study school, as an earlier quote illustrated, because the method potentially combined advantages of both oral/aural and manual/visual approaches, and appeared to avoid the major pitfalls associated with a polarizing 'either/or' method. The possibility that hearing children would enjoy the benefits of finger spelling and learning signs, alongside their deaf peers, as proposed at the time by disabled people's representative organizations (eg, Vaughan, 1983), was readily accepted by most teachers in the study school, though firmly opposed by the Authority who continued to dictate that sign usage offered a second rate approach to communication which could only be countenanced for

children they openly referred to as 'oral failures' (In-Schools Project, 1984).

Although the idea of utilizing all available modalities for developing communication had intuitive appeal, it was quickly realised that practising Total Communication would be an awesome task. The approach is fundamentally flawed because the exercise of presenting and receiving two different symbol systems of language simultaneously is impossible; for example a communicator experiences difficulty using signs in spoken English word order (Kyle et al, 1981). It has however, proved possible to present simultaneously signed and spoken words with respect to the grammar of one of the languages such as with Signed English and a group of staff in the study school began to regard Signed English as a viable enterprise. (Wood and Wood (1991, '92) present further technical discussion of Signed English).

Once integration commenced in the study school, nursery staff rapidly became disillusioned with the oral/aural approach to communication because they felt it failed to cater for the needs of *all* deaf children, particularly those with Deaf parents. Members of staff, encouraged by the prospects of Signed English, came together as a group and attended BSL classes in their own time. They also endeavoured to set up a course for all interested staff in holiday time. Although these initiatives were resisted by senior managers, they fuelled interest in Signed English amongst staff who had deaf children in their classrooms.

Signed English pays attention to details of spoken English syntax. The strategy makes use of components of British Sign Language with additional signs and finger spelling to provide a complete visual representation of the English alongside the spoken form. Signed English is more elaborate than Sign Supporting English, an adapted sign system in which sign is used primarily to add clarity to a spoken message following spoken English word order. Critics argue that Sign Supporting English, in particular, will encourage the acquisition of pidgin language

and may therefore restrict rather than facilitate a child's development as a communicator (see Lynas et al, for further elaboration of this view). It has been argued that as sign systems found in classrooms managed by hearing teachers are unlikely to make full use of British Sign Language they offer few advantages over oral/aural methods and this point needs to be debated.

There is, for example, some concern that speech may be slowed down if accompanied by sign (see Sachs, 1989). It is envisaged that the ordinary rhythm patterns of spoken English may become distorted. With Signed English some features of BSL are omitted, most often unaccented function words such as conjunctives or pronouns which comprise approximately one third of spoken words. Opponents of this method of communication argue a child may not realise lexical items are missing and therefore misconstrue the structure of spoken language; in turn this could impede access to literacy (eg, Lynas, 1986). As BSL, in this form, is also impoverished, neither language is fully represented.

Recent research looking at aspects of deaf children's communication in the classroom led Wood and Wood (1992) to argue that teachers were unable to deliver flawless Signed English. This finding is not remarkable however, as Wells (1992) points out, since Signed English gives primacy to speech rather than to signing and does not follow the organizational principles on which 'natural' sign language is based. Further, Wood et al (1986) also found that teachers using oral/aural methods distort their spoken langauge in interactions with deaf children, slowing down for example, using stilted language and failing to make use of natural expansions, all of which suggests imperfections in communication are not exclusively a dimension of sign supported systems of communication.

Wells argues (op cit) there may be reason to be optimistic about the potential of Signed English for communication with deaf children because it is a form of communication which has evolved

only recently. The relative youth of this communication system may offer potential for adaptation and improvement by those looking for a method of communication which deaf children and their hearing peers can genuinely share. As Signed English initiatives were utilized for a while in some of the classrooms studied in the research reported here, it has been possible to consider the effectiveness of such strategies and to describe associated successes and drawbacks of the method.

Throughout the two year course of the research reported here, however, debates about the advantages and disadvantages of different approaches to communication continued to clash, and within the school views remained in a continual state of fluctuation.

In the meanwhile, recognition of the cultural boundaries implicit in Signed English, and objections to Total Communication as a goal because it is impossible to put into practice, stimulated discussion of the bilingual option. Whereas the structural limitations of Total Communication, and the cultural constraints of Signed English are easy to describe, bilingualism appears a feasible option, albeit perhaps difficult to provide in a completely authentic form. For reasons which will hopefully become clear, potential for bilingual education in the study school appeared negligible at the time of the research. Even so, the political tensions which suppressed bilingualism shed light on the situation of children within the study school, and so some consideration of key issues has been attempted.

1.3.3 Prospects for Bilingualism in integrated settings

Bilingualism is concerned with learning and using two languages (Fitouri, 1983), and for deaf children, refers to the use of sign language and spoken English with various means of communication in between (Llwellyn-Jones, 1988). It has been argued that the education and development of children will often be best served

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if they are bilingual and bicultural (eg, Cummins, 1984; DES, 1985; Llwellyn-Jones, 1988), and this is likely to be particularly true for deaf children in integrated settings. The bilingual option could offer deaf children opportunities to acquire the language of the hearing culture, but also and equally, the language of the Deaf community. Practical difficulties of providing a child with genuine bilingual input however, cannot be overlooked as two complete language systems can rarely be made available by teachers on a full time basis, and in England and Wales, the involvement of native BSL users in education is unusual (see Gregory, 1993). In the study school, as already mentioned, none of the staff had BSL as a first language or even an advanced level of signing competence. The involvement of Deaf parents who were BSL users, was not considered by the school at any time during the course of the research.

Despite operative difficulties in providing and evaluating bilingual communication however, substantive conceptual skills in one language provide a useful basis for the development of a second discrete language, in which case, bilingualism might be regarded as a valuable resource in the search for ways of enabling deaf and hearing children to share a means of communication (Cummins, 1984; Strong, 1988). Bilingualism may well comprise the option of choice if deaf children are to be educated alongside their hearing peers yet retain links with their own language and culture. In addition, the bilingual approach promotes recognition of the rights of minority groups. In the study school however, whilst a few individual members of staff aspired to adopting at least some of the features of bilingualism in the classroom, general acceptance of the importance of cultural continuity was slow to emerge.

Baker (1993) has found the "social, cultural milieu and political environment in which a school works" affects the effectiveness of bilingual education, but with appropriate sensitivity to contextual support, claims there can be reason for optimism about

the prospects of bilingualism. However in the study school, the "social, cultural milieu and political environment" militated strongly against bilingualism and bicultural ambitions, and these tensions intersected with the general climate for integration.

Some illustration conveys reasons why foundations for bilingualism in the study school were regarded as fragile, and their depiction reveals a variety of pressures which threatened to similarly undermine integration.

A language policy statement uncovered during the second year of the research exposed a yawning abyss between school policy and recognition of children's rights to their own culture and identity. Ethnocentric allegations threatened to ride roughshod over prospects for integration :

> "Not only the paucity of experience for the deaf child of immigrant background presents problems, but also the family arrangements and attitudes to children and their handicaps are problematical . . .
> Many of them are not spoken to because a) it is not the West Indian habit to talk to their children b) because parents feel it is not worth talking to DEAF children" (original caps)

Further assertions completely disregarded issues of a child's rights to their own culture and language : "whatever the background of these children English is the language to be learned in school". In the study school the priority was to promote a particular version of cultural and linguistic propriety. The pejorative assumption made was that the most important thing for all deaf children was to learn spoken English. Audiological status was viewed as the key determinant of a child's identity, with no recognition of the importance of other structural features such as cultural background, class or gender. It is not possible to comment on whether the political intentions of this orientation were relatively innocuous, though there was of course, great danger they could be viewed otherwise.

Repression of culture and identity clearly was endemic in the approach of some senior staff and members of the authority. Recognition of the educational and cultural rights of deaf children and their hearing peers as actual and prospective members of a shared culture was continually denied. Further examples illustrate the extent of oppression witnessed in the context in which the research took place.

Frustrations over ineffective communication between school and parents about medical examinations, led the most ardently oralist Head teacher to compile of "a list of signs for use with Bengali speaking parents". Non English speaking adults were placed in the category of 'oral failures' though none had impaired hearing. Unfortunately such instances of explicit intolerance and discrimination were not rare. The same teacher, in-charge of deaf children, later compiled "a list of words which cannot be used with deaf children" seeking to ensure certain elements of language would, without question, be denied to children with impaired hearing. There can be little doubt about the oppressive functions of this list which began 'bouncing, make, game, about, snowy ...'.

Further denial of children's rights to a shared culture was seen in confusion about which rolls deaf children should be counted on (Unit, Infant, Junior etc). Records reveal that one Head teacher suggested "all the integratable deaf children could go to her school *as though their deafness turns them into infants*" [original emphasis] (In-Schools Project, 1984). The notion of "integratable deaf children" signals further potential oppression in the tacit assumption that some deaf children would be 'unintegratable' and eligible for exclusion from an infant school register. Clearly, as integration commenced, the prevailing climate in the study school was not only hostile to initiatives for bilingual education, but also in danger of incipient discrimination against deaf children.

These examples reveal the depth of social and linguistic prejudice prevalent amongst key staff in the study school. They have been presented to orient the reader to the climate for integration within the study school and were all systematically documented during the course of the project.

Despite the virtues claimed for bilingualism in integrated settings, it is perhaps not surprising that it remained under-valued in the study school. Approaches to communication continued to reflect prejudice towards linguistic minority groups and to maintain a variety of oppressive legislative practices which became the main concern of this study. The rights of deaf children in integrated settings are frequently undermined by professionals who cloud arguments about the benefits of integrated education with arguments which compromise a deaf child's entitlement to communication and self-definition.

Perhaps then, in the context of the forgoing discussion, it is not surprising that Corker (1993) should argue that while control over education policy and practice remains "in the hands of people who do not have disabilities" (p.148) an experiential chasm persists which renders the wishes of Deaf/deaf people themselves irrelevant. This situation is of course, intensified for Deaf/deaf people, all the time control is literally not in their own hands but determined via the voices of hearing professionals who presume to know better than Deaf/deaf people what is best for Deaf/deaf people. Even within this research deaf children intermittently had their own voices taken away, being made, for example, to sit on their hands, in an effort to promote spoken interactions. At another level, attempts to involve Deaf/deaf consultants in the project met with disapproval by the Authority and were seen as compromising the legitimacy of the research. Without the central involvement of Deaf/deaf people however, the final research product necessarily remains ignorant of many issues claimed to be under study. Failure to build in a platform for Deaf/deaf people to influence this

project, though not of my own volition, shows the study to be an arrogant enterprise.

In the next part of this Introduction, I will argue an effective model of integration cannot be constructed without reference to debates concerning mode of communication such as have now been outlined. Later on, it will be seen that notions of integration, far from being unequivocal, function and fragment in relation to the demands of those who determine the communication environment in which children find themselves, and the implications of this are very far reaching.

It has been seen that debates about mode of communication are closely tied up with ambivalence about integration for profoundly deaf children. The complexity of issues begs further consideration of the rationale behind integration.

1.4 Rationale for Integration

Rationale for integration has been based upon arguments concerning the rights of children, and concern that children with disabilities were being inappropriately marginalised, and not prepared for life within the wider community. Warnock's claim that "democracy of the shared classroom experience is the cradle of democracy in the outside world" (Warnock, 1988, p.6) reinforces the entitlement issue in debates about integration. Evidence of an apparent lack of success of segregated settings has also been used to fuel the trend towards integration (eg, Galloway and Goodwin, 1979). Despite this however, some writers express fears that deaf children (eg, Branson and Miller, 1989), and children with other disabilities (eg, Gresham, 1982), may be less well served in integrated than in segregated settings. There is a lack of literature on successful integration schemes and so one of the main aims of this project was to examine the extent to which the practice of integration, in one particular context, provided an education suited to the needs of profoundly

deaf children. Such an evaluation was particularly apposite because, as Gregory and Bishop (1988) note, integrated provision expanded more readily for deaf children than for those with other types of disability.

1.4.1 *Expanding integration for deaf children*

Prior to the 1981 Education Act, a significant proportion of children with hearing losses were already placed in mainstream schools (Gregory and Bishop, 1988). The qualitative change brought about by the 1981 Act was that it led to the placement of children with profound and severe hearing losses in mainstream schools. The school which is the focus of the research reported here, was one of the first in England and Wales to encounter this shift. Even so, the teacher in charge of deaf children pointed out that prior to amalgamation "integration had been going on for sixteen years." "Getting handicapped children to mix was fine" she said, pointing out they had "done this for years in Games, Art, Craftwork and P.E.". Interestingly, such activities have been described as "possibly the worst times for social adjustment and acceptance" by Stobart (p.3, 1986). Prior to amalgamation taking place, the school's inspector let it be known that in his opinion integration had already gone "far enough" (In-Schools Report, 1983). While education policy was becoming more liberal than ever with respect to the rights of profoundly deaf children, most of those with responsibility for implementing change in the study school did not endorse moves towards less insular and culturally introspective practice.

Those regarded as accountable, such as the Special Needs Inspector, declined invitations to explain reasons behind the merger to Head Teachers. At least one of the Heads realised the significance of this, and placed on record her anxiety observing "it would have been unprincipled to negotiate this merger without [the Inspector's] support" (In-Schools Project, 1984). Formally, of course, the Authority did not confirm the view that it's

commitment to integration was illusory, but it did fail to deal with practices and policies which seriously undermined the efforts of those actively pursuing equal access to equal opportunities for deaf children in their charge (In-Schools Project, 1984). All of these factors will have to be taken into account in the final analysis of data collected for the research presented here. The children's experience of integration of course, reflects the cultural and political climate both within the school, and of the time, which is why these factors have been described at some length.

Given the high level of tension and uncertainty surrounding the launch of integration for profoundly deaf children in the study school, it is worth considering at this point, just what the theoretical aims are said to be.

1.4.2 Aims of integration

Like some staff in the study school, and as mentioned before, many writers have reservations about whether integration can best serve the needs of deaf children (eg, Lynas, 1986; Webster and Wood, 1988; Corker, 1993). Gregory and Bishop (1988) urge that integration must be seen as a means to educating children and not as an end in itself. Integration, they argue, should be thought of as a process which encompasses a variety of realities in practice, all of which need to be evaluated in terms of what they enable a child to achieve.

Gregory and Bishop (op cit) describe integration as having two broad aims :
>   (i) a social function in integrating the child into
>   the ordinary social world, and
>   (ii) an educational aim of exposing the child to the
>   wider curriculum than is usually available in special
>   schools.

For deaf children the second part also includes a linguistic element, in exposure to an environment where spoken English is used by both adults and children.

Special education can be seen to militate against the social aim described above, because deaf children are separated from their hearing peers and integration into the wider community is consequently restricted. One of the outcomes of special education is that deaf children become isolated from their neighbourhood and from friends with whom they have grown up (eg, Bishop, 1982; Moore and Beazley, 1992). Advocates of integration suggest that if deaf children attend their local mainstream school, links with siblings and local friends can be encouraged and links with the wider community established. However, not all provision for integration in mainstream schools enables such relationships. Most of the deaf children attending the study school were from outside of the borough; a situation that was completely different for their hearing peers who all lived locally. Deaf children were brought to the nursery by taxi or bus, often making a journey of more than one hour and they were not in position to meet either with each other, or with their hearing peers outside of school. Such circumstances fail to increase deaf children's access to the social world of their hearing classmates and vice-versa.

A wide range of essentially segregated provision masquerades as integration, and it will be clear that not all of the potentially beneficial social features claimed for integration were realised in the school studied. In addition, members of the Authority felt strongly that social integration was relatively unimportant and quite divorced from education. Teachers who raised the issue of the deaf children's relative social isolation were told "we are not here only for social integration but for educational purposes" (In-Schools Project 1983).

Gregory and Bishop's "educational aim" was said to be prioritised by HMI involved with the study school. An independent study to monitor the curriculum prior to and during integration showed

many more activities became available to deaf children in integrated settings as compared with segregated contexts (Sinha, et al, 1987). Prior to integration a total of four activities were available to deaf children on a typical day. The minimum number of activities available *at any one time*, once integration was underway, rose to twelve with as many as twenty-five commonly available. These findings were taken as an indication of the considerable curricular advantages that integration can afford young deaf children and have been reported elsewhere (op cit). A rich curriculum is, however, only part of the solution for enabling deaf children to maximize their learning. Opportunity to access the curriculum was assessed separately, as part of the current study.

Similarly, a wider curriculum in integrated classrooms may not be the antidote to the poor social outcomes previously seen in the education of deaf children. Sachs (1989) points out, that any model of integration can bring an isolation of it's own if it cuts children off from the language and culture of their own community. This point, in particular, is central to the interpretation of evidence arising from this study and presented in Chapters 3,4 and 5. Issues in cultural and linguistic isolation had particular resonance for children from minority cultural backgrounds, not least one child whose family language was BSL. Promotion of the linguistic aim for integration as described above, raises concerns that deaf children in integrated settings may indeed experience isolation from a language and culture which is potentially their own.

Although speech and speaking are not the privilege of oral/aural languages, there is immediate danger that BSL will be undermined if emphasis is placed on "speech" rather than "communication" environments. In discussing "speech environments" there is a risk of minimalizing or ignoring languages which are not articulated orally, and in doing so there is danger of discounting the rights of those who use them. In addition, a setting which makes no reference to BSL is primarily aimed at equipping deaf children

for life in the hearing community and cannot claim to offer linguistic or cultural continuity for deaf children. As established earlier on, no such pretensions could be claimed for the school which is the focus of this research.

Of course the extent to which deaf children in mainstream schools are actually placed together with their hearing peers will substantially determine opportunities they have to access the linguistic environment encountered by hearing children. As research commenced in the study school, the prevailing model of integration for infants involved drawing up an integration timetable, for example, 'P.E. Tuesday 1.45 - 2.15pm'. Staff frequently asked "is integration on today?" (In-Schools Project, 1984). Although there was formal commitment to the provision of non-separatist education, everyday practices were potentially isolationist. The point is that the aims of integration do not necessarily structure the practices that evolve in its name.

1.4.3 Reservations about integration

Some members of the Deaf community, as Lane (1984) has pointed out, have for a long time favoured segregated provision, particularly for pre-lingually deaf children with parents whose natural or preferred language is BSL. Special schools have, albeit sometimes unintentionally, provided a forum for use of BSL which is closely linked to the transmission of Deaf culture and Ladd, amongst others, rejects integration, claiming it threatens the heritage and identity of Deaf people (Ladd, 1991).

In fact, even in the supposedly oral/aural integrated environment of the study school, children were seen to have developed their own sign system, though it was not initially known if this was to any extent BSL based. From their first contacts with deaf children, hearing children were noticed to make "conspicuous efforts to communicate . . . . in some cases learning and adopting sign usage" (In-Schools Report, 1985). The children's resources for communication and their strenuous efforts were

however, greeted with contempt by some staff. One teacher complained "sometimes in signing to one another, deaf children miss further instructions" (In-Schools Project, 1984). Despite the facade for integration in the study school, communication between children was typically regarded as secondary to acknowledging directives from adults.

Some writers have opposed integration as it frequently occurs, agreeing that the integration of all deaf children is desirable in principle, but raising legitimate concerns about emphasis on spoken language in mainstream settings (eg, Jordan, 1981; Llwellyn-Jones, 1987). It is sometimes argued that integrated provision in which oral/aural communication methods are used exclusively may be appropriate for some deaf children but not others. For example, hearing parents of children who are post-lingually deaf and not associated with the Deaf community, may opt for their child to be educated in mainstream schools, and prefer oral/aural language and communication methods (see Sachs, 1989; Gregory et al, 1991). In any event, parents of children in the study school were not consulted about their preferences for communication methods to be used following amalgamation. Lack of partnership between parents and professionals meant few opportunities existed for staff, children and parents to share experiences of integration and this functioned to maintain the illusion that parents were happy with oralism ('no news is good news'). Unfortunately, parental perspectives could not be formally studied as part of this project because parents were very rarely included in school life, and my remit was specifically school based.

Two issues seem indispensable in an attempt to make sense of integrated provision for profoundly deaf children. Firstly, educational provision for this group of children cannot be meaningfully discussed without taking into account a wide range of positions concerning appropriate methods of communication. Secondly, debates about the rights of a child crystallise these

positions and so must be kept fully in view in an appraisal of integration practice.

Widespread and misplaced emphasis on the inabilities of deaf children is identified by Kyle (1987) as largely responsible for conflicting views about the appropriateness of integration for deaf children. Since the abilities of deaf children are so often, due to a whole cluster of constraints, assessed without benefit of easy and effective communication, it is not perhaps surprising if deaf children's achievements have frequently appeared wanting. Of course the possibility that one of the purposes of assessment is to provide a means of justifying the views of professionals and in particular, decisions about education policy and school placement (Dyson, 1987) cannot be overlooked when we try to understand the persistence of unempathic evaluations of deaf children's successes, and attendant implications for integration such as have been described above.

It is clear then, that in the context of a wealth of literature, and practices focused on within this Introduction, many views held about deaf children by professionals are oppressive and contribute to social constructions of disability. Beliefs about the way in which deaf children communicate can be directly related to the provision of disabling educational environments. Intolerant discourses in education can be seen as defining and producing a range of barriers which are then decreed and practised. An important goal in this project, was to try and uncover some of these barriers.

As the general theoretical propositions on which educationalists base their views originate, at least to some extent, from academic reflection, I decided to use the next section to consider the relationship between relevant research and oppression in the classroom.

1.5 Research and Oppression in the Classroom

In view of the enormity of arguments relating to mode of communication it was with some disquiet that I discovered key researchers working in the field of deaf children's education and development claimed "no wish to enter the debate about which method of communication is likely to benefit the hearing-impaired child more than any other" (Webster and Wood, 1989, p.16). During the course of the project reported here however, the notion that gainful research about deaf children can, in reality, be achieved without reference to these concerns became more and more implausible. Research which side steps modalities of communication encountered by deaf children fails to take into account a key determinants of their experience and is necessarily inadequate because social and communication restrictions which deaf children face are denied. Even so, Webster and Wood (op cit) argue that attention should be diverted "away from factors such as mode of communication" which they claim does not provide a sufficiently "productive focus of interest" (p.20). Reasons given as to why such focus should prove unrewarding are far from straightforward and more recently these writers distance themselves, to some extent, from previously entrenched positions (eg, Wood and Wood, 1992).

Where research is based in oral settings such as special schools or units attached to special schools, Wood and others have argued that consideration of facilitative methods of communication can be regarded as particularly unnecessary though they declare this view does not arise from ideological bias (Wood et al, p.3, 1986). Wood et al acknowledge that 'audiocentric' orientation limits consideration of deaf children's experiences to sound and talk dimensions but set out to present this as useful. However, such an approach necessarily entails focus on aspects of communication a deaf child is likely to find most difficult and so fosters a deficit view of the child. Audiocentric focus undoubtedly ignores significant strategies used by children in their communication and paints a deceptively spartan picture of

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their experience of, and competence for, communication. Moreover, Deaf/deaf adults do not accept that dialogue about mode of communication can continue to be suppressed via research which fundamentally denies their linguistic rights (eg, Montgomery, 1981, '86; Pullen, 1992; Corker, 1993).

During the course of my own research I had continually to deal with efforts by the Authority to ensure outcomes would collude with particular ideologies of communication. The Authority insisted that research must be "only observation, not about change" (In-Schools Project, 1985). They maintained that the project should resist being "sidetracked" into debates about communication methods otherwise the work would be construed as "getting in the way" (op cit). It was made clear through formal channels, that failure to toe the Authority line on communication methods would compromise entitlement to continue the research, and this threat had repeatedly to be contested throughout the course of the project.

In this way I gained first-hand insight into the potential uses and abuses of research with which I was relatively unfamiliar at the time. Whilst preparing for the project I witnessed the pressures teachers faced daily to promote practices which perpetuated particular representations of children, regardless of their own beliefs. These tensions shaped a resolve to develop a *modality independent* method of analyzing children's communication in an effort to avoid collusion with the Authority's seemingly transparent attempts to construct barriers to integration for profoundly deaf children. At the time, the political stakes of an eventual research report seemed high and I wanted to make my explanation as strong as possible. I felt prejudicial, ideological bias did permeate many of the research studies being carried out, in particular those by Wood et al (1986) and Lynas et al (1986) which were proving influential at the time. My own research efforts felt extremely vulnerable to manipulation and I wanted to distance myself from some of the more conspicuous risks.

Against this background, a way of accessing deaf children's experience of communication without excluding structural dimensions identified by members of the adult Deaf/deaf community as the key to more complete comprehension of the child's abilities was clearly the first requirement. Principles evolved in relation to this will be examined in the next chapter which outlines the conceptual framework underpinning the study.

So far then, this introduction has attempted to outline the research context, to describe the legislative background to central developments in educational practice, and to highlight some of the linguistic, social and political issues which underpin the educational experience of deaf children. It remains now, to elucidate the specific aims of the project undertaken. The evolving research objectives are clarified next.

1.6 Emergent Research Objectives

The school's advisors had called for the 'experiment' on profoundly deaf children being placed in integrated settings to be closely monitored (In-Schools Project, 1984). In the absence of evaluation by the Authority, this is what I set out to do.

Firstly, since so many writers have expressed concern about how deaf children fare academically and socially in traditional school settings, it seemed timely to explore the extent to which integrated placement might enhance the education and development of young profoundly deaf children. The research context permitted an attempt to describe the social behaviour and communication of a small group of deaf children, experiencing a range of integration practices. Such data could advance understanding of the benefits integrated early school provision afford this group. In addition, the impact and significance of other, related, ecological events, and processes concerning changes in methods of communication during the course of the study, could also be

described. The intention was that data collected should enable reflection on the experiential reality of integration policy and practice for young deaf children.

A holistic approach to observation of a child's repertoire of communication skills was needed, both to enable optimum reflection on a child's accomplishments, and to resist reinforcing negative images of deaf children's abilities produced by modality specific research. Attempting to describe the range of a child's abilities in the fullest possible sense opened up possibilities for challenging the increasingly entrenched view that deaf children can derive only limited advantages from integrated settings (eg, Vandell and George, 1981; Vandell et al, 1982; Lindsay and Dickinson, 1987).

It seemed important to avoid analyzing a deaf child's experiences with reference to lowest possible denominators and instead to provide the fullest possible description of what deaf children are able to do. This is not a particularly innovatory approach given the general re-orientation of theory and method which has taken place in developmental psychology since the 1970's (see Wood, 1988). However in the context of the education of deaf children, even where writers take great care not to construe barriers to learning as if being within the child, emphasis typically is attached to what the child can *not* do because studies are either modality specific (Wood et al, 1986, '89, '92), or restricted to gross indicators of social behaviour (eg, Lindsay and Dickinson, op cit). The authors mentioned here have not been alone in suggesting deaf children do not benefit adequately from being in integrated settings, but their fears are based on data which does not comprise a sufficient picture of the resources upon which deaf children might capitalize.

Recent research on pragmatic and functional aspects of communication development has emphasised the psychological aspect of what a child is trying to do in communicating, rather than structural, syntactic or semantic features (eg, Bates, 1976;

Bates et al, 1980; Mohay, 1990). In relation to this, a methodological aim for this study, was to develop a means of exploring young children's communication behaviour, which facilitates productive interpretation and analysis of a wide range of communication abilities by appraising, as far as possible, everything a child can do. Since the complexity of the utterance is not central to this type of analysis, even the communication of children with limited speech, vocabulary or command of syntax can be evaluated. Children's interaction, then, is studied beyond the level of utterance to the level of conversation which enables optimal assessment of communication resources and abilities. Comparison between deaf and hearing children is straightforward and meaningful.

Strategic interactions between deaf and hearing children can be examined by exploring the dynamics of their interaction. It then becomes possible to explore key theoretical issues such as what variables besides linguistic proficiency influence the effectiveness with which a child can communicate. Having collected information about how deaf children actually do communicate, it should be possible to consider ways in which interactions between them can be encouraged for successful integration. Parallel data about deaf and hearing children would permit consideration of a wide range of educational issues.

A series of general questions embedded in both the research context and deliberations above, can now be outlined.

The primary aim was to find out about the experience of profoundly deaf children in the newly set up facility for integration. Integration has become something of a dictum in educational practice and information about what happens to the children it encompasses is needed to ensure positive outcomes for other deaf children and to subsequently evolve principles for good practice. In this study, emphasis was placed on interaction as a means of illuminating whether the parameters of the integrated setting were such that deaf children were meaningfully

integrated. Such an appraisal amounts to looking at the quality of the communication, and thus educational experience, of these children. Self-identity, communication and culture are dominant themes for an analysis of integration, which though inseparable, are not static and so can be investigated in relation to context. The notion of access to communication environments is singularly important given the principle that communication determines access to shared experience and learning (eg, Vygotsky, 1962; Bruner, 1975).

I decided to focus on opportunities for communication in integrated settings as a way of assessing the extent to which deaf children could be active participants in everyday communication and school life. The intention was to maintain a focus on each individual child and follow them through their experiences across time. To do this it was necessary to evolve a way of entering into communication as an outsider yet capture as much as possible about the processes with which children were involved without distorting the integrity of their experiences. Of course, the distance between myself as an observer and the observed is necessarily material.

To some extent the information this report draws on is built out of traditional inferential methods, but the over-riding concern is to critically examine what happens to the children within a range of integrated settings and to examine related contingent influences as fully as possible. Thus, I have not resisted constructing and reconstructing interpretations and ethnographic approaches have also been valued (eg, Hammersley, 1990).

1.7 Resume

The dominant theme of this thesis is the interplay between mode of communication and children's experience of integration. Both the nature of children's communication in a variety of educational settings, and the limitations of different policies about communication, and models of integration in classroom

settings are explored. The next chapter provides an overview of issues which guided research design and methodology, and presents critical viewpoints on decisions made about how to carry out the research.

Discussion then turns to the data, revealing contrasts in the experiences of the group of deaf children and the group of hearing children in integrated nursery settings which are distinguished by the availability or non-availability of sign within an English language context. In the fourth chapter, matters such as age, gender, race and first language are considered in an evaluation of individual differences which may impact on a child's experience of integration. Alternative models of provision, and the relative efficacy of segregated and partially integrated settings, are then assessed. Finally, the strengths and weaknesses of this attempt to make sense of deaf children's experiences of integration are evaluated in terms of implications of the findings for education policy, in-schools practice and subsequent research activities.

Before launching into further discussion, I should make clear that the material on which I have based this account is not based on the perspectives of service providers, whose own preoccupations would need to be taken into account for a more complete analysis. The review presented is not intended to judge the competence of individuals involved in the provision examined, but to make explicit the complexity of both their own positions and issues which faced them and the children with whom they worked.

We can now return to the next point on the agenda, which concerns the development of a conceptual framework which will permit the widest possible exploration of the issues described. This comprises the focus of the next chapter, along with discussion of the steps that were taken to bring the study to fruition.

CHAPTER TWO : CONSTRUCTING A FEASIBLE RESEARCH PROJECT: DECISIONS AND RESERVATIONS

2.1 Introduction

This chapter examines different strategies for obtaining material for an observation study of the opportunities young deaf children have for interaction and communication in integrated settings. Firstly, it addresses ways in which the setting up of a study to observe opportunities for communication in itself contributes to the construction of data. The processes involved in gaining access to children in schools, becoming familiar with the setting, observing opportunities for communication and analyzing them, all play an important role in framing the analysis and eventual outcomes of the study. Ethical considerations in observational studies of this type are examined in the course of discussion. Secondly, this chapter describes the evolution of methodological tools. An attempt is made to theorise notions of communication intent and modality independence for the purposes of the research. Thirdly, research activities are described in detail, followed by an appraisal of analytic reservations.

2.2 Methodological Dilemmas

2.2.1 Why an Observation Study ?

Selection of methodological tools was directly constrained by the Local Authority whose agreement was required before the research could be implemented. In Chapter 1, some of the background which explains why observation should be the Authority's preferred modus operandi might have become apparent. To clarify, the key LEA representative believed observation to be the least bothersome of research activities which could be tolerated in a situation where permission for an investigation was only being given with reluctance in the first place. Observation was felt to be acceptable because it could not make reference to internal

psychological processes of individuals under scrutiny and could make no claims to understand the meaning behind social and individual behaviour. The Authority felt observation of the integration process might be less partisan than, for example, interviews, which were deemed unacceptable because of their potential for eliciting the views of those involved.

Permission for the research to offer staff opportunities to reflect on their experiences and reconceptualize if they wanted to do so was withheld on the grounds that "schools are under a great deal of pressure" (In-Schools Project, 1985). Thus, it was not possible to design a mutually reciprocal or developmental research project, and explorations have been largely confined to description. Therefore, from the outset, limitations on the way the research could be operationalised influenced construction of data. The proposed review could not be genuinely informed by participants at any stage. Possibilities for building the project upon the personal experiences of either those directly involved in planned integration, or those affected by it were refused and reference to the role that Deaf/deaf people themselves wish to play in research which impacts on their lives was generally regarded by the Authority as dissident. (Oliver, 1990, '93, provides extensive discussion of the role of disabled people in disability research).

Given these fixed parameters, I set about designing an observation study that would elicit as much information about the process of integration and its impact on profoundly deaf children as possible.

2.3 Development of An Observation Coding System

Observation of behaviour in the naturally occurring environment has often been considered the method of choice in research of children's communication development. Despite this general consensus, there is a wide divergence of both opinion and

research practice with respect to both the particular techniques employed, and the aspects of the communication situation which can most fruitfully be addressed in observational studies. The methodological dilemmas of psychologists and educationalists alike, framed in the terms of such issues as ethnographic 'rich' interpretation vs 'objective', behaviourial description are not of course unique to these disciplines and in their nature are not susceptible to prescriptive solutions which claim to be valid in every circumstance.

The approach adopted in formulating a coding scheme for this study, represents a partial solution to a problem with many different conceptual, practical and ideological dimensions. Some of these are addressed in this discussion, but it will not be possible to cover them exhaustively here. In particular it must be recognized that collecting observation data is a highly interpretive activity and does not comprise neutral, unaltered reflection on what has been witnessed (eg, Mills, 1988). The constructive character of observation coding invariably means that a degree of analysis takes place *during the course of* describing the observation and it is important to keep this in mind.

2.3.1 Observation and accessing deaf children's communication

Methodological problems are exacerbated in the case of observational studies of deaf children by the ongoing and fundamental disputes surrounding the mode of communication issue referred to in Chapter 1. As previously stated, a methodological tool was required for the purposes of this study, which would enable a child's communication to be accessed without reducing the depiction of communication. A major shortcoming of most previous studies of deaf children's communication development can be seen in their virtually exclusive orientation to the *linguistic* description of communication behaviour; that is they have been concerned with either sign or spoken language

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acquisition as a process of structural mastery (eg, Gallaway, et al, 1980).

This has led to two divergent sets of accounts of deaf children's communication in the literature, based on two opposed prescriptive approaches (oral-aural and manual-visual). The disadvantage of such approaches, whether they focus on either sign or spoken language, is that they necessarily neglect both the possible contribution of simultaneous communication strategies to the development of communicative interaction, and the fundamental problem entailed by inferring children's communication resources from the *formal* means employed for their realisation. While it is not possible to claim to be neutral with respect to the general controversy about mode of communication, it is considered important to utilise methodological tools which are (as far as practicable) theoretically neutral with respect to communication mode, if conclusions are to be drawn about deaf children's communication competencies and intentions as distinct from their strictly linguistic knowledge and abilities.

2.3.2 A Procedure Which Deals With Modality Impasse

The question of intention is central to the coding system developed for the research described here. A key contention is that coding judgements based upon assessments of a child's communicative intent[1] offer more useful and instructive insights into a child's interactional abilities (communication competence), than do coding judgements based exclusively upon the linguistic form of communication acts. It is a necessary corollary of this contention that an intention-based coding system can meet the necessary requirements for validity, reliability and overall methodological rigour, quite as fully as can form-based coding system. A detailed account of the

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[1]The term "intent" is used here to refer to "the deliberate pursuit of a goal by means of instrumental behaviours subordinated to that goal" (Dore, 1975)

reliability of the coding system can be found further on in this chapter.

A further important objective of the research has been to examine possibilities for enhancing the social and communication development and environment for deaf children. In this respect too, a focus on intention affords a greater degree of psychological and ecological validity, since individual variations due solely to a lack of command of communication resources can (in principle) be distinguished from variations in communication competence.

The observation coding system described is therefore based upon the premise that those aspects of a child's communication development which are most relevant from the point of view of understanding the child's *competence as a communicator*, are manifest more in their repertoire of communicative intentions, than in language specific lexical or structural features. 'Intention' is not however, considered to be a unitary phenomenon, but rather one that is structured in relation to a variety of features of communication, cognitive and social content and context. The coding system eventually developed attempts to capture the principal features of the communicative intention of the child, as manifested in a communication act, as well as the principal features of the relevant context for that act.

The coding system encapsulates a multi-dimensional pragmatic analysis. It enables the range of communication actions and exchanges in which the child engages to be analyzed in considerable detail, and provides sequential information which reveals whether and how these exchanges offer possibilities for encouraging communication and learning. The coding system thus addresses both the communication objectives children pursue, and the discourse contexts within which these are elaborated.

Six dimensions of communication are addressed by the coding system: Initiation, Response, Mode of Communication, Referential Communication, Interpersonal Communication, and Interactive Context. Each of these dimensions constitutes a variable in the coding system which may take one (or more) of a number of possible values. The coding of the value of each variable is independent of the coding of other variables. As indicated above, some values for some variables are non-exclusive. Further detail explaining the basic principles underlying the construction of the coding system will be given, together with a description of the observation procedure as this chapter progresses.

A detailed description of the categories of the coding system, organised in terms of the six variables, explaining the criteria for the application of each category and giving examples of their application can be found in Appendix 1.1. Further examples of coded interaction, intended to demonstrate how the coding system operates in practice are also provided in Appendix 1.2.

Without doubt however, the way in which features of communication are described and coded involves decision making processes which encompass a variety of cultural assumptions, and it is accepted that the extent to which the data can capture the 'real' character of communication is always limited.

At this point it is appropriate to describe the observation coding system evolved for the purposes of this research.

2.4 Principles of the Observation System

2.4.1 Communication Act and Communicative Intent

The basic unit of analysis in the coding system is the *communication act*, considered as an intentional act orientated to the fulfilment of certain communication goals, constructed

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from available linguistic and non-linguistic resources. Implicit in the notion of communicative intent is the assumption that the structure of a communication act depends both upon communication purpose, and upon the context within which the act is constructed. It is also assumed that communication acts are *multi-functional*, that is, they may reflect in their structure the simultaneous realisation of a variety of communication functions.

Each specific communication function can itself be viewed as a selection from amongst the option governed by a communication "meta-function". Communicative intent then, is a complex of purposes, realised in relation to a context by a single communication act.

The structure of a communication act is considered to reflect first, different dimensions of the psychological structures ("communication metafunctions") underlying the intentional construction of the communication act, and second, different dimensions of the communication context. The coding system distinguishes two principal dimensions ("metafunctions") of communicative intention: Referential and Interpersonal. This analysis is not exhaustive, but is hopefully both sufficient to reveal significant development processes, and minimally necessary to capture the interplay of structure and function in communication. The coding of communication acts as (in principle) multi-functional thus enables analysis in terms of *content* as well as *context* and *purpose*. It should be noted here that, while the coding system is based upon "pragmatic" principles in the general sense of that word, it goes significantly beyond interpretations of pragmatics in terms of "pure" function, or speech act classification, since codings also yield a basic specification of message structure in relation to referential context.

The communicator's communicative intention is also to be understood in terms of the actions and events which precede and

follow the particular communication act. While the coding scheme does not provide for a detailed discourse analysis, it does provide the minimal necessary information for the later implementation of a conversation analysis. This information is yielded by the application of the Initiation and Response coding variables. These variables (communication dimensions) are, in the context of the other variables, not merely indices of the number of "turns" initiated by and responded to by the child, although they do provide that important information. They also contribute to pragmatic meaning-in-context, since the success in attaining a particular communication goal - such as a request - may be dependent upon the response of the receiver.

The other two variables   Mode and Interactive Context - are not directly related to the structure of the child's communicative intention, but they encode information necessary for the evaluation of the overall communication performance of the child. The Mode variable encodes the *means* employed by the child in realising the communication act, whose specification is otherwise *independent* of these particular means (see below). The Context variable, as its name suggests, encodes the macro-level features of the interpersonal interactive setting within which the communication takes place. Both the range and the frequency of types of communication act may be context dependent in this respect, and the employment of this variable makes it possible to investigate such context-dependence.

Furthermore, the Initiation, Response and Context variables together make it possible to compare the principal features of the actual communication environments of hearing and deaf children. This possibility is essential if the goal of an observation study is not only to characterize comparatively the development of the communication competencies of individual children, but also to take account of the *ecology* of the communication: that is the nature of the constraints and supports afforded by the environment for the communication activities of the developing communicator.

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It should be clear that the coding system is oriented to the recording of the *meaning* of communication acts, rather than to the *structure* of the message, if the latter is understood in terms of the elements and options provided by a given linguistic code. Message structure does achieve a representation in the coding system, but it does so in terms not of the selection of linguistic code options, but rather of the concurrent selections from within communication "metafunctions" in relation to a particular context. Given the multi-dimensional conception of meaning, there is no one formal element or combination of elements which corresponds to the "meaning" or "primary intention", of a communication act. Meaning (and intention) is taken to be the outcome of a complex interaction between communication goals, communication resources, and the communication environment including, and perhaps most importantly, the communications of others.

While it is possible to isolate, for example, a dimension in the coding scheme which roughly corresponds to the "propositional content" of the communication (Referential Communication), and another which roughly corresponds to its "pragmatic force" (Interpersonal Communication) it is important to emphasise that these are not intended, in the coding system, to be "true" descriptions of "components" of either communication competence, or of the meaning system of a language. Rather they are viewed as ecologically appropriate descriptions of relevant dimensions of the overall communication situation, contributing to the child's construction of dynamic, context-bound meaning intentions. Although it is assumed that these dimensions reflect (or are represented at) some level of psychological reality. it is not assumed that this relationship is a direct one. The main interest is in producing ecologically valid psychological characterisations of a child's developing communication competence, and the coding scheme is a means to that end. It is not in itself a "theory" about the development of communication competence, although of course it does reflect certain theoretical assumptions about that development process.

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2.4.2 Modality Independence

For the purposes of a comparative study of the communication behaviour of young deaf, and hearing, children, structural (lexico-grammatical) comparisons alone are both inadequate and misleading since variations between individuals in acquired linguistic resources are thereby confounded with variations in the range and complexity of communication acts produced and understood. It is this consideration which led to adoption of the communication act as the basic analytic unit for the coding system.

Although a strictly linguistic comparative analysis of the (spoken and sign) language acquisition processes of deaf and hearing children is, a valid research objective in its own right, and although such analysis could constitute a strand of investigation complementary to the investigation of communication acts, it is not the chosen focus of this study. The research question which the coding system is intended to address is not whether deaf and hearing children, in their communication behaviour are saying/signing the same or equivalent communication goals, where equivalence is defined in terms of the range and complexity of communication acts.

The primary objective of the coding system is to provide a descriptive characterisation of communication acts independently of phonological, lexical and grammatical structures which realise these acts. This *modality independence* of the coding system means that it is suitable for analyzing the communication behaviour of children who may have very limited speech, vocabulary or command of syntax, while never the less yielding directly comparable data for profoundly deaf and hearing children. The coding system is capable of analyzing spoken communication, signed communication, and non- and pre-linguistic communication in such a way that the description of communication behaviour of children with little or no formal spoken or sign language is not necessarily impoverished with respect to

descriptions of spoken language. The modality independent approach to describing communication behaviour distinguishes the present study both from studies of deaf children's communication which are predominantly concerned with sign language acquisition, as well as from those which focus on deaf children's talking (see for example, Wood et al, 1986).

It is even so, necessary in conducting a comparative analysis, to record sufficient information concerning the means employed by the child to realise communication goals, as is necessary for the investigation of possible dependencies between the availability of structural resources and development of communication competence. The Mode of Communication variable enables the observer to record the method, or vehicle, of communication employed by the communicator in realising their communicative intention in a particular communication act. Mode is defined, in part physically, in terms of channel, and in part structurally, in terms of whether the communication involves, partly or wholly, the use of recognisable conventional speech or sign language signs.

The modality independent nature of the coding system carries with it the further advantage that the observation procedure does not necessitate the transcription of (sign or speech) utterances: the coding system is designed to be used in a real time, online mode.

2.4.3 Target Child Focus

Focal individual sampling is regarded by many researchers as the observation technique of choice in studies of social behaviour (eg, Altmann, 1974). Following the 'focal animal' observation technique used by ethologists, and adaption of this method in previous child observation studies (eg, Sylva, et al, 1986), the coding system works on the basis of focus on a target child in the naturally occurring environment. Occurrences of relevant behaviours (communication acts) are recorded for a particular

individual during a pre-specified sampling period. Thus, one child is studied during a specified time session, across a range of unspecified situations, in order to establish a profile of that child's communication behaviour and the interactive context within which it occurs.

It is important to note here that target child focus does *not* equate to an exclusive concern with the communication acts produced by the target child her or him-self. Since the coding system is intended to characterise the communication environment which provides the context of those productions, communication acts directed to the child are also encoded. Directionality of the communication act is unambiguously recorded in the coding for the Initiation and Response variable (see below).

2.4.4 Online Coding

The coding system is designed to permit the direct recording of communication behaviours, without the intermediate step of transcription being necessary. It can be employed to record either directly observed or filmed (videotaped) communication behaviour. In both cases the coding procedure is *online*, that is to say coding takes place simultaneously with the observation of the behaviour. The observation procedure is detailed next.

2.4.5 Time Sampling Strategy

A time sampling method was employed as follows:

A target child was either directly observed, or filmed, for five continuous minutes. In the direct observation mode, and from video-tape, observations are recorded on coding schedules at 15 second intervals (Appendix 3). When twenty observed sequences are encoded the observer changes focus to watch the next target child. During an observation session, I focused on a group of four target children, thus each child could be observed for five

minutes at least twice per hour. When observation of the fourth targeted child was completed the observer reverts to watching the first child targeted again and so on. Target child order needs to be rotated across observation sessions to maximize representativeness. Systematic rotation plays a critical role in helping cut down the problem of unknown variable bias. For this study, children were observed in all public arenas of everyday school life, including classrooms, clinic rooms, playgrounds and other parts of the school, as well as during a wide variety of excursions.

The advantage of using a focal individual observation technique is that the observer follows the target child and stays with them during the sample period, obtaining observations from a range of situations, in some of which children have not typically been under cross observation. This advantage is retained by not having multiple focal individuals within one sampling situation. Observations in this method are made on one target child, to the exclusion at those times of detailed information about others in the group. Therefore certain questions, for example relating to behaviourial synchrony between participants, could only be obtained where two observers each simultaneously observe one target child member of a focal pair but this was not an aim of the study reported here.

It is essential that observations commence at a pre-determined time, independently of the target child's behaviour. This is important because the nature and extent of dependence would otherwise confound the data sampled. Thus, it is not appropriate to begin observations 'when the target child does something interesting' for example. Similarly, a fixed time must be predetermined for when the observer will terminate observations. The termination rule is again important because sampling could otherwise assume dependence with behaviour observed. The observer should not, for example, stop recording when nothing of particular interest is occurring (see Sackett, 1978, for a comprehensive discussion of these rules).

In principle, the observer watches the target child for 10 seconds and codes in the next 5 seconds, watches for 10 seconds, codes in the next 5, watches for 10 seconds, codes in the next 5 .... continuously throughout the 5 minute period, at which point 20 observations will have been recorded. A shorter observation period may be necessitated if the target child does not remain in public view for the complete five minute period.

Hence in one 15 second observation interval, the observer encodes details for each of six basic aspects of communication behaviour. Firstly, the nature of either (i) initiation the child engages in, or (ii) responses the child makes are recorded. If an interaction is described within either initiation or response category, then (iii) mode of communication which the child uses, must be outlined; (iv) referential and/or (v) interpersonal features of the communication act are then coded. Finally, (vi) the social context in which the target child functions is noted. Social context is always coded even if no interaction takes place during the observation interval.

Particulars of the principal research instrument have now been outlined. With this description of the observation procedures to be used, we can now turn to the research scenario, and remaining methodological issues.

2.5 Setting Up the Study

2.5.1 Gaining consent

Obtaining the school's consent to the project and my presence refers only to getting the agreement of the school's inspectors and head teachers. Senior managers expected that teachers and other staff would acquiesce with the project once it had been given the go ahead at managerial level. Tensions this gave rise to undoubtedly impact on emergent data.

Most teachers seemed happy to be involved in the research project. They appeared to accept that they were involved in a unique educational venture, and monitoring and evaluation of outcomes for children would be a necessary and desirable feature of implementing change.

At the start of the project I tried to give individuals power in decisions about observation that would take place in their classrooms by letting it be known I didn't mind if anyone preferred a situation was not observed, and so on. True empowerment was negligible however. Two instances illustrate this point. Firstly, as the project commenced, all nursery teachers and one classroom assistant had been newly appointed to the school. These individuals were relatively powerless should they have wished to object to being involved, as the project had already been approved. Later on however, when a new teacher joined the nursery half way through the study, problems relating to voluntary participation became even more conspicuous.

The new teacher, taking up her first post qualification job, entered into a climate in which her views on communication were openly opposed by almost all of her new colleagues. She was therefore anxious about operating in a context in which formal observation procedures took account of her interactions with children. When she expressed reluctance to permit continuation of observation of children in her charge, other staff believed this to be motivated by fear of having her methods appraised. Moreover, established staff felt committed to continuation of the project and treated her resistance as uncooperative, subjugating children's interests and self-centred. Eventually I managed quite amiably, to persuade this teacher to take part in the project and to agree to continued observation of children who were now her responsibility, but for one reason and another, she was to all intents and purposes coerced.

Parents were in an even less powerful position regarding involvement in the study than teachers and classroom assistants.

Professionals controlled my access to parents and this gave rise to a number of influences which militated against freedom to opt out for parents.

Formal permission was sought from individual parents by sending a letter on headed school note paper, outlining the purposes of the study. Parents were informed their child would be included in the research unless they specifically asked me not to include them. At the time, this strategy for eliciting parental agreement was regarded as entirely appropriate by both myself and the school. As I had the letter translated into Bengali where this was the family's first language, it was considered I had taken more steps than usual to contact parents in a meaningful way. Actually however, parents had little choice over whether their child should be involved in the research or not. My work was explicitly sanctioned by the professionals who determined entitlement to service provision. It would have taken a brave parent to challenge the right of those same professionals to expect cooperation in an in-service evaluation of their child's experiences.

Children themselves, as in most observational studies of this type, were not afforded the privilege of having their consent sought. The question of who had a right to give or withhold consent for children to take part was particularly complicated when the particular teacher discussed earlier wished children she regarded as 'hers' to be excluded, even if their parents were happy for them to be included. It is acknowledged with regret that a variety of power relations and their reverberations have been considered only briefly and in retrospect.

2.5.2 Getting In

Prior to beginning the formal observation activities which yield principal data for this thesis I spent time in school in order to learn about the context in which integration was being

implemented. During a number of visits to the school it became evident that staff were familiar with outsiders coming into their classrooms. It seemed to be expected that as the provision of an integrated environment for profoundly deaf children was unusual, those involved would find themselves under scrutiny.

School staff appeared to perceive me as relatively unthreatening, undoubtedly because of my relative youth and naivety. Mostly they were willing to share quite a lot of 'insider' information seemingly because I was positioned on the 'not as expert as us' side rather than 'more expert and able to tell us where we are going wrong'. Staff seemed keen to 'spill the beans' (see Hammersley and Atkinson, 1983) and were eager, for example, to tell me about the frustrations of coping with the reality of implementing integration, the nitty gritty of working with colleagues who felt differently to them about what was happening, and about the exhausting task of coping with mixed, continually conflicting, messages from management about how things should be done, even though these insights were not solicited. Thus, access to a variety of information has further influenced the nature and interpretation of data.

During the 'getting in' phase I also piloted the observation system and carried out modifications and enlargements which led to the final version described earlier in this chapter.

2.5.3 Observer Presence

Researchers are often advised to safeguard against the influences of observer presence on environments they are observing (eg, Croll, 1986). It is assumed that undistorted measurement of the situation is essential if meaningful results are to obtained and suggestions such as "try to become a 'a *fly on the wall*', as inconspicuous as possible" are often found in texts on how to observe (Sylva, et al 1986, p.230, original emphasis). During the study however, I realised the prospect of being invisible is a myth and, moreover, unhelpful.

As Woolgar points out (1993), once an observer is in situ they are no longer the sole determinants of their own identity or actions. In school for example, staff often asked for my opinion about children and events. Some of these questions impacted directly on the nature of data available for example, "Shall I get the instruments out so you can see them playing together ?" "Would you rather we sat in the light ?" and so on. Other questions led to less overt influences but were possibly more hazardous such as "What do you think about them using signs?" I regarded openness as important in the research process and so tried to give honest feedback whenever requested. To risk influencing the research situation directly in such a way has however, been traditionally regarded as heretical within psychology. Of course it is important not to ignore the effect of my presence on those involved with the study, and possibly tensions could have been avoided if I had disguised my presence and observations, but the attendant ethical problems that would go with not revealing my role outweighed any advantages of covert observation, in my view.

Clearly, however, a complicated set of barriers and boundaries determine relations between the observer and the observed. Trying to maintain distance as an observer seems unlikely to ensure a truer image of events and practices will be assembled. In sensitive situations such as studied here, in which participants had a priori reasons for feeling insecure, it seems beneficial to reinforce distance and reflect on this, rather than try and minimilize it.

Nevertheless, the political context in which the research was conducted necessitated some attempt to demonstrate that I was observing strictly what I claimed to be observing. A conventional indication of construct validity was required to bolster the impression that data has some kind of meaning which others can verify. Similarly, an indication of reliability between observers has traditionally been viewed as a sensible way to share the interpretative burden. Therefore, both the observation coding

system and observer were subjected to stringent assessments of validity, reliability and overall methodological rigour which are reported next.

2.6 Reliability and Validity

It is evident that an online observational coding system such as that described, in which behaviour is coded directly and without recourse to transcripts, makes several demands upon the observer in terms both of speed and accuracy. Use of the coding procedures and categories is assisted by the orientation of the observer to the communicative intention of the observed child, rather than to structural features of the message. In this sense, as mentioned before, the validity of the system is interpretive, based upon the subjective and inter-subjective understanding of the observer, and upon mutual knowledge of the context of utterance and act. The methodological proposition underlying the coding system is that such interpretive validity equates, for the purposes of studies such as the present one, with ecological validity. Such validity is consensual, definitional and qualitative rather than being quantitative or related to external criteria; although the data yielded are suitable for quantitative and statistical analysis.

The following indices of reliability were established between independent observers :

- inter-observer reliability
- reliability across population
- reliability across setting
- reliability over time
- reliability between observations made directly and those video-recorded.

Preparatory groundwork therefore included two inter-observer studies designed to assess construct validity determined by the ability of theoretical propositions embedded in the coding system to stand up in practice, and agreement between independent observers. These assessments are described next.

2.6.1 Inter-observer Study (i)

The first reliability test was concerned to establish agreement between observers, reliability of the coding system in use across populations, and reliability of the system in use across different settings. These assessments were additionally intended to enable categories which were the chosen focus of the observation system to be tested for their general usefulness and transferability. The study was therefore conducted in a different school which offered integrated nursery provision for partially hearing children. Observing children described as partially hearing gave some opportunity to assess construct validity because coding of a continuum of communication behaviours spanning the range of skills expected of both deaf children and hearing children would be required.

Two independent observers observed target children in accordance with the procedure outlined previously. Three reliability sessions, each comprising two and a half hours, were conducted. The first half an hour of each session was used for collaborative observation in which observers tried to share their interpretation of a child's communication and ways of assigning behaviour to categories. The purpose of this was to tighten procedural guidelines, ensure conditions of exclusivity and exhaustion were met as far as necessary, and assess the degree and nature of observer inference. Independent observations were then coded over the remaining two hours of each session.

Independent observations were compared value by value. This provides a meticulous assessment of reliability because

observations are not collapsed over time. Cohen's Kappa was calculated to measure reliability on each variable, controlling for chance agreement (Cohen, 1960). Reliability scores for each variable on the coding scheme are shown in Table 2.1.

Table 2.1

Table to Show Results From Inter-observer Reliability Study (i)

Variable	Percentage Agreement	Cohen's Kappa
Initiation	77.3%	.72
Response	88.6%	.80
Mode	81.9%	.73
Referential	87.1%	.76
Interpersonal	88.7%	.76
Context	88.5%	.80

The larger Kappa gets the more agreement there is between the two independent observers. Thus data summarised in Table 2.1 indicate trained observers were consistently able to generate the same description of a child's communication using the coding system developed for this research, and that reliability can be obtained in observations of children with a range of communication skills across different settings and occasions. Relations between variables being measured and the theoretical framework in which observation procedures were embedded were found to exist and taken as evidence for the construct validity of the observation system. Utility of the coding system across settings and target populations was also demonstrated by these assessments.

2.6.2 Inter-observer Study (ii)

The second inter-observer test, carried out half way through the main study, focused on repeat reliability, ie, observer stability

over time; and reliability between observations made directly and those video-recorded as another indices of construct validity. The procedures described above were repeated but this time observers compared independent observations made directly in the main study setting with simultaneously video recorded data. Results given in Table 2.2 suggest trained observers can sustain the ability to generate the same description of a child's communication over time. As reliability was established between direct coding of observations and those made from video-recordings, further evidence of construct validity was accepted.

Table 2.2

Table to Show Results From Reliability Study (ii) [Repeat]

Variable	Percentage Agreement	Cohen's Kappa
Initiation	88.6%	.80
Response	88.8%	.80
Mode	83.3%	.74
Referential	88.1%	.76
Interpersonal	87.7%	.76
Context	88.6%	.80

2.6.3 Reliability achieved

In both reliability studies it was discovered that disagreement related less to criteria for application of coding categories, than to decisions about the frame of the communication act observed within the fifteen second interval. This may have been reflected in the first reliability study attempted, in the difficulty establishing a very high level of agreement for initiation. Coding initiation was also complicated because a child may have responded to initiatives as perceived by them which were not identified by the observer as initiations, in

which case our usual response was to code the event the child had construed as an initiative. Even so, the high degree of overall accuracy achieved, confirms that selection of the focal communication act is, for the most part, relatively unproblematic. The categories were found to be mutually exclusive and apparent similarities in the coding definitions utilized did not create difficulties in the actual coding process.

After many hours of discussion and experimentation, the impossibility of producing fail safe guidelines to determine the specific start point of the communication act to be coded was realised. This is obviously because any interactive sequence is free flowing and may not have clearly marked boundaries. Moreover, it must be recognised that an observer is never neutral with respect to gaze. Thus it is believed that the reliability data presented is, in fact, artificially deflated because where different sequences were selected for observation all six variables were necessarily coded differently by each independent observer. This means that the interpretation of communication acts per se, is likely to be even more robust than the tabulated results suggest. The need to address disagreement between observers arises in relation to selection of acts, but not in relation to the description of those acts.

One exception to this however, concerns the description of signs in the mode of communication category, which was extremely complicated for a variety of reasons. An immediate weakness forced upon the observer was the lack of recourse to a native BSL user, or to a deaf adult familiar with any variation of sign usage. Thus the reliability coding was completed by overtly deficient observers, who were exceptionally ill equipped to determine the status of signs we saw. The principal data coded for the study suffers from the same weakness. Moreover, a mixture of sign systems was used in the nursery ranging from children's invented signs, through SSE to full BSL, with all of which I was less proficient than nearly everyone under study (one reason for introducing video recordings once the SSE phase moved fully into

gear). In the later stages of the research, the task was inestimably compounded when 'private' signs were evolved to replace mutually recognizable signs which were prohibited by that time. From the outset, the decision was taken to code any visual-spatial communication that could be construed as a sign as a 'sign,' in order to credit children with a linguistic, rather than non-linguistic, act wherever possible. Sometimes these acts will have occurred many times and been coded as, for example, 'non-verbal', before their sign status *for the child* was recognized by the observer. These difficulties are reflected in the reliability scores attained in both studies (Tables 2.1 and 2.2). It is essential to understand these limitations as they certainly denigrate data relating to sign if an accurate record of BSL is assumed.

Not withstanding the generality of these points, the reliability of the study is felt to be adequately demonstrated in terms of methodological rigour.

2.7 Formal Observations

Formal observations were conducted over an eighteen month study period. Breakdown of component ecological events is shown in sequential order in the table overleaf :

Table 2.3

Table to show breakdown of ecological events studied

Setting	Model of Integration	Communication Policy
Nursery	Segregated	Oral/Aural
Nursery	Partly Integrated *	Oral/Aural
Nursery	Partly Integrated *	Sign Supported English
Nursery	Fully Integrated	Sign Supported English
Nursery	Fully integrated	Oral/Aural
Reception	Part-time Integration	Sign Supported English

[* During the phases described as 'partly integrated' building work for the new integrated facility was not complete and deaf children were housed in assorted make-shift accommodation. The number of hearing children on roll was restricted because of this, and integration in these circumstances, was relatively ad hoc]

All observations were conducted in uncontrived, ordinarily occurring settings. No specifications were made about choice of activities, topics, materials, groups, timing and so on. I tried to include as much as possible of 'naturally occurring' school life, both inside and outside of the classroom.

Video-recorded observations were made using hand-held equipment focused directly on the target child. If the child was occupied within a particular area (reading corner, sand-pit, playground boat and so on) I fixed the focus and left the camera unattended so that whenever possible, children were not necessarily conscious of being watched. Prior to formal observation, children were introduced to the camera through games and exploratory play. They soon lost interest in both observation paraphernalia and observer presence, and in general, happily ignored the entire observation process.

2.7.1 Nursery Observations

Deaf children were observed in all settings and hearing children observed in both fully integrated nursery settings. In the nursery each deaf child was observed for eight five minute periods during one full day per week, and their hearing peers for four five minute sessions over half a day in the same week. Data collection extended over an eighteen month period, comprising thirty six study weeks. Thus for each of six deaf children approximately three hundred five minute observation records were collected, generating twenty-four hours of recorded observation per individual. A comparable quantity of data was collected for hearing children during the two periods of their inclusion in the research.

When formal direct observations commenced, deaf children were attending the nursery but hearing children were not admitted for a further month. Therefore, the first four weeks of data relate to deaf children in a segregated setting. Thereafter, a period of partial integration began during which the number of hearing children on roll gradually increased, until the point at which the full quota of hearing children had been admitted to the nursery and totally integrated provision was subsequently available. Video recording of deaf children was introduced to coincide with full integration and cope with the added demands on data collection. Details of changes in communication practice which occurred during the research period have been indicated above.

2.7.2 Reception Class Observations

Some children included in the research moved on from the nursery during the course of the first study year. When these children came together in the reception class, observations were extended to provide data relating to their new environment. The reception class operated a part-time integrated day so that deaf children were educated in a segregated unit based setting for part of the

day and thus were only sometimes to be found in integrated settings. In the reception class, observations were conducted weekly, over half day stretches.

2.7.3 *Characteristics of the Children Observed*

Twelve children were observed for the purposes of this research: six described as 'profoundly' deaf with hearing losses of 100dB or more, and six children classified as normally hearing. One deaf child had Deaf parents and her family used BSL as their first language. For two deaf children, Bengali was the preferred language used in the home. The preferred family language of one of the hearing children was Chinese, and of another, French. The remaining deaf children and hearing children all experienced spoken English as their first language.

The youngest child included in the study was aged 2 years 2 months when observations began and the oldest 6 years 6 months when observations concluded, which gives some indication of the developmental range pertaining to data collected. Children were allocated to matched pairs (deaf child - hearing child) on the basis of age, sex, home background and length of time attending school. Teachers had been asked to suggest hearing children as near as possible to the deaf children on these variables, in order to permit comparisons. Table 2.4 illustrates matched pair combinations and is followed by consideration of the problems with deliberate matching.

The sample is non-selective in that all available deaf children and nominated matches were included and it is very easy to argue the sample will not be representative of, and may bear little similarity to, the wider populations of profoundly deaf children and their same age hearing peers. Certainly, the school setting was not like any other in the country at the time. Appropriate circumspection must be applied to avoid generalizations in analysis and interpretation of data.

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Although the population sample is small, the sample of observed behaviour obtained is considerably larger than achieved in other studies of young deaf children in integrated settings (eg, Levy-Shiff and Hoffman, 1985; Lindsay and Dickinson, 1987; Gregory and Bishop, 1989). By way of further contrast, current significant reports on aspects of deaf children's interaction are based on data collected from isolated classroom conversations video-taped on one-off occasions over a three year period (Wood and Wood, 1991). In comparison, the volume of data on which conclusions are based in the study reported here is relatively substantial which hopefully will help minimize randomness and enhance validity.

Table 2.4

Table to show characteristics of children included in the study, depicting matched pairs

[Names have been changed for confidentiality]

Deaf Child [family language]	Matched Hearing Child [family language]	Sex	Age *	Observations conducted
Luke [SE]	Robin [SE]	Male	4.5	Nursery and Reception
Nicholas [SE]	Darren [SE]	Male	4.0	Nursery and Reception
Serena [Bengali]	Julia [Chinese]	Female	3.11	Nursery and Reception
Shula [Bengali]	Sian [SE+ French]	Female	Sh:3.4 Si:3.6	Nursery
Catherine [BSL]	Faye [SE]	Female	C: 3.0 F: 3.6	Nursery
Charlotte [SSE]	Katy [SE]	Female	C: 2.2 K: 3.4	Nursery

Key to family languages :

SE = Spoken English
BSL = British Sign Language
SSE = Sign Supported English

   * Age when observation commenced (deaf children were admitted to the nursery from age 2 onwards)

In using a matched subject design several problems are encountered. To begin with, the variables on which the subjects are matched must be fairly substantially related to the dependent variable or the matching is meaningless. In this case, matching the subjects on the basis of age, sex, home background and length of time attending school is tolerable since all of these factors are likely to be linked to the child's developing communication competence (see Wells, (1987) for fitting illustration).

Even so, the matching undertaken does have severe limitations. It is of course, very hard to match subjects on more than one variable because it is difficult to ascertain the equalizing power of the variables which lead children to be matched. In this study it is impossible to assess the extent to which children have been successfully matched. The problem of whether matching is a waste of time is difficult to resolve. For example, Nicholas and Darren, whom staff wanted to compare, did have in common age, sex, and length of time attending school, but the extent to which their home backgrounds were comparable is largely indeterminate, and moreover, Nicholas was black (see footnote on page 119) whereas Darren was not. Similarly, Serena and Julia, and Shula and Sian could only be 'matched' in relation to home background in the specific sense that they all encountered minority languages at home. Charlotte and Katy were unavoidably mismatched in terms of age.

Thus the matching of subjects attempted is highly ambiguous and comparison validity can not be taken for granted. In short, matching was undertaken to apprehend the point that staff were interested in these comparisons, and in the final analysis, some psychological and educational questions do not lend themselves to an easily controlled experimental approach.

In relation to the above point however, Kerlinger (1981) argues "let us not throw out the baby with the bath" (p.311). It is imperative to recognize the advantages and disadvantages of pairing subjects in a particular research situation, and in

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relation to this, the request from teachers for comparative data relating to individual children was the driving force in the decision to use matching for analytic purposes.

The multiplicity and complexity of variables used to assign children to pairs reveal that it is misleading to assume that matched pair comparisons attempted in Chapter 4 are characterised by the certainties associated with unequivocal experimental matching.

2.7.4 Characteristics of the School

Historical details, pertaining to the study school setting have been given in Chapter 1, in which moves to provide integrated facilities for profoundly deaf children by assimilating a unit for deaf pupils in to an ordinary primary school when a special school for deaf children was closed, have been elucidated at length.

Within the study school, nursery and reception classes were the focus of the research. During the first year, the nursery was staffed with two full-time teachers, neither of whom was a qualified teacher for deaf children. The teacher to be in charge of deaf children in the nursery was required to attend an In-Service course for probationary 'teachers-of-the-deaf'. Her appointment was regarded as a great asset even so, because her primary background went some way to balancing a strong secondary bias among Unit staff (In-Schools Project, 1984). During the second year, a newly qualified specialist teacher was appointed to the nursery as the teacher responsible for deaf children. The original nursery class teacher, then became responsible for deaf children in the reception class. Two full-time NNEB nursery nurses and a part-time classroom assistant were also based in the nursery. The nursery consisted of two rooms attached to a large open-plan area with access to an enclosed playground outside. The reception facility comprised two large inter-connecting

classrooms, plus a separate classroom, some distance away, for segregated activities.

Throughout the study period changes in nursery management and practice were frequently implemented in response to various internal and external pressures. Later on it will be argued such pressures on teachers and other staff are likely to force practices which perpetuate the oppression of deaf children in integrated settings; some instances of this have already been referred to in Chapter 1.

2.8 Analytic Apprehensions

The research outlined above was designed in the tradition of reductionist research in which attempts to peel away bias in interpretation have long been applauded (eg, Kerlinger, 1981; Cohen and Manion, 1980). When I embarked on this project I did so as a conventional Psychology graduate trained to believe in the quest for 'realism' and accepting a history of psychology as resistant to reconceptualizing methodology. I was firmly attached to the fantasy of collecting 'objective' data and began to recognize misplaced emphasis on the discovery principle only much later on.

Some original concerns, such as for example, the aspiration to minimize impact of the observer on the research situation as described earlier, typify the epistemological challenge. Now I think it would have been better to have recognized bias as a resource in the process of discovery. There will undoubtedly always be a mismatch between objectivity and knowledge, particularly where the pursuit of knowledge fails to take into account participants own understandings, and in retrospect, it is not difficult to recognize ways in which the research reported here would have benefited, perhaps considerably, by distance from the illusion of objective measurement.

The personal cost of deconstructing my own research understandings were considerable, and the anguish of facing up to, and finding a way of dealing with, necessary reconceptualization, has been a major debilitating factor which contributed to serious delay in writing up this project.

For several years I believed the original positivist representations within the project, together with absence of input from Deaf/deaf adults, rendered it irreconcilable with new directions in disability research and as such "a waste of time" (Oliver, 1993). It took a long while to remind and reconvince myself that the research circumstances were such that only statistical data could provide currency for stimulating change in the study school. Similarly, steps to carry out empowering or emancipatory research, in which the investigative process could have benefitted the participants as well as the researcher, would have condemned the very existence of the project, but I still feel that the positivist emphasis matters, and that there are serious problems inherent in research which does not build on the interests and motivations of those who are the focus of the study. Eventually, I came to accept reflexivity as a tool for facing up to the consequences of these difficulties in a moderately meaningful way and it became possible, at least, to commence writing up.

I came to accept too, that many Ph.D students discover en route, that the kind of research that they would ideally do is not the piece of research they have embarked on. Frequently, a great deal of energy is spent "back-pedalling, trying to reshape what you've done to fit changing ideas of what it is that you want" (Rampton, 1992, p.29). I came to realise that such processes of reformulation could prove adaptive rather than condemnatory, not least because they serve as an uneasy reminder of how necessary this type of reflection is, if the final research account is to confront any of the political uses and misuses which it gives rise to.

Reconceptualizing the nature of research alerted me to the importance of reviewing what is being taken for granted in analysis and interpretation. The picture constructed from the research data is clearly not the 'real' picture but simply one which gives rise to a particular view which might, in turn, lead us to challenge the validity of other pictures which could be adhered to. Impressionistic observation for example, or ethnographic data would lead to different pictures, neither of which is necessarily less meaningful than the other. It cannot be denied that individual researchers have their own reasons for permitting their research to be seized by particular agendas, and I have already spelt out some of my own reasons. The implications of these points will have to be returned to later on.

Thus, data in the next three chapters is presented cautiously. The principal data collection method has simply provided a tool for building a particular kind of account and only one kind of meaning is provided in this thesis. In retrospect I also fell into the predictable trap which entices Ph.D students to collect far too much data (Phillips and Pugh, 1987), and have subsequently had to rationalize plans for data analysis. Specifically this has meant that data collected during the partial integration phases, when integration was fragmented and uncoordinated, receives attention only in passing in order that the most critical findings, relating to systematic integration, could be adequately pursued (see Table 2.3).

The temptation still is however, to be persuaded by quantitative "dazzle" (Woolgar, 1993), but this brings several weaknesses to interpretation of the events and processes observed which need to be recognized when interpreting data presented in subsequent chapters. In some chapters I have moved quantitative material aside in order to restore focus on how or why, or the implications of, findings which have come about.

Hopefully, meanwhile, these reservations do not mean the research is as totally unproductive as once feared. There has been some

attempt to marshall together a variety of theoretical propositions which have been neglected by previous researchers. Further, reflexivity provides for some synthesis of research paradigms and later it will be seen that it is increasingly important to reconcile a variety of contrasting research practices if research is to become emancipatory and move away from perpetuating oppressive representations of Deaf/deaf people's experiences. Ways in which researchers can satisfy requirements for academic rigour within their home disciplines, but also be sensitive and responsive to the requirements of participants will be examined as part of wider discussion as the thesis progresses.

2.9 <u>Resume</u>

To summarize, having explained decisions relating to research design, details of methodological tools and emergent research practices, we can now turn to consideration of the observation data obtained.

The politics of explanation weigh heavily upon remaining chapters. Although it is accepted hypotheses regarding causality are no more than speculative, results are not confined to descriptive analysis. I have attempted however, to keep the presentation simple so that the principles of analysis are self-explanatory and a clear view of the analytic scope can be retained. Construction of an analytical framework must invariably be reflexive, and I wish to emphasize, rather than disown, the interpretive nature of the following account. It is never possible to comment on everything. Statistics have been used simply as a guide to making sense of intuitions raised by observation. Quantitative data is always limited in the extent to which it enables us to makes sense of other people's experiences because it is so heavily filtered through the perspective of academic researchers and consequently in danger

of misrepresenting what may be the critical concerns of those who are under scrutiny. Thus, the basis for subsequent arguments is not unproblematic even though highly statistically significant.

CHAPTER THREE : THE IMPACT OF SIGN IN AN ENGLISH LANGUAGE CONTEXT

3.1 <u>Introduction</u>

This chapter focuses on some aspects of the relationship between sign in an English language context and integration. During the course of the research I began to see availability of Sign Supported English as a key determinant of the children's experiences of integration. This is because sign usage appeared to be associated with more effective communications and more egalitarian relationships between the children both in relation to each other and in relation to staff. Most of those participating in the integrated nursery settings appeared to gain from the use of sign in the English language context, only to lose those gains once Sign Supported English was taken away. Of course these were intuitive impressions but they guided decisions about what to examine more rigorously within the data. These decisions seemed particularly apposite in the context of reports that deaf children using oral/aural methods in integrated settings show less skilled communication than deaf children using sign (eg, MacKay-Soroka, et al, 1987) which contradict the determination of other writers to establish the supremacy of oralism (eg, Markides, 1983; Van Uden, 1986; Lynas, 1986; Lynas et al, 1988).

It was possible to directly compare children's experiences of communication in two integrated nursery settings distinguished by availability or unavailability of Sign Supported English. This enabled the relative effectiveness of the two settings to be examined. Details given in Chapter 2 (section 2.5) describe the sequence in which these comparable settings came about. Events consisted in a phase during which Sign Supported English was introduced in the integrated nursery, followed a few months later by a period in which the use of any sign with deaf children was then prohibited, *although not officially forbidden to hearing children*. The decision to revert back to oral/aural communication was instigated by the Head of the Unit with support from a member

of the school's inspectorate, albeit against the wishes of both parents who were BSL users, and the majority of nursery staff.

Observations were conducted for two corresponding, lengths of time in the same setting, altered in the second period by the decision from senior managers to insist on oral/aural communication only. Data in this chapter relates to these events. The results presented comprise a formal analysis of differences in the experience of integration between the group of deaf children and the group of their hearing peers, and enable reflection on the impact of sign in an English language context.

In previous research, the 'career' notion has proved a useful tool with which to organize data collected over time, and at the same time make tensions between an individual's development and the circumstances in which they find themselves explicit (Oliver at al, 1988). An implicit assumption here is that over the years a child's career might be expected to progress in a developmentally advantageous sequence in which the child will take steps forward and achieve new goals. Use of the career analogy in this study however, forces recognition that in some circumstances, experiences of integration are associated with regression, steps backwards and the relinquishing of once held accomplishments. Evidence presented in this chapter will show that this can happen regardless of whether a child is hearing or deaf given a sufficiently inappropriate communication environment.

Two final points need to be made before interpretation commences. Firstly, data collected in the Oral/Aural situation relates to the children at a more advanced stage of development than data pertaining to the Sign Supported English[1] setting. Secondly, the group of deaf children under consideration are children who have been deprived of a sign system for communication. With the exception of one child, born into a Deaf family, all of the

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[1]Hereafter the settings will be referred to as SSE (Sign Supporting English) and OA (Oral/Aural)

children began their education using oral/aural strategies; they later had access to sign in an English language context, which was subsequently then denied. Thus it cannot be argued that exposure to sign in the first instance explains the desolate picture of development which eventually unfolds. It is important to have these points in mind when considering the findings.

3.1.1 Outline of data

In this chapter frequency data for the group of deaf children and frequency data for the group of hearing children is presented for each of the six aspects of communication studied. For each variable, results are expressed as percentages of the total number of observed occurrences of each category per group, thus posing the following questions :

> (i) of all the <u>variable specific</u> communication acts deaf children were observed to use, what percentage arose in SSE settings and what proportion in the comparable OA setting ?

> (ii) how does the distribution of communication acts observed for deaf children compare with that observed for their hearing peers ?

> (iii) how is the distribution of communication acts related to the nature of the communication environment permitted for each group ?

Descriptive analyses of main findings is provided together with chi-squared distributions which test the significance of observed associations. Significance levels given in the text refer to the probability of the difference between observed and expected frequencies in that table being due to chance alone. The significance level allows us to see whether relationships explored are systematic and, if so, this indicates findings are

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unlikely to be wiped out if we simply took another sample. It should be noted that chi-square statistics are unique to each table and so comparison between tables is inappropriate.

Each of the six principal variables is taken in turn and assessed in terms of its relationship to integrated nursery environments distinguished by the availability of SSE. Statistical analysis is followed by interpretation. Where percentages are given these have been derived from very large numbers (in each case hundreds) of observations, which ensures their use is legitimate. Consideration was given to the requirement that in order for comparison between the groups to be viable, the absolute differences in the number of observations between the deaf children and the hearing children should not be substantial. This was confirmed prior to the analyses for this report, and has been fully reported elsewhere (Moore et al, 1987). Analysis of preferential patterns of interaction for each group is also included.

Summary descriptors which might function as predictors of developmental progress have been isolated with reference to (a) range of communication acts children engage in, as discussed above, and (b) frequency of preferential patterns of interaction for each group, which will also be discussed. It is possible to illustrate a number of links between aspects of communication and environment which throw further light on the calibre of integration children in this study experienced.

I will be drawing on the data to argue that the children's experiences of communication in the integrated settings studied, pose a number of theoretical and practical challenges to educationalists, and necessitate reflection upon some of the initial premises and discourses of integration practice in early childhood education.

I should indicate at the outset, that what I have to say may seem highly repetitive and, to many, little more than common sense.

The question is raised of whether integration for deaf children and oral/aural methods are incompatible. There clearly is an inverse relationship between patterns of communication, oral/auralism and positive experiences in integrated settings, which once established, leads to presentation of findings with tedious similarity. Since this is so, however, the question of why educationalists have for so long refused to take responsibility for the consequences of oral/aural policy for deaf children's experiences of integration cannot be avoided.

3.2 Descriptive Analyses of Between Group Data

3.2.1 Patterns of Communication

To open the discussion, Table 3.1 shows the most frequently observed patterns of communication experienced by each group of children during the period under discussion in this chapter, which account for approximately 40% of all observations made in this phase. This information will be referred to periodically to amplify points of concern.

Table 3.1 is of interest in itself too, because it illustrates the contrasting experiences of communication which deaf children and hearing children have, even within the same educational setting. Table 3.1 also shows however, that both deaf children and hearing children in integrated nursery settings, share a large slice of experience which does not provide for learning and development through communication. The most frequently occurring observations reveal children not involved in communication of any kind, but simply alongside another child. The only variation between deaf children and hearing children is that deaf children spend more time in small groups not communicating, whereas hearing children are more often observed alone. It is clear that this picture of opportunities for communication in integrated settings will require examination of what we understand the benefits of integrated early education to be.

Table 3.1

Table to compare preferential communication patterns experienced by the group of deaf children and the group of hearing children

Deaf Group	%	Hearing Group	%
X,X,X,X,X,P	15.1	X,X,X,X,X,P	22.2
X,X,X,X,X,SG	7.4	X,X,X,X,X,S	5.5
X,X,X,X,X,S	7.1	X,X,X,X,X,SG	4.5
AC(T),A,NV,X,IAC,SG	1.4	AG(T),N,X,X,X,LG	2.4
X,X,X,X,X,CC	1.3	AG(T),A,NV,X,IAC,LG	1.5
X,X,X,X,X,AC	1.2	X,X,X,X,X,LG	1.4
AG(T),A,NV,X,IAC,SG	1.2	AG(T),N,X,X,X,SG	1.4
C(T)S,X,PV,RA,X,S	0.9	AC(T),A,NV,X,ICP,SG	1.1
AG(T),N,X,X,X,SG	0.9	CC(T),I,X,X,X,SG	1.0
AC(T),A,NV,X,ICP,AC	0.9	AG(T),I,X,X,X,LG	1.0

Findings presented in Table 3.1 recall Gregory and Bishop's impression of primary age children in integrated settings : "at first sight it seemed that the deaf children were participating" (p.165, 1991). The extent of parallel and small group physical co-presence shown in Table 3.1, did create this same initial image of integration in the study school. However the finding that substantial periods are spent literally in physical co-presence without any semblance of communication, together with the extent of solitary state observed for all children, gives rise to important questions about how interactive early integrated environments can actually be for any child.

Thus, the first point of interest, before commencing detailed discussion of the experiences of children observed, lies in the degree to which both deaf children and their hearing peers are *not* actively involved in communication in integrated settings, although co-presence with other co-actors is considerable [eg,

rows 1,2,5,6]. Further issues relating to Table 3.1 will be reviewed as discussion of particular communication acts proceeds.

3.2.2 *Comparison of Initiation in the SSE Nursery setting vs Initiation in OA Nursery setting*

The first specific question asked was 'are the deaf and hearing groups both likely to use the initiation categories equally in the OA and SSE settings ?'

Analysis of data presented in Table 3.2 (overleaf), confirms they are not. For the deaf group there is a highly significant association between initiation categories used and the setting in which children find themselves (chi-square value = 2425.5 (df 85), p<.0001). Similarly for hearing children, the relationship between initiation categories they use and setting in which they are observed is significant (chi-square value = 162.7 (df 15), p<.0001). For this and subsequent tables, standard residuals, which indicate the size of observed discrepancy, are used as a point of entry for subsequent discussion.

Table 3.2

Table to compare frequency of Initiation Acts in Integrated Nursery settings distinguished by availability of Sign Supported English.

Type of Initiation	Deaf Group SSE	Hearing Group SSE	Deaf Group OA	Hearing Group OA
AC(T)	53.5	39.6	46.5	60.4
C(T)A	56.5	41.1	43.5	58.9
CC(T)/CHCH(T)	59.4	24.6	40.6	75.4
C(T)C/CH(T)CH	58.6	31.9	41.4	68.1
CHC(T)/CCH(T)	48.4	86.8	51.6	13.2
C(T)CH/CH(T)C	49.7	71.6	50.3	28.4
C(T)S	76.1	30.9	23.9	69.1
C(T)G	86.2	52.0	13.8	48.0
AG(T)	67.4	40.9	32.6	59.1

INITIATIONS MADE

Target Children to Adults

Deaf children initiate more to adults in the SSE situation than they do in the OA situation. This trend is reversed for hearing children, whom the evidence reveals approach adults more frequently in the O/A setting. The pattern shown by hearing children might be predicted in line with increased maturity and familiarity with school by the time changes in communication practice were implemented. Confidence for asking questions, seeking guidance and generally taking part in conversation with familiar adults could all be expected to increase for all children over time. However, deaf children appear to develop restricted patterns of interaction with adults over the same period of time which suggests the nature of a communication environment may be a critical determinant of their access to

adults. The return to O/A communication in the nursery is, for deaf children, linked to reduced incidence of initiating communication with adults. The implications of this finding for deaf children's learning and development are likely to be considerable. Several writers have demonstrated how once children merge into the background, it becomes more difficult for teachers to focus on, and respond to, their needs (Pye, 1988; Yard, 1993). Consequently, the deaf children studied here were at risk of missing out on critical aspects of education and learning.

As mentioned previously, the links claimed between initiation acts and setting are found to be statistically reliable; findings are extremely unlikely to be due to chance or sampling variation. As also said before, statistical conclusions only permit speculation in relation to causality. They do however, further concerns raised from the descriptive analyses and reinforce misgivings about denial of SSE in integrated contexts.

Target Children to Other Children

Children's initiation to other children throws further light on the above issues. Interactions between children present another generally disquieting picture of integrated settings in which sign usage is denied.

The same pattern as described in relation to initiation with adults appears again; the extent to which deaf children initiate interaction with their deaf peers reduces dramatically when the communication environment is changed to deny use of SSE. This set back is seen even though children are older and predictably more socially skilled in the OA setting. Hearing children on the other hand, encounter no such set back. As they move in to their second year in the nursery their confidence and ability to begin conversations with their hearing peers has developed to the extent that they more than double the frequency of such communication efforts (31.9% to 68.1%). Frequency of initiations from deaf children to their deaf peers however, shows a decline

when they are required to function in an oral/aural setting
(58.6% to 41.4%).

One of the most central concerns for an evaluation of integrated
provision relates to the extent to which deaf children and their
hearing peers actually are able to interact with each other, or
conversely, simply become assimilated into groups characterised
by audiological status. In view of this the results described are
particularly worrying.

It appears that target deaf children maintain, and even
marginally increase, their efforts to initiate communication with
their hearing peers across both SSE and OA environments. Target
hearing children however dramatically cut down their attempts to
initiate communication with their deaf peers when SSE strategies
are prohibited. Prospects for meaningful integration seem bleak
if, bereft of access to sign and manual/visual forms of
communication, hearing children then avoid interaction with their
deaf peers. The picture unfolding, shows that while integrated
settings can offer opportunities for interaction between deaf
children and hearing children, a communication environment which
imposes oral/auralism is associated with impoverished child-child
initiations in contrast to its SSE equivalent.

Self-Talk

Observation of children's soliloquy proves interesting in
relation to emergent themes. It can be seen that deaf children
chat to themselves much more freely when SSE is a feature of the
communication environment than when it is not available (76.1%
and 23.9%). Yet hearing children increase their self talk as time
goes by, unimpeded by changes in communication environment. One
explanation of this finding is that deaf children's self talk is
simply visible when they are in contexts permitting sign usage.
We might assume that deaf children's self-talk continued to
develop in the oral/aural context but became imperceptible to

others. Although it seems unlikely that some indication of self-talk could not be coded, given the capability of the observation system for recording virtually any indicator of communication effort, this must be a possibility. Even so, however, implications for learning and development would persist. In contacts with hearing children, adults and other children continued to have access to audible or visible self-talk which they could then exploit in their own communication efforts. When oral/aural communication became the order of the day during the course of this study however, deaf children's self-talk could no longer be accessed. In turn it may be that co-actors found it harder to judge the interpersonal requirements of potential interactions which would account for some of the newly found reluctance of hearing children to approach their deaf peers in the OA setting.

Target Children to Groups

Data indicating children's initiations to groups is also of interest. Table 3.2 shows deaf children are much more likely to approach groups in settings characterised by SSE. In the OA setting considerable reticence for making advances to groups seems to set in (82.6% compared with 13.8%).

Although hearing children similarly reduce their initiations to groups in the OA setting the extent of the reduction is far less substantial (52% to 48%). Again this finding implies that deaf children are less equipped for engaging in a similar range of social interaction to their hearing peers when they find themselves in an integrated nursery which does not permit SSE.

In the SSE setting deaf children actually have more opportunity to initiate to groups than their hearing peers, though this type of interaction is characteristic of both children. It is surprising then, that in the OA setting, deaf children are hardly ever observed to initiate in this way.

My own feeling about the reduced frequency with which deaf children initiate to groups in the OA setting, is that they were less frequently invited to do so. Initiations from the target child to a group were very often encouraged by adults, for example, selecting the child to come to the front of the class and tell a story, assist with a song, and such like. The inference is that adults became increasingly loath to expose deaf children in this way for two reasons; firstly because the children were less able to communicate effectively than when they had shared SSE, and secondly because adults themselves had more difficulty making their own expectations clear when confined to OA strategies. Given the hearing children's increased frequency of initiations to groups, we could expect the deaf children to at least have maintained their level of participation in this type of initiation as they became older: without SSE however, this was clearly not to be.

Many of the themes described in relation to initiations the children make recur in relation to initiations which they receive, and these will be considered next.

INITIATIONS RECEIVED

Adults to Target Children

In the SSE setting adults make more initiations to deaf children than they do when those same children are in an OA setting. Conversely, adults make more initiations to hearing children in the OA setting than in the SSE setting. Clearly for deaf children there are considerable advantages to being in the integrated nursery where manual/visual forms of communication are encouraged if they are to benefit from the approaches of adults. Increased approaches from adults to hearing children in the OA setting might partly be explained because the deaf children no longer obtain a proportionate share of these initiations once adults are

forbidden to use SSE strategies. If this is the case, then OA integrated settings must be regarded as prejudicial and as generating unfair communication practices by which deaf children are affected most.

A similar pattern is seen for the frequency of interactions made by adults to groups which include the target child: adults make fewer approaches to groups including deaf target children in oral/aural settings than they are inclined to do in SSE settings (32.6% and 67.4%), whereas there is no parallel decline in approaches to groups encompassing hearing target children. Expectations of increased equality of opportunity in integration policy are unlikely to mean much for deaf children in the context of these reflections on integrated OA settings.

This data presents a strong illustration of how pressures imposed upon teachers can result in oppressive practice in the classroom, a tension which has also been identified by Marks (1993). On all initiation variables discussed so far, the pressure to practice oral/aural communication was associated with deaf children being disadvantaged. It should be pointed out that many adults in the study regarded themselves as oppressed by the directive to permit only oral/aural communication in the nursery. These staff were painfully aware that in following the instruction to deny use of sign and related manual visual forms of communication they became carriers of oppression against deaf children, and ultimately against hearing children too. In the end, this situation led at least one teacher committed to a long term vision of bilingual approaches to resign after several years of trying to encourage more equitable communication methods.

Children to Target Children

When SSE distinguished the nursery environment, deaf children received more initiations from their deaf peers than they did when the situation was altered by the mandate that only oral/aural communication should be permitted (59.4% vs 40.6%).

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Initiations received by target hearing children from their hearing peers however, escalated considerably from the SSE setting to the oral/aural setting entered into several months later (24.6% vs 75.4%). If advances from peers encountered by hearing children are taken as a general indicator of personal and social development, then the corresponding decline in initiations encountered by deaf children gives immense cause for concern.

A pivotal finding will again lie in data concerning initiations between deaf children and their hearing peers. Table 3.2 shows hearing children willing to persist in their efforts to initiate contact with their target deaf peers irrespective of communication environment. Deaf children however, appear to lose all confidence for approaching their target hearing peers once SSE is withdrawn from their repertoire of permissable strategies for communication (48.4% and 51.6% vs 86.8% and 13.2% respectively). (This finding, on initiations target children receive, seems at odds with evidence presented above in respect of initiations target children make themselves but the discrepancy can be accounted for because the total number of deaf children available as interactive partners in the nursery was never more than six, whereas up to forty hearing children were available as interactive partners to their deaf peers over the course of a day.)

We will now turn to consideration of the responses children made in the contrasting integrated nursery settings.

3.2.3 Comparison of Response in the SSE Nursery setting vs Response in OA Nursery setting

The question asked here was : 'are the deaf and hearing groups both likely to use the response categories equally in the OA and SSE settings ?'

Analysis of data presented in Table 3.3, confirms, again, that they are not. For the deaf group there is a highly significant

association between response categories used and the setting in which children find themselves (chi-square value = 362.0 (df 20), p<.0001). Similarly for hearing children, the relationship between response categories they use and setting in which they are observed is significant (chi-square value = 211.1 (df 4), p<.0001). Once more, standard residuals have been used to guide selection of issues for subsequent discussion.

Table 3.3

Table to compare frequency of Response in Integrated Nursery settings distinguished by availability of Sign Supported English.

Type of Response	Deaf Group SSE	Hearing Group SSE	Deaf Group OA	Hearing Group OA
E	60.8	34.6	39.1	65.4
A	55.6	78.9	44.4	21.1
I	50.8	41.8	49.2	58.2
N	55.2	9.5	44.8	90.5

Exchange

The nature of response deaf children make is more likely to be an exchange when they are in communication environments characterised by SSE. In OA settings exchanges occur noticeably less for deaf children (60.8 SSE vs 39.1 OA). Thus SSE integrated settings enable deaf children to enter more often into episodes of intellectual exploration, than OA settings permit. For hearing children OA settings do not restrain their opportunities to enter into exchanges, and indeed the data show, as we might predict, that hearing children make more exchanges in communication as their general development advances. Again developmental gains predicted for deaf children appear to recede once manual/visual forms of communication are denied to them. This provides yet another example of the way in which, as the deaf children's

integration career progresses, their development actually regresses once SSE is taken away.

Acknowledgement

Responding by way of simple acknowledgement appears to reduce for all children in OA settings. Had the data relating to opportunities for deaf children to enter into exchange (above) not been so depressing we might have predicted that simple forms of responding are replaced by more protracted and engaging responses as the child advances in age, but this appears to be the case only for hearing children. Acknowledgements by deaf children do not subside as drastically between settings as exchanges did however, and quite a large degree of the more simple response behaviour is retained.

As indicated, at first sight it seems hearing children also dispense with the simple acknowledgement form of responding used frequently in SSE settings once they are in an oral/aural environment (78.9% vs 21.1%) but make increased use of exchanges as illustrated above. However, a closer look at the data reveals that as acknowledgments taper out for hearing children in OA settings the relative proportion of less productive, rather than advantageous, forms of responding, such as ignoring and more particularly, non-communicative response acts, increase for them too.

Ignoring

Data on ignoring is interesting because it seems entirely independent of communication environment and unrelated to hearing status. Neither the group of deaf children nor the group of hearing children change the frequency of ignoring responses across integration settings and a lack of difference between groups testifies against the common assumption that deaf children

have poor social skills (eg, Meadows, 1980; Lemanek et al, 1986).
Table 3.1 reveals however, that two of the most frequent
sequences hearing children engaged in during the observation
period involved them ignoring either an adult or another hearing
child. These findings require additional investigation because
such a high degree of non-reciprocal communication seems unlikely
to provide for profitable interactions or classroom experiences
of quality.

Non-Communicative Responses

Data on Non-communicative responses (ie, the child is not aware
either that an initiation was made, or of it's intended message)
is interesting in several respects. An assumed association
between non-communicative encounters and deaf children is often
used to justify the implementation of programmes for 'learning
to listen', particularly in OA settings (eg, Hanen, 1985).
Although the teaching of listening is presented as of fundamental
importance however (op cit), data presented next suggests such
intervention may be far from imperative.

The extent to which responses are characterised by non-
communication does not appear to intensify for the group of deaf
children in OA settings, and indeed the proportion of responses
which are non-communicative is more substantial in settings
characterised by SSE. This finding intimates that where
manual/visual forms of communication are permitted co-actors make
more assumptions about the ease with which their initiations will
be received. Alternately, by the time of their participation in
the OA nursery, deaf children may have become accustomed to
providing a response to minimize communication breakdown, as
other writers have reported (Robinson, 1981; Gregory and Bishop,
1991), but this would suggest intervention might be usefully
directed at the receptive skills of adults rather than children
themselves.

The SSE environment does offer advantages to hearing children in connection with non-communicative response acts. In SSE settings only a small proportion of responses made by hearing children are characterised by non-communication. However in OA settings responses resulting from unsuccessful initiation increase almost ten-fold which signifies greatly increased risk of communication failure for hearing children. It is possible that while adults make special efforts to ensure adequate delivery in their interactions with deaf children the need to do so may be overlooked in interactions with hearing children. These findings imply that SSE environments offer important benefits to hearing children, who appear to profit from the more conspicuous nature of initiation afforded in SSE contexts and to be disadvantaged when oral/aural strategies alone prevail.

The possibility that correctives for minimilizing non-communicative interactions may not be as paramount as is commonly imagined gains credibility from the finding that hearing children experience a high level of non-communicative acts, just as their deaf peers do. Table 3.1 has further shown that initiations made both to deaf and to hearing children frequently result in non-communicative responses and this occurs more habitually for hearing children than those who are deaf. It then becomes possible that some experience of non-communicative encounters proves adaptive.

Thus, hearing children may be advantaged by a parsimonious approach to their reception of messages from adults which their deaf peers have relatively little chance to exploit. Deaf children, in contrast, may be bombarded with efforts to make sure they will not miss or misconstrue messages from adults, which leaves little scope for personal reaction to initiations directed to them. Gregory and Bishop (1991) observed that teachers talk more to deaf children than hearing children and this finding, together with those presented in this report, may lend further support for the latter idea. Thus, emphasis on deaf children listening may prove far from beneficial and serve purposes other

than the promotion of effective communication. In particular, stress on learning to be a *listener* invests responsibility for effective interaction within children, and diverts attention away from the child's development as a *communicator* in which responsibility can be invested between a child *and* their co-communicator equally.

3.2.4 Comparison of Mode of Communication in the SSE Nursery setting vs Mode of Communication in OA Nursery setting

The next question examined was 'are the deaf and hearing groups both likely to use mode of communication categories equally in the OA and SSE settings ?'

Analysis of data presented in Table 3.4, again suggests differences observed are unlikely to have occurred by chance. For the deaf group there is a highly significant association between mode of communication categories used and the setting in which children find themselves (chi-square value = 1755.5 (df 105), p<.0001). Similarly for hearing children, the relationship between mode of communication categories they use, and setting, is significant (chi-square value = 99.7 (df 10), p<.0001). Standard residuals have again been used to inform selection of key differences for discussion.

Table 3.4

Table to compare frequency of Mode of Communication in Integrated Nursery settings distinguished by availability of Sign Supported English.

Mode	Deaf Group SSE	Hearing Group SSE	Deaf Group OA	Hearing Group OA
S	72.2	---	27.8	---
S+V	84.8	---	15.2	---
S+NV	40.6	---	59.4	---
S+PV	65.0	---	35.0	---
S+P	60.0	---	40.0	---
V	73.9	39.4	26.1	60.6
V+NV	45.5	4.5	54.5	95.5
V+P	69.6	---	30.4	---
NV	55.3	47.8	44.7	52.2
NV+PV	9.9	---	90.1	---
NV+P	31.5	---	68.5	---
PV	73.9	40.5	26.1	59.5
PV+P	49.0	---	51.0	---
P	43.4	91.6	56.6	8.4

The first point of interest in relation to Table 3.4 is that neither group of children rely exclusively on either manual/visual or oral/aural modes of communication in either of the two communication environments. Irrespective of the aspirations of some members of staff, the deaf children continued to use signs and other gestural forms of communication in the OA setting and their hearing peers also persisted with a substantial proportion of non-verbal strategies even though sign usage and gesture were explicitly frowned upon. Spoken language, which some staff thought would emerge once signs were discouraged, was not observed to increase for the deaf children and as the proportion of formally recognised sign was forcibly reduced in the OA

setting, deaf children were obliged to make increased use of non-linguistic strategies such as pointing which again provides evidence that the experience of an OA environment actually began to reverse the deaf children's development as communicators. These effects were seen as a result of the insistence of a small group of hearing professionals that they knew better than Deaf/deaf people themselves, including Deaf parents, about what method of communication would assist deaf children's development.

Sign

As mentioned above, despite instruction to withdraw the use of SSE in the integrated nursery, use of sign in an English language context persists in the communication efforts of deaf children. It is well known that sign usage can not be suppressed where deaf children come together (see, Lane, 1984) and failure to eliminate sign features from communication in the study school is clearly not exceptional. Some adults decided to continue using sign alongside spoken English, despite the ruling to the contrary, which meant much of their interaction with deaf children needed to be concealed from public view. Even so, however, communications involving a sign component are reduced considerably in the OA setting and the implications of this have begun to be recognized in discussions above. The use of S+NV strategies does, exceptionally, increase in the OA setting and this is thought to be a product of clandestine interactions using disguised signs.

Observations described as 'verbal' refer to orally produced verbal communications. Verbal acts which were not vocalised were coded as Sign. This is clearly an unsatisfactory feature of the coding system because it wrongly implies that verbal acts are restricted to oral/aural languages. Ensuing coding aberrations must be borne in mind. It is critical that the verbal content of sign acts should be fully recognized. (See Appendices for further detailed information.)

Ironically, Table 3.4 shows that in the SSE setting deaf children make much more use of oral/aural strategies than they do in the setting which prevents use of manual/visual strategies. Theoretically sign usage was discouraged for the purpose of eliciting more effective oral/aural communication. The exact opposite effect however was achieved. Deaf children in OA settings, were evidently less able to use verbal strategies than in SSE settings. Clearly the withdrawal of SSE did little to facilitate the development of spoken language and instead, grossly impeded it.

We see yet again, that hearing children are not set back to the same extent as their deaf peers, by the imposition of an oral/aural communication environment. For the group of hearing children, verbal communication expanded in line with their age and the ordinary course of language development. Deaf children however are forced to go backwards in their development as communicators if denied access to sign in integrated English language settings. Any advance in spoken language acquisition facilitated in the SSE context was subsequently eroded once deaf children were obliged to communicate without recourse to manual/visual strategies. We are clearly far from the oralist decree that use of signs will hinder development of spoken language. The data here provides compelling evidence that the reverse is true : prohibiting use of sign ensures that the

development of spoken language for deaf children is seriously inhibited.

Combined verbal and non-verbal strategies for communication are used more in the OA setting by deaf children, and noticeably more by hearing children. Children's apparent willingness to blend modes of communication in the pursuit of effective interaction could easily be harnessed to avoid many of the pitfalls associated with idiosyncratic gestural communication. Evidence of children's own readiness to resist oppressing those amongst them who are most vulnerable to taken for granted assumptions about language and communication will be returned to many times during the course of analyses.

Non-verbal modes of communication

The frequency with which deaf children use non-verbal communication is less in OA settings than in the SSE context. The opposite is true however for hearing children who increase their use of non-verbal strategies even though manual/visual interactive means are, in principle, discouraged. This finding, like many others addressed, again raises the possibility that hearing children may respond readily to using sign in an English language environment, and it has already been suggested that there may be several advantages for them in doing so.

Pre-Verbal

The frequency of pre-verbal communications is high for deaf children in the SSE setting but diminishes in the OA conditions (73.9% and 26.1% respectively). Reduced dependence on pre-verbal strategies would be predicted for children learning to talk and initially might seem an encouraging trend indicating more skilled speech production. However, we have already seen that verbal modes of communication do not progress well in OA settings and

non-verbal strategies decline. There is a striking escalation in use of combined NV+PV modes of communication by deaf children : 9.9% in the SSE setting as opposed to 90.1% in the oral/aural context, but this may not represent considerable developmental gain. In view of the lack of other positive indicators increased use of NV+PV in the OA setting looks rather like the salvaged remains of once richer communication repertoires.

For hearing children however, pre-verbal strategies also increase in the OA setting which would not ordinarily be expected since they were younger in the SSE setting. No doubt this finding could be seized upon as a warning of developmental perils hearing children might face when integrated with their deaf peers. Staff interviewed as part of a separate study within the study school (Pound and Moore, 1989) who expressed anxiety because "some of the hearing children . . . imitated the unusual sounds of the deaf children" would for example, almost certainly have found increased pre-verbal communication over time in integrated settings worrying. On the basis of the evidence seen so far however, we can hypothesize that given an integrated setting characterised by SSE, pre-verbal strategies would be replaced by more productive endeavour for all children. Indeed, the evidence on pre-verbal communication does affirm that the SSE setting may assist the expressive ability of hearing children as well as their deaf peers.

Pointing

Pointing as a mode of communication is used more or less equally for deaf children in both SSE and OA settings, but for hearing children, use of pointing is virtually exclusive to the SSE setting. This finding may reflect efforts hearing children entered into when the interactive environment permitted gestural communication with their deaf peers. In this case, the acute decline of pointing as a mode of communication in the OA setting for hearing children is disappointing.

However, given that pointing is widely seen as one of the main ways of establishing joint attention and expressing communicative intent (eg, Bruner, 1975; Lock, 1978, '80), the findings related above for deaf children, give considerable cause for concern. Ordinarily, words gradually replace deictic gestures which would account for their demise in the hearing group, but signals some delay amongst the deaf children, once their expressive language has been curtailed by the OA policy. This apparent hold up in the deaf children's development is peculiar given that in the earlier setting, dependence on pointing was comparable between the two groups of children, and provides further evidence of the destruction which change in communication policy, to restore oral/auralism, wrought upon deaf children's development as communicators.

3.2.5 Comparison of Referential Communication in the SSE Nursery setting vs Referential Communication in the OA Nursery setting

'Are the deaf and hearing groups both likely to use referential acts equally in the OA and SSE settings ?'

Analysis of data presented in Table 3.5, confirms they are not. For the deaf group there is a highly significant association between referential acts used and setting (chi-square value = 1002.1 (df 70), p<.0001). For hearing children the relationship between referential categories used and setting, is significant (chi-square value = 295.6 (df 13), p<0.0001). Standard residuals guide selection of main differences for discussion.

Table 3.5

Table to compare frequency of Referential Communication in Integrated Nursery settings distinguished by availability of Sign Supported English.

Referential Communication	Deaf Group SSE	Hearing Group SSE	Deaf Group OA	Hearing Group OA
RCT	53.5	96.0	46.5	4.0
RNO	70.5	100.0	29.5	---
RCO	72.9	31.8	27.1	68.2
RSO	51.3	92.9	48.7	7.1
RCS	63.4	33.0	36.6	67.0
RRI	51.9	37.1	48.1	62.9
RRO	38.3	100.0	61.7	---
RRA	61.3	44.4	38.7	55.6
RIR	31.9	2.7	68.1	97.3
RA	79.2	93.5	20.8	6.5
RDN	40.8	23.4	59.2	76.6
RDO	100.0	65.2	---	34.8

Referential Communication

Data on referential communication is varied : some types of referential acts follow the same pattern for deaf and hearing children across communication environments. Other referential acts follow reverse patterns for the two groups. Further details are given below.

Referential Comments - Events/ Objects, Others, Self

Referential comments on objects, events and attributes occur more frequently for both the deaf group and the hearing group in the SSE setting. In the OA setting the fall in the frequency of such referential comments is particularly drastic for hearing children

(96.0% vs 4.0%). A drop in the use of these acts does occur for deaf children too, but is less pronounced for this group (53.5% and 46.5%). It may be that without recourse to, or encouragement to use gesture, some referential acts are depleted not only for deaf children, but also for their hearing peers. On the other hand it may be that in the ordinary course of development children make fewer referential comments as they get older. It seems odd however, that this particular language skill should become less important as children take an increasingly active role in using their language to learn, and unless this is in fact so, particular conditions may be required for children to sustain this type of referential act which the OA communication environment does not appear to provide.

Referential comments on self and on others show reverse inclinations for the groups of deaf and hearing children across settings. The frequency of referential comments on self or others is higher for deaf children in the SSE setting and much reduced in the OA setting, contrary to what might ordinarily be expected. For hearing children the reverse pattern occurs (once again) and we see the frequencies of their referential communications concerning both self and others, rise in the OA setting in accordance with developmental predictions based on increasing age and growing competence as communicators (eg, Wells, 1987).

Referential Requests - Objects, Action, Information

Requests for action and information are made more frequently by deaf children in the SSE setting than in the OA setting. Hearing children increase the frequency of these referential requests in the OA setting. Once again we see the communication development of deaf children deviates from the course taken by their hearing peers in the OA integrated nursery setting.

Unusually, data on referential requests for objects veers away from the general tendencies emerging so far. Requests for objects are made more frequently in the OA setting by deaf children, than

in the earlier SSE setting. No occurrences of this type of referential act were observed for hearing children however in the OA setting. Referential request for objects are characteristic of the earliest phases in a child's development as a communicator (eg, Bruner, 1977; Ninio and Bruner, 1978), and so perhaps this is another finding which suggests the group of deaf children are disadvantaged by an OA setting. It may also be that the deaf children preferred to be occupied by objects rather than people in the OA setting because of their own awareness of communication problems without SSE.

Referential Imaginary Acts

The frequency of imaginary referents and reference to absent objects or events was greater for both deaf and hearing children in the OA setting than in the earlier SSE setting. This result would be expected in accordance with predicted cognitive gains and associated increased ability to engage in fantasy play (see for example, Sylva, 1986; Moyles, 1989). However the relative frequency by which imaginary referents increase in the OA setting is greater for hearing children than for deaf children, suggesting a less impressive range of these skills for the latter group. Leekham (1993) points out that the ability to engage in pretence requires a child to make explicit their awareness of the distinction between the external world and the mental world. Hearing children typically use their voices and conversation to indicate that they are making this distinction, but deaf children, refused their natural strategies for communicating as in the OA setting, may have been less equipped for making this distinction clear.

Referential Deictic   Object, Naming

Referential deictic naming increases in frequency for both deaf and hearing groups in the OA setting although gains are more substantial for the hearing group than their deaf peers (the

distribution is 23.4% and 76.6% for the hearing group vs 40.8% and 59.2% for the deaf group). Simpler referential acts naming objects occur more frequently for both deaf and hearing groups in the SSE setting and decline steeply in the OA setting which may be a function of greater maturity.

The frequency of referential deictic acts which do not involve naming the object decreases for hearing children in the OA setting and disappears completely for the deaf group in this context. This finding is surprising given the general lag which data is leading us to expect for the deaf group of children; the suggestion is that deaf children have dispensed with an elementary communication act earlier than their hearing peers; alternately they can no longer utilize this kind of communication act effectively once an OA environment is imposed.

Referential Accompaniment

Referential accompaniment is more noticeable in the SSE setting for both deaf and hearing children. There is a substantial decline in this type of communication act in the OA setting, either because communication and cognitive developmental progress has left a role for this type of act behind or because the OA is less conducive to this type of act for some reason. The demise of referential accompaniment may also have occurred because mime accompanied songs, which children were seen to greatly enjoy in the SSE setting, were discouraged in the OA context.

3.2.6 Comparison of Interpersonal Communication in the SSE Nursery setting vs Interpersonal Communication in the OA Nursery setting

The next question asked was 'are the deaf and hearing groups both likely to use interpersonal acts equally in the OA and SSE settings ?'

Analysis of data presented in Table 3.6, shows that they are not. For the deaf group there is a highly significant association between interpersonal acts used and the setting in which children find themselves (chi-square value = 780.1 (df 60), p<.0001). Similarly for hearing children, the relationship between interpersonal acts they use and setting they are observed in is significant (chi-square value = 290.1 (df 11), p<.0001). As usual, standard residuals are used to guide selection of main differences for subsequent discussion.

Table 3.6

Table to compare frequency of Interpersonal Communication in Integrated Nursery settings distinguished by availability of Sign Supported English.

Interpersonal Communication	Deaf Group SSE	Hearing Group SSE	Deaf Group OA	Hearing Group OA
IATN	55.7	53.6	44.3	46.4
IG	54.0	27.8	46.0	72.2
IS	44.9	71.4	55.1	28.6
ICT	56.6	41.3	43.4	58.8
IR	28.4	100.0	71.6	---
IAC	58.4	80.6	41.6	19.4
IO	72.2	28.4	27.8	71.6
ICP	62.4	38.5	37.6	61.5
IA	50.0	29.0	50.0	71.0
II	60.6	57.9	39.4	42.1
IAG	52.9	26.7	47.1	71.6

Interpersonal Acts

Interpersonal acts eliciting attention occur more in the earlier, SSE setting, than in the OA context for both groups of children and the same is also true of acknowledgement acts. Interpersonal

acts involving imitation follow exactly the same direction for deaf children and hearing children: both groups use this type of interpersonal act less frequently as they get older and are observed in the OA setting. Frequency of imitation remains slightly higher for hearing children than their deaf peers. This is interesting in the context of disparaging references by many writers on mimicry and imitation behaviour used by deaf children: "if Gail does a butterfly, then Christine does a butterfly; if Gail does a snowstorm, then we get a snowstorm from Christine" (Lynas, 1986, p.187). Data presented in Table 3.6 suggest hearing children are more likely to persist with imitative interpersonal acts than deaf children.

Interpersonal agreement remains the same for deaf children across settings but increases for hearing children in the OA setting again suggesting a different experience of communication in integrated OA nursery settings for deaf children as compared with their hearing peers.

Interpersonal greetings are used more frequently in the SSE setting by deaf children than in the OA context. The picture is the other way round for the hearing group however, who increase the frequency of greetings and other conventional forms in the OA setting. As greeting acts may often precipitate conversation, the decline in their use by deaf children in the OA setting signals a general deterioration in opportunities for interaction and learning.

Reduction of deaf children's interpersonal communication acts in the OA setting is also seen for compliance, offering, contesting and aggressive behaviours, whereas all of these behaviours increase in frequency for the hearing children. For deaf children, the range of interpersonal communication is clearly restricted when access to SSE and manual/visual strategies are denied. The attendant implications of limiting prospects for shared understanding and mutual interests between deaf children and their hearing peers are easy to predict.

The difference between groups in relation to contesting acts, which often comprise disputes, is of special interest. In the SSE setting deaf children use contesting acts more than their hearing peers. Hearing children however, enter into more challenges in the OA setting than their deaf peers. This trend raises alarm given Tizard and Hughes (1984) evidence showing that challenges comprise one of the most prolific sources of opportunity for passages of intellectual search in children's conversation. The difference between deaf children and their hearing peers in use of contesting acts in the OA setting, indicates that the deaf children are considerably disadvantaged in terms of relative opportunities to access learning (see Tizard and Hughes, op cit, for further background to these points). Further, Table 3.1 has shown the most frequently arising patterns of interaction for deaf and hearing children alike, give little opportunity for intellectual exploration.

Once again, in an environment which dictates oralist strategies must have precedence, the communication development exhibited by deaf children seems relatively dilatory when compared to their same age hearing peers and this is bound to have repercussions for the development of satisfactory relationships between deaf and hearing children. In the OA setting we find that not only do deaf and hearing children not share a means of communication but they also do not share a frame of interpersonal activity and so inevitably miss out on a great deal of prospective joint involvement.

Data on interpersonal rejection shows further difference between the deaf and hearing groups. Hearing children use rejecting interpersonal acts in SSE settings but these are not observed in the OA context. Deaf children, on the other hand, increase the frequency with which they use rejection in the OA setting. Given the detrimental impact of the OA setting seen generally in relation to the communication repertoires of deaf children, this effect may well be related to increasing frustrations of not being able to understand or be understood. This idea has some

foundation because we also find suggestion acts become more frequent for deaf children in OA setting but less frequent for hearing children in OA setting (44.9% to 55.1% respectively for the deaf group compared with 71.4% to 28.6% in the case of hearing children). It seems likely that the deaf children may have to repeat their ideas more often in OA settings to achieve understanding.

3.2.7 Comparison of Social Context in the SSE Nursery setting vs Social Context in the OA Nursery setting

Finally, in relation to differences between groups, social context was explored in the two contrasting settings and the question asked : 'are the deaf and hearing groups both likely to use the social contexts categories equally in the OA and SSE settings ?'

Analysis of data presented in Table 3.7, confirms that they are not. For the deaf group there is a highly significant association between social context categories used and the setting in which children find themselves (chi-square value = 1370.8 (df 40), $p < .0001$). Similarly for hearing children, the relationship between the social context categories used and setting in which they are observed is significant (chi-square value = 105.2 (df 8), $p < .0001$). As usual, standard residuals have been used to guide selection of differences for subsequent discussion.

Table 3.7

Table to compare frequency of Social Contexts in Integrated Nursery settings distinguished by availability of Sign Supported English.

Social Context	Deaf Group SSE	Hearing Group SSE	Deaf Group OA	Hearing Group OA
S	41.6	42.1	58.4	57.9
P	72.3	38.0	27.7	62.0
CC/CHCH	57.1	24.9	42.9	75.1
CCH	57.1	69.4	42.9	30.6
SG	56.0	31.4	44.0	68.6
LG	37.0	46.9	63.0	53.1
AC/ACH	62.7	36.8	37.3	63.2

Groups

Deaf children were observed less frequently in small groups in the OA setting than in the SSE setting. In contrast, the frequency with which hearing children were observed in small groups doubles in the OA setting as compared with the SSE. The data suggests some unsatisfactory changes in social contexts for all children however, as the frequency of large groups, typically associated with non-productive experiences of interaction, multiplies for everyone in the OA integrated nursery setting (Table 3.1).

Solitary and Parallel Contexts

The frequency of solitary activity increases for both deaf and hearing groups in the OA setting. Increased isolation is associated with the OA setting which, it appears, brings a deterioration in social interaction for all children. Thus, hearing children as well as their deaf peers appear to be

disadvantaged by restrictive communication policy. Parallel social contexts however, also decline in frequency for deaf children but double for their hearing peers in the OA setting, suggesting that hearing children are not deprived of company to the same extent as deaf children in the oral/aural environment.

Child - Child Dyads

Frequency of observed pairings between deaf children decreases in the OA setting but pairings between hearing children increase quite considerably. Pairings between a deaf and a hearing child occur most frequently in the SSE setting and subside in the OA environment. It seems the type of communication environment permitted does determine the extent to which deaf and hearing children are together in integrated nursery environments, and insistence on OA strategies reduces the willingness of deaf and hearing children to come together. Communication and friendships between deaf children and hearing children could stem from greater opportunities for successful interaction when sign accompanies spoken English and they need not be hampered by speech intelligibility.

Adult - Child Dyads

Deaf children were in one to one situations with adults far less frequently in the OA setting than they had been in the SSE setting. Their hearing peers however, were observed together with adults twice as often in the OA setting as compared with the SSE. This discrepancy in experience between groups is not difficult to understand, and its implications easily recognized. In the SSE setting gestural strategies were available to assist adults in easy and comfortable communication with deaf children. Fear of communication failure is likely to be the key reason why adults were less often available to deaf children in OA settings. The same adults who spent time alone with deaf children when SSE was

encouraged, actually said they felt bereft of appropriate skills for interaction in the OA setting when they were interviewed for a separate study (Pound and Moore, 1989).

There is evidence in Table 3.1, that communication between deaf children and adults was often characterized by rigidity and sameness. The frequency of the interactive sequence : *AC(T),A,NV,X,IAC,SG* for deaf children [line 4 and also line 7] is of interest in relation to Gregory and Bishops's concern that adults and children may "collude with each other in maintaining the semblance of classroom interaction, when for neither party is the communication itself based on mutual understanding" (p.170, 1991). Data presented in Table 3.1 shows as an observed fact that adults most continually do enter into interactions with deaf children which simply require mutual recognition that interaction is taking place.

Undoubtedly collusion takes place; furthermore collusion, and the expectation of collusion, is repeatedly set up by adults through their expectation, and acceptance of, acknowledgement acts. What is really interesting however, is that the same complicity characterizes interaction between adults and hearing children, who are also engaged in sustaining the pretence that mutually reciprocated communication is taking place (Table 3.1, line 5). Thus in the school under scrutiny here, a facade of communication attended to the needs of adults in integrated settings and meant the necessity for staff facing up to their own limitations as effective communicators could be avoided. The possibility that collusion became particulary widespread in the OA setting has been substantiated further through interviews with staff published elsewhere (Pound and Moore, op cit).

3.3 Conclusion

One certainty is that the sample of deaf children were observed using a variety of speech, sign, gestural and pre-verbal

strategies to meet a wide variety of communication purposes in the SSE environment, but when SSE was prohibited their participation in interaction was depressed on all six variables.

Although hearing children suffer too in the OA nursery, their communication did not show equivalent deterioration in the OA setting, and they continued to make developmental gains in their interaction that maturational variables such as age would predict. The evidence also suggests use of manual/visual strategies enriches many aspects of hearing children's development as communicators and offers them, as well as their deaf peers, advantages not afforded by OA communication environments.

With the new emphasis on OA methods in the integrated nursery, there was conspicuous oversimplification of the deaf children's position in communication. In their resistance to the value of sign in an English language context, those who insisted on OA practices perpetuated an inaccurate and oppressive representation of deaf children's abilities, and a wrong idea of their chances of benefitting from an integrated education.

There is some evidence to suggest hearing children continued to benefit from the use of non-verbal and gestural communication strategies even in the OA setting, and, unlike their deaf peers, hearing children did not have these methods explicitly denied to them. In the OA setting deaf children too, persisted in their attempts to utilise a range of modalities in their interactive efforts. As all but oral/aural strategies were systematically censured by most adults for deaf children however, benefits potentially accruing from mixed modality communication slumped.

The situation of deaf children in integrated settings as represented by this data suggests that investment in OA communication can disable deaf children more than audiological impairment.

Certainly analyses presented here does not permit decisive claims about the adequacy of communication in the SSE environment for deaf or hearing children. The findings relating to the relationship between communication environment and general pattern of participation in interaction however, challenge many of the claims, referred to earlier, that have been made for the superiority of oral/aural approaches in integrated settings (eg, Markides, 1983, Lynas, 1986, Lynas et al, 1988).

This chapter has brought together a wide array of issues, enabling a comprehensive review of the children's situations and providing an initial account of the findings. However, the discussion so far raises very diverse sets of preoccupations in relation to influences on development, and the next chapter attempts to contend with some of these.

CHAPTER 4 : EXPLORATION OF INDIVIDUAL DIFFERENCES

4.1 <u>Introduction</u>

This chapter provides leeway for reflecting on the difficulties of undue reliance on group data. It examines individual differences which impact on the findings presented in Chapter 3 with the aim of subjecting those findings to a further process of reflection. It is then possible to see that the relationship between integration and opportunities for communication is not static but changes according to individual differences. The limitations of matching subjects have been described at length in Chapter 2 and should be kept firmly in view.

Similarities and differences can be found within and between each matched pair of children, all of whom were experiencing the same integration environment. It will be argued that the relationship between integration and communication affects each individual child differently but these differences can be set against a background of common themes which impact on children in similar ways. The central theme is by now firmly established: in terms of opportunities for communication, the potential advantages of integration are quite distinctly eroded if children are confined to oral/aural modalities.

4.1.1 Outline of data

Data comprises frequency material which has been reviewed in a similar way to that presented in Chapter 3. Having the data available in the text, as in the previous chapter, makes explicit the commitment to acknowledging that alternative interpretations could be made and that even statistically robust accounts can never produce a 'final analysis'. For the same reasons, the data referred to in this, and subsequent, chapters is also available so that the reader can construct their own analysis if so desired. From here on however, the statistical material is

presented in appendices so that it becomes easier to unpack key issues. Relevant tables are sign-posted along the way.

Of course, this is not what Potter and Wetherall (1987, p.158) refer to as the 'recipe-style format' associated with traditional methodologies and subsequent accounts; but it is a necessary compromise given structural constraints on this thesis, and a productive one too, since rather than attempting to sweep through all the intricacies of the quantitative material it becomes possible to review some of the principal findings which enable central debates to take shape.

A brief indication of how the material referred to in this chapter was originally organized is, never the less, included, partly for information and partly to indicate what steps have been taken to minimize speculation, guess work and partiality. This confesses that I never did find it possible to dispense completely with pressure to try and produce findings which are a 'product of the data', but hopefully explanations given in Chapter 2 go some way towards justifying these defence mechanisms.

So, frequency data was compiled for each pair of children[2] in the two integrated nursery settings on the six aspects of communication studied. For each variable, results were assessed as percentages which indicate the relative distribution of <u>variable specific</u> communication acts per child according to setting. Again, percentages are compiled from hundreds of observations in each case and thus permit the following questions to be examined :

> (i) what is the relative distribution of communication acts used by the deaf child and by their same age hearing peer in each nursery setting ?

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[2]Information regarding personal characteristics of children and construction of matched pairs is given in Chapter 2

(ii) what similarities or differences are there
between the two children's observed communication in
either setting ?

(iii) how is the distribution of communication acts
related to the nature of the communication environment
the children find themselves in ?

Chi-squared distributions were calculated as appropriate, to test
the significance of observed differences between the children.
Analysis of main findings is undertaken as before with
illustrative statistics provided to support interpretations.

Some of the data relating to individual matched pairs shows
trends which differ from those highlighted by the group data.
Thus we can immediately see the drawbacks of relying too heavily
on children's collective experiences when trying to analyze and
evaluate prospects of integration for deaf children. It is
essential to recognize the potential of statistics for affirming
particular ideologies under the guise of truth. The group data
has provided a frame within which to view the general picture of
children's experiences of integration, but within that picture
there are many different individual reactions and responses which
will now be picked out for discussion. Individual differences
were of particular interest to staff working with the children
at the time. When we look at variation within the matched pairs
of deaf and hearing children, what else can be discovered ? This
question provides the focus for the rest of this chapter.

Individual differences relating to age, and to use of more than
one language, are considered in depth because these dimensions
relate most clearly to the development and communication themes
of the thesis. Such an analysis is opportune because, although
there has been abundant conjecture about cognitive factors
responsible for age-related differences in communication (eg,
Schmidt and Paris, 1984; Whitehurst and Sonnenschein, 1985),
there has been little previous research which takes into account

audiological status, use of more than one language, type of educational provision and communication modality (see MacKay-Soroka et al, 1987).

Other structural determinants of children's lives, particularly race and gender are considered discursively, though it is recognized that they are crucial factors which determine the experiences of all children (see Begam, 1992; Claire et al, 1993). These factors are not deliberately 'excluded' in the way Morris (1993) claims disability research is often at fault. Gender-based and racially-based barriers are not denied, and an attempt is made to grapple with some of their complexities, but fullest appraisal of their pedagogical implications is beyond the scope of this project.

Five, out of the six pairs of children, are considered in this review of individual differences. The remaining pair has been excluded because the deaf child was moved into the reception class shortly before the rest of his peers and so data collection pertaining to him and his hearing partner was briefly interrupted. However these children are included in the analysis again in Chapter 5.

4.2 Age differences

4.2.1 Experiences of the eldest children observed

Nicholas (deaf) and Darren (hearing) comprise the eldest pair of children studied over the complete course of the research. Various mismatches between their profile of communication experience and the profile of data relating to their respective groups can be considered. Tables providing the statistical summary of data pertaining to Nicholas and Darren can be found in Appendix 2, Section A.

In relation to Initiation data displayed in Table 4.1, there is no difference between the boys in the extent to which they

initiate to adults in the SSE setting, whereas data for the groups had indicated a general tendency for deaf children to make more approaches to adults than their hearing peers in this context. Thus a deaf child at the top of the nursery age range might be able to hold their own more effectively if SSE is to be taken away, than their younger deaf peers.

However, there is no indication that Nicholas acquires the same relative independence in the OA nursery as Darren. In relation to the initiations children make to adults in the OA setting, the group trend again, does not fit the experience of the eldest pair of children. Whereas the group of deaf children found themselves making fewer initiations to adults in the OA setting, Nicholas was able to sustain the same level of this type of act. His hearing peer, Darren however, makes fewer initiations to adults in the OA setting than he had done previously which might suggest less dependence on adults in the OA setting is associated with increased maturity.

What is really interesting about these individual differences in communication styles and behaviour is the reaction of staff to a deaf child who was not subdued in seeking out access to adults either by maturation effects teachers might have expected, or by the imposition of an OA environment. Further evidence of Nicholas's relative lack of submission needs to be provided before this can be fully explained.

As Table 4.2 shows, the proportion of Exchanges remain the same for each of the two children, irrespective of setting. As the group data would lead us to predict, Nicholas continues to encounter fewer opportunities for elaborated response acts than his hearing peer in the OA nursery, just as he did when SSE was available, *but* he manages to encounter a less substantial drop in the frequency of exchanges in the OA setting than that with which the rest of his deaf peers met. Despite his own commitment to elaborated communication however, the OA setting is associated

with increased use of acknowledgement for Nicholas, whereas this is not the case for the deaf children as a group. For Darren too, in contrast, as for the hearing children generally, simple acknowledgements virtually disappear; initiations he receives result either in exchange or he chooses to ignore them. The same luxury is not afforded to Nicholas, who despite hardly ever ignoring initiations, mostly has simply to acknowledge initiations addressed to him.

Evidence of Nicholas's resources for helping himself in his own development as a communicator can be seen in his increased use of requests for information in the OA setting (see Table 4.4 in Appendices). Again this does not mirror either the use of requests for information by the deaf group, or by Darren. There might be evidence here of Nicholas having increased difficulty making sense of what is going on in the setting in which sign usage was denied, which would explain his consistently high level of initiations to adults. However, this would suggest he had *particular* difficulty making sense of what was going on in relation to the rest of his deaf peers, whereas I don't think this was the case. Rather, I think Nicholas's determination to get his own needs met was less easily suppressed than that of the other deaf children.

Nicholas was not an easily marginalized child, but highly 'visible' (eg, Spender, 1989,) because he was a boy amongst a predominantly female group of deaf children and because he was in a minority of black[3] children. The latter factor, in particular, was not unimportant in the context of institutionalized racism described in Chapter 1. Nicholas was undoubtedly processed in a particular way because of structures of sexism and racism which influence classroom life (see Corson, 1993, for further discussion) in addition to responses to his

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[3]The term 'black' is used following Stuart's (1993, p.99) example, "to describe people of New Commonwealth origin in the UK and including people of Arabic, Vietnamese or Chinese origin"

audiological status. Stuart, (1993), presents an extended discussion of "simultaneous oppression" in the experience of black disabled people. Unfortunately, further consideration of these specific issues is beyond the scope of the discussion presented here, however they are not regarded as discrete, and will often converge with other factors in discourses concerning integration.

The range of Interpersonal Acts Nicholas uses also testifies to his active attempts to involve himself in communication, particularly the frequency of attention acts which does not change for Darren between the two settings, but increases considerably for Nicholas in the OA setting (see Table 4.5). This trend may be connected with increased requests for information described previously, and indicative of the child having more trouble working out what is generally going on if sign is not available to assist spoken English communication. This brings us to the reason for suggesting the reaction of staff to this child's repertoire of communication behaviour is of particular interest.

The frequency of attention acts used by Nicholas in the OA nursery was regarded by staff as sufficiently problematic to merit referral to an Educational Psychologist. Thus deaf children needing to make their needs known but forbidden to use their full repertoire of communication strategies ran the risk of behaving in ways which staff might construe as deviant and unacceptable; so much for supposed links between oralism and "normalization". Of course, Nicholas's interpersonal behaviour may be a function of differential initiations offered to him, rather than the tendency to 'over-dependency' which some staff assumed.

It is worth pointing out here, that of all the deaf children studied, Nicholas had the least profound hearing loss and also had speech which could be fairly easily understood by others, even if they were relatively unfamiliar. In terms of audiological management, Nicholas should have been the child least affected

by the withdrawal of SSE in the nursery, but his frustrations at not having the opportunity to communicate as effectively as permitted when younger clearly resulted in his disablement by oppressive communication practices. By the time he moved into the reception class, (where the class teacher used SSE in direct opposition to the Head Teacher in charge of deaf children), Nicholas was additionally disabled by a new label proclaiming 'referred to Educational Psychologist'.

Finally, unlike the rest of the children for whom the frequency of solitary observations increases in the OA setting, for the eldest pair under discussion here, solitary contexts occurred less frequently in the OA context. It can be seen from Table 4.6 that both children were observed more frequently in small groups in the OA setting than had previously been the case in the SSE nursery, making Nicholas's experience more comparable to that of his hearing peer in this respect. In the OA setting, adult-child dyads were more frequently encountered by Nicholas than Darren who had much more freedom from one to one contact with adults than his deaf peer.

These findings appear to suggest that even deaf children at the top of the nursery age range, are less independent of adults than their hearing peers where modes of communication are restricted. Given the ordinary course of development we would expect children to have more autonomy in their interactive behaviour. While this appears to be the case for the hearing child, it seems for the deaf child that oral/aural environments tied him down to adults as interactive partners. As this trend in social context observations is associated with reduced opportunity for conversation generally it seems that Nicholas certainly is disadvantaged by more than his auditory impairment in oral/aural settings as many writers have predicted (eg, Montgomery, 1986).

Nicholas is likely to be particularly vulnerable to disadvantage in the classroom because education is never neutral or value free

with respect to race and gender. The findings examined above intimate that audiological status is only one dimension of Nicholas's experience of disability in the integrated settings studied. The OA environment compounded his situation and led to his experience of estrangement in the integrated nursery. Corson (op cit) suggests that injustices multiply when a child is ascribed membership of several non-dominant groups within the classroom, and this was the position Nicholas was in. Issues relating to language, minority groups and gender will be returned to in section 4.3. Prior to this, the question of how the situation of the eldest children in the sample compares with that of their younger peers will be considered.

4.2.2 Experiences of the youngest children observed

Charlotte and Katy were the two youngest children studied. A statistical summary of observations is presented in Appendix 2, Section B.

Although Katy is the youngest child included in the sample of hearing children she is in fact a year older than her matched deaf peer Charlotte. This discrepancy was unavoidable because hearing children were not admitted to the nursery at the age of two. Consideration of age related similarities and differences in the children's experience of integration does however, remain feasible.

It will be argued, that there are more similarities between deaf children and hearing children in the experience of integration when the children are very young. For example, the data suggests it might be only beyond approximately three years of age that the extent of initiations children receive from adults changes according to audiological status. Where there is similarity in the way in which deaf children and hearing children are managed in integrated settings, the chances of equivocal development and egalitarian relationships between children seem to be much greater than where there is variation.

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Charlotte and Katy appear to be positioned in the way which Tizard and Hughes (1984) describe as typical of most children moving into nursery school : "most of the child's experiences are away from the teacher, with other children and they are not shaped by adults" (p.80). Both children receive fewer initiations from adults, irrespective of setting, than their older peers. Unlike the rest of the deaf children, the frequency of initiations Charlotte receives from adults does not actually decline in the OA setting, but for Katy, unlike the rest of the hearing children, the number of initiations she receives from adults in the OA setting does not increase either. Thus the youngest children in the sample are not subjected to a change in the extent of initiations they receive from adults across settings, and the proportion they each receive of such initiations is almost identical. Table 4.7 illustrates these trends.

As children increase in age and approach the transition to school, nursery staff could be expected to try to help them develop skills such as sustained attention which make more structured learning possible (op cit). Charlotte and Katy may not yet have encountered this emphasis on systematic learning and so remain relatively free to engage in other formative experiences. Group data presented previously, however, implies that within an OA setting it is doubtful Charlotte will go on to receive this type of support as unlike hearing children, older deaf children in the OA settings typically receive fewer initiations from adults.

Thus, although it appears there may be an age-related period during which adults interact with children in comparable ways which are not predominantly differentiated by reference to the child's audiological status, the nature of the communication environment may determine the likely continuation of equality in initiations received. At the time of the study, being the youngest child in the sample seems to have afforded Charlotte relative immunity from the changes other deaf children discovered

in initiations from adults, and she retains a similar pattern of these initiations to that received by Katy. Unfortunately the OA environment seems likely to ensure that this parity will not be maintained. Why not ?

It could be that the youngest children in the nursery setting enjoy a time when the expectations staff have of them are the same, regardless of whether they are deaf or hearing. When an OA policy prevails however, deaf children, bereft of their full repertoire of strategies for communication, are compelled to interact in ways which confirm the suspicions of qualified teachers of the deaf that there is something 'special' about deaf children which requires intervention and in turn justifies their own specialist involvement. Thus professionals can recycle their own ideologies in the name of responding to the children's best interests. If the proponents of oral/aural approaches could recognize that their fantasy of deaf children learning to talk is more concerned with their own needs than the needs of children however, we may be better able to engage meaningfully with the situations of deaf children in their varieties of cultural and educational positions.

Clearly a wealth of evidence that deaf children are disabled by oral/aural communication policy and practice can be assembled through the observations reported here. However, some of the data on individual differences, relating to the youngest children studied, does enable the thesis to avoid becoming just a catalogue of the statistics of invariable oppression with integration. Both Charlotte and Katy experience, for example, an increase in the relative frequency of initiations received from and made to other children of the same audiological status in the OA setting, which is not the same as the experience of the wider groups of children.

Whereas deaf children mostly encountered a decline in the frequency of initiations with other deaf children once SSE is eliminated from their interactive environment, Charlotte is able

to increase her interactions with other deaf children which corresponds to the direction Katy follows with her hearing peers. It is likely that because Charlotte is left more to her own devices than her older deaf peers, her interaction is less subject to scrutiny by adults and so a richer repertoire of both interactive partners and communication strategies can be utilized to evident advantage.

Of course the decline in initiations the group of deaf children receive from other children in the OA setting is probably linked too, with the example set by adults who, as we have already seen, tend to initiate to older deaf children less when SSE is not available to assist communication. The positive experiences of Charlotte and Katy while young enough to avoid the gaze of staff committed to oral/aural approaches could stand as a warning to those who wish to emphasize the centrality of dependence on oral/aural strategies for young deaf children in integrated settings.

Up to now I have been arguing that children can resist being positioned as deaf or hearing while they are young enough to circumvent the track of preparation for systematic learning and that this ensures some symmetry in their experience of integration. But deaf children are admitted to the nursery at the age of two precisely so that they can embark on this course earlier than their hearing peers and in this situation, differential experiences of integration seem inescapable. The OA environment in particular however, militates against protection for deaf children from disablement because it forces them to behave in ways which professionals can seize upon and problematize if they wish to do so. Further evidence to support these arguments has already been presented at some length.

I want to argue next, for recognition of the consequences of a communication environment which is restricted to OA modalities, not only for deaf children but for hearing children too.

There is quite a lot of evidence to show that Charlotte, at a year younger than Katy, holds on to some of the developmental gains made in the integrated SSE, better than her hearing peer does when the two children find themselves in the OA setting. It is worth pointing out here, that being a year older than Charlotte, "preparation for primary school by such means as encouraging [children] to listen to staff and follow instructions" (op cit, p.181) was more imminent for Katy by the time the OA policy was implemented.

It is interesting then, to see, in Table 4.11, that some features of Katy's interpersonal communication undergo more dramatic change in the OA setting, than is the case for Charlotte. This could reflect relative stagnation in the deaf child's development except that, despite greater maturity, Katy's interpersonal communication is not necessarily more impressive in the OA nursery as compared with her own performance in the SSE setting, or compared with observations of Charlotte.

Agreement and acts of compliance increase quite considerably for Katy in the OA setting, whereas the deaf child's interpersonal behaviour is not characterised by the same degree of acquiescence. In fact Charlotte engages in more disputes (contesting and rejecting) in the OA setting than she had in the SSE setting (which it has been argued, elsewhere, may facilitate episodes of sustained learning), and also makes more suggestions and fewer simple acknowledgements. In this dyad it is the hearing child, Katy, who finds herself with less opportunities for intellectual search in the OA setting than when she was younger and in the SSE environment.

These findings are indicative of the limitations of an integrated OA environment for learning for both deaf children and hearing children. They highlight the reluctance of policy makers to reflect beyond the parameters of their own beliefs and to question assumptions about the benefits of oralism for any child.

In a sense, issues in deaf children's communication in integrated settings are very much the same issues for hearing children too. The challenge for educators here, is to move beyond the straight-jacket of oralism to consider what assumptions underlie communication policy and whose development they serve.

The final indicators that Katy, the hearing child, may survive the OA integrated nursery setting rather less well than her deaf peer Charlotte, can be seen in Table 4.12 which depicts the children's experience of social contexts. Unlike older deaf children, probably for reasons which have already been suggested, Charlotte manages to avoid intensive adult-child dyads in the OA setting. Although she is still observed in this context more than her hearing peer, the intensity of one to one adult-child contact has diminished in comparison with the SSE setting. Katy, in comparison, hardly ever benefits from one to one adult-child dyads in the OA setting. Thus the OA environment increases distance between deaf children and hearing children in their experience of integration, but benefits neither group in the process.

Like other deaf children studied, Charlotte does miss out on the relative anonymity of large groups in both nursery settings as compared with her hearing peer, and is confined to small groups much more often than Katy, particularly in the OA setting. However, Katy ends up either in large groups or parallel situations for almost half of her time in the OA setting. Once again too, interactions between deaf and hearing children decline in the OA setting, implying that SSE is required for social integration to become a reality.

Those of us who believed integration and equal opportunities could go hand in hand need to recognize the wide divergence of children's experiences even within the same educational setting. This involves explicit evaluation of communication policies within integrated settings to ensure they are appropriate for *all* children. In the study reported here, provision of SSE, although

far from a fully developed model of sign support, is clearly associated with equitable experiences for both deaf and hearing children in a way that oral/auralism is not.

So far in this chapter we have looked at questions about how age differences influence children's experiences of nursery integration settings characterized by different approaches to communication. Clearly each child responds differently to these circumstances. It seems important to acknowledge that the way in which adults deal with a child is influenced by a variety of expectancy effects, when we try to make sense of the different experiences of integration recorded here.

In the next section, ways in which children's experiences of integration are influenced by contact with more than one language are addressed in relation to the issue of whether mode of communication makes a difference to a child's development in integrated settings.

4.3 Using More Than One Language

Several children included in the study used, and were developing more than one language. It is not known to what extent any of the children had equivalent fluency in their different languages, simply that they used different languages on some occasions, in some contexts and with some people. Typically a child used one of the languages primarily at home and one primarily at school, but of course choice of language is not static and language use was determined by many contextual and situational variables.

Three deaf children, each of whom used more than one language, are the focus of this section. For two of these children spoken Bengali comprised the family language used at home; both were matched with hearing children whose family languages were spoken

Chinese in one case, and spoken French in the other. In the SSE nursery these children were therefore experiencing three languages. The third child, identified as a member of the Deaf community, used BSL at home; she was matched with a hearing child whose first language was spoken English.

Several interesting questions can be asked of the relations between use of more than one language and integration. Firstly the situations of the children learning two oral languages will be discussed, followed by consideration of the child using BSL.

4.3.1 Additional spoken languages

Serena (Bengali) and Julia (Chinese)
Shula (Bengali) and Sian (French)

It will be argued that learning more than one language does not necessarily confound a deaf child or a hearing child in their development as a communicator, but an OA integrated environment can produce children for whom 'expert' intervention can be justified. Children learning more than one language may be particularly vulnerable in integrated settings which make no reference to sign strategies. What evidence is there to support these claims ? Statistical evidence relating to these issues is summarized in Appendix 2, Sections C and D respectively. Emergent themes are discussed next.

Initiations from adults escalate considerably for Serena (a deaf child whose family language is Bengali) in the OA setting as compared with her hearing peer (whose family language is Chinese) for whom they stay the same (see Table 4.13). This pattern differs from the group trends seen in Chapter 3, but is similar to the experience of the eldest two boys studied who are nearest in age to Serena and Julie. As with the hearing boy considered in the previous section, Julie appears to have greater independence from adults than Serena in integrated nursery

settings generally. The communication profiles of both Serena and Julie are however, dominated much more by adult involvement in the OA setting than the two boys endure. Age differences between this pair of girls and Nicholas and Darren are negligible, and so unlikely to account for this difference. Gender may be a factor and both girls were members of ethnic minority groups which it has been argued previously may be linked to bias. I will argue however, that the major determinant of the discrepancy is likely to be the impact of mode of communication on the experience of children learning more than one language.

In the SSE setting, where Serena and Julie received comparable initiations from adults to Nicholas and Darren, it could be that SSE provided a shared medium for easy and effective communication between teachers and children who each preferred different spoken languages. In the OA setting, without refuge in SSE, the potential for breakdown in communication would be much greater necessitating more attempts by adults and children alike, to get their message across.

If, as suggested previously, the oldest children in the sample were increasingly exposed to the demands of systematic learning, then the relative monopolizing of the children's experiences of communication by adults can be more easily understood. The danger here is that the OA setting denies deaf children access to the ordinary interactive milieu of the integrated environment, investing them with a set of difficulties which in turn provide reassurance for those with oral/auralist convictions. This propensity is particularly clear in the observation that Serena encounters more than twice as many initiations from adults as her hearing peer. Similarly, as with the wider group of deaf children, initiations to and from other deaf children diminish rapidly in the OA setting for Serena as compared with when she was in the SSE context. Interaction with other hearing children is not similarly disrupted for Julie.

Data concerning response acts however, which can be seen in Table 4.14, provides more evidence of the threat which the OA environment posed to hearing children as well as their deaf peers. In comparison with Serena, for example, Julie's response acts are relatively unproductive in the OA setting. Both children increase their use of ignoring responses in the OA nursery, but Julie ignores almost a quarter of all initiations directed to her in this context. In addition almost another quarter of Julie's response acts are non-communicative, which represents an alarming proportion as compared with 4.6% in the SSE setting. Sian too, a younger hearing child also learning more than one language, and her matched peer Shula, both experience an increase in non-communicative acts in the OA setting, as can be seen in Table 4.20.

These children appear to have been advantaged by the communication environment which encouraged SSE. It is of concern that Julie, in particular, seems even more disadvantaged by the OA setting than her deaf peers. In the OA setting where bimodal input was no longer sanctioned, positive features of the children's respective communication repertoires are lost. Why should this be so ? In particular, why should the withdrawal of SSE affect a hearing child so materially ? Is the fact that the children are learning more than one language correlative ?

In the SSE nursery setting, all four girls who are the focus of this section were experiencing two spoken languages, none of which they would be expected to have completely acquired given their age, even if only one language was learned in isolation, (eg, Wells, 1987) but one of which was, for a short period, accompanied by sign. What are the effects of such exposure ? Some speculative comments are worth pondering in relation to bilingualism. Although the research only provides evidence on the use of SSE within an English language context, it does provide insight into aspects of the bi-channel context of spoken vs signed language which may be of interest.

Opponents of bilingualism argue that a child exposed to two
different languages may learn neither effectively. However,
evidence to support this is limited since researchers rarely have
the requisite communication skills themselves to fully access a
child's performance in both languages. Concern that a child will
become 'semi lingual', and fail to achieve linguistic competence
in either language (Cummins and Swain (1986) call this the
'linguistic mismatch hypothesis'), is linked to dominance theory
in which it is believed a child will become better at one
language than the other. The assumption underlying these concerns
is that a child in this situation is aiming to be bi-monolingual.
It has been increasingly argued however, that explorations of a
child's linguistic competence in either language may not be
meaningful (eg, Cummins, 1984). Focus might be more productively
placed on a child's overall competence as a communicator.
Interference, for example, of loan words, in which a bilingual
child does not keep their output totally free from features which
mark it off from the language output of mono-linguals, need not
be construed as evidence of inability, but as evidence that a
child is developing a unified language system which is richer
than a singular system (see Cummins, op cit, for a full
discussion of these issues). The problem for researchers at
present, is how to access the child's complete range of
abilities.

Such arguments concern *underlying language proficiency* (Cummins,
op cit), and can be extended to hypothesize that manual/visual
modes of communication provided a useful support in a child's
task of developing their language and communication skills,
irrespective of whether they were deaf or hearing, and
notwithstanding exposure to a variety of languages. Where
manual/visual input has some roots in a linguistic system such
as BSL then the potential contribution to language acquisition
could be considerable. Evidence of gains made by children
learning more than one spoken language in the SSE setting clearly
supports this possibility further but does not deal specifically
with issues relating to bilingual development.

Volterra (1986) points out that "in real life, that is in everyday communication, parents and teachers do in fact use unconscious gesturing with deaf children" to facilitate interaction, and of course this is ordinarily true in communication with hearing children too. However, in pursuit of an OA environment in the study school, even spontaneous supplementary gestures were explicitly resisted, for example, the recordings show staff folding their arms when talking to deaf children, and children persuaded to sit on their hands. Sadly, Volterra's recognition of what happens in "real life" bears little resemblance to what happened in the study school during this period of the investigation. It is clear that both deaf children and hearing children carried the burden of oppressive communication policy and practice. These are highly contentious arguments and so I should present further illustration.

In relation to mode of communication, as Tables 4.15 and 4.21 show, it can be seen again, that none of these children rely exclusively on *either* manual/visual *or* oral/aural modes of communication in either integration environments studied, despite the attempts of some staff to suppress manual/visual strategies. This reinforces the view that children are the primary architects of their development as communicators (eg, Wells, 1987) and extremely resourceful in helping themselves, even when the odds are stacked against them.

In the OA setting, both deaf children greatly increase the frequency of non-verbal acts, though these decline for their hearing peers. Signs, which were used by the deaf children in combination with a variety of other communication strategies, diminish in frequency in the OA setting, apparently replaced by idiosyncratic non-verbal communication, yet there is no increased efficiency with verbal acts: these actually decline for Serena, along with pre-verbal efforts which decline for both deaf children. It is regrettable to report that once support for sign usage was withdrawn from the deaf children, their transition to linguistic communication did not fulfil the promise of the

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headway they had made in the SSE setting. Gestures have been linked both theoretically and empirically, to the beginnings of early linguistic communication by many researchers (eg, Stokes and Bamford, 1990; Volterra and Erting, 1990; Lock, 1984; Ninio and Bruner, 1978). The evidence reported here shows that if gesture is suppressed, as in the OA environment, then subsequent linguistic development is set back.

Both of the deaf children learning more than one language, use a wider range of referential communication than their matched hearing peers in both settings, which merits some consideration (see Tables 4.16 and 4.22). It could be that communication acts characteristic of an earlier developmental phase persist longer in the deaf children's repertoires; for example Sian is observed not to use simple naming acts in either setting, but instead to use deictic naming, use of which Shula does not demonstrate (though there is other evidence of deictic communication for Shula). However, this idea does not provide a satisfactory explanation for the absence of referential requesting or commenting acts in Sian's interactions in the oral/aural setting, and it may be that in this pair, the deaf child is the more skilled communicator and makes use of a richer assortment of referential acts.

Previous research has entrenched the view that the range of referential communication acts used by deaf children is unlikely to be comparable, let alone favourable to the repertoire used by their same age hearing peers (Alegeria, 1981; Breslaw et al, 1981), but it seems, as MacKay-Soroka et al (1987) have also argued, that these claims may require renewed investigation.

Requests for information, which remain constant for the elder of the hearing children learning more than one language, increase considerably for Sian across settings, and also for both deaf children, in the OA setting. Possibly there is some evidence of greater opportunity to engage in episodes of sustained questioning in the OA setting. In the context however, of

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depressed opportunities for exchange described above, escalation of non-communication response acts in the oral/aural setting, and the video records of abject confusion on the faces of these children in the integrated OA nursery, I am more inclined to believe they simply had to multiply their efforts to keep track of what was going on.

Slightly older hearing children (Julie, and those discussed previously) do not increase requests for information in the OA setting as much as their deaf peers and so there may be reason to suspect either that younger children are at particular risk of bewilderment when manual/visual communication strategies are not available, or that older deaf children give up on asking for information in OA circumstances.

Interpersonal acts, summarized in Tables 4.17 and 4.23, are also of interest. Julie uses an unsurpassed proportion of interpersonal greeting (or conventional form) acts (47.5%) in the OA setting. It has been postulated before that her communication repertoire is noticeably less balanced than that of other children. However, this type of interpersonal behaviour does increase in frequency for all of the children learning more than one language in the OA setting. Interestingly, this category incorporated observation of ritualised utterances, which became prolific in the OA setting. Examples include strings such as "Say 'hello-Mrs-Nelson'. . . . say 'hello-Michele' . . . say 'hello-Charlotte'" which had to be repeated by each child individually every morning complete with imitation of sing-song intonation, and similarly "I'm-going-home-bye-bye" which had to be reproduced in staccato fashion by every child, again individually, at the end of every day.

Stereotypic utterances have certainly contributed to increased use of this interpersonal category, particularly for younger children. The importance of opportunities for the child to make *genuine* communicative contributions when learning English as a speaker or signer of other languages continues to be stressed by

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educationalists (eg, Baker, 1993) but was not recognized within the integrated OA nursery at the time of the research.

Bouvet (1990) is resolute in her condemnation of such efforts "to 'make' deaf children talk" which, she says, are based on a totally mistaken philosophy that reduces the process of communication to just learning a code for getting by in interpersonal situations. Bouvet argues that teaching ritualised utterances such as those described above, not only jeopardizes a child's understanding of what communication is for, but also deeply damages their confidence for participation in interaction, all for the sake of "demuting" deaf children (Bouvet, 1990, p.16). If these arguments are accepted then the OA setting must be seen to actively destroy children's development as communicators, and failure to do anything about this comprises a grave injustice to deaf children.

Finally, to brief consideration of social contexts. Tables 4.18 and 4.24 show small group scenes increasingly featured in the deaf children's interaction in the OA setting, practically monopolizing the younger child's activities. Matched hearing children spent much less time in small groups. As mentioned in earlier chapters, opportunities for integration between deaf children and their hearing peers will ultimately be determined by availability for mutual interaction. There is evidence of greater constraint being placed on deaf children's social movements which would militate against access to their hearing peers.

Again, amongst the group of children learning more than one language, there is little evidence of social activity between deaf children and hearing children. Serena however, the oldest deaf girl studied, is increasingly observed in social situations with hearing children in the OA setting. Initiation data relating to Serena suggests the initiative for these contacts comes from hearing children which is encouraging for those who might share concern that "since the Warnock Report ...in the case of hearing

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impaired children, too much has been expected of them" (Reed, 1981).

The idea that integration in an OA setting is more oppressive for children than integration with SSE seems increasingly more persuasive. Evidence presented suggests that just as policies for OA communication complicate the task of children developing one language, they also constrain the progress of children learning more than one language. These effects are not confined to deaf children alone.

It now remains to consider data relating to the child exposed to the bimodal situation, learning BSL at home and spoken English at school.

4.3.2 Additional signed language

Catherine (BSL) and Faye (Spoken English)

Statistical summary of observations can be found in Appendix 2, Section E.

Catherine, whose parents identified both their daughter and themselves as Deaf and whose entire extended family used BSL, attended the study school because her parents said they had been told the alternative was residential special school (In-Schools Project, 1985). The price of a local integrated education was that Catherine would have to survive in an OA environment. In fact, it was the promotional efforts of Catherine's parents, combined with the commitment of one teacher and a classroom assistant, which eventually led to the brief period of SSE in the integrated nursery. However, as we have seen this period was to be relatively short lived.

The period of time which the Authority gave for SSE to 'prove' itself was extremely limited in terms of the technical and ideological changes involved. Those staff who were resistant to challenging their own practice were easily able to exploit the processes of implementing change at both political and practical levels. During this phase I finally came to believe that for some professionals, children are simply the vehicles through whom one's salary is paid, and oppressive policies are practised for a purpose. Deaf/deaf people themselves, of course, have recognized this for many years (see, for example, articles in Taylor and Bishop, 1991).

Clearly, reflections on personal motivations come from beyond the formal observation data. They are grounded in a variety of encounters in staff rooms, research meetings and general conversation. The attitude of individuals, together with being in a position to influence policy are important variables here. I realise these impressions are judgemental, and thus contradict my original intention <u>not</u> to judge individuals. I am however, reluctant to temper the commentary as this feels like abdicating responsibility for challenging prejudice.

Returning to the data, what was Catherine's experience of integration in the nursery ?

Unlike the majority of deaf children Catherine was observed to initiate more to hearing children in the OA setting than she had in the earlier SSE environment, though her initiations to other deaf children reduced (see Table 4.25). Having BSL as her family language meant Catherine was never entirely bereft of sign, even when the 'oral/aural only' policy was most ardently imposed and this may account for her ability to sustain contact with hearing children when other deaf children in the study were unable to do so. Moreover, she had also the advantage of having arrived in the nursery *with* a linguistic system firmly in place, unlike the rest of her deaf peers, and because of this, even though her own language was not initially valued, and later disparaged, she was

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better equipped to maintain her own development as a communicator than other deaf children (see Strong, 1988).

In the OA setting the chance of extended dialogue was considerably reduced for Catherine (dropping from 34.8% in the SSE setting to 20.7% in the OA, see Table 4.26). Faye, Catherine's matched hearing peer, went on to make more use of exchange in the OA nursery as generally accepted theories of growth and development would predict. In addition, the proportion of non-communicative responses became greater for Catherine in the OA setting than when SSE was permitted. As we have seen before however, the frequency of non-communicative responses which Faye experienced also rose perilously in the OA setting to characterise almost a fifth of her response behaviour. This meant that in the OA setting, Faye was equally as unlikely to perceive initiations addressed to her as her profoundly deaf peer was in the SSE setting. For Catherine the OA environment increased the proportion of unperceived communications to more than a quarter of all interactions she was involved in.

These outcomes illustrate some of the reasons why nursery integration with an oral/aural communication policy could be regarded as a travesty for all of the children involved. Retrospective accounts of Deaf/deaf adults who have personally endured integration and oral/auralism reinforce the experiential reality of this view (eg, Ladd, 1991).

The vastly increased use of referential acts requesting action used by Catherine in the OA setting is reminiscent of her look of continual frustration with the pace of spoken English, and hence, events in the OA setting. Perhaps increased frustration is to be anticipated for a bright, fluent child who finds her principal means of communication suddenly deplored and herself consequently unsure about how to make sense of the world. The return to an OA environment visibly began to push some of the

deaf children into what Montgomery described as "the oralist wilderness" (Montgomery, 1986).

In relation to interpersonal communication, Table 4.29 shows that Catherine made increased use of attention acts in the OA setting, offered more suggestions and used fewer of the passive interpersonal acts such as compliance or acknowledgement than she did when she was younger and in the SSE environment. Such a profile of communication acts reflects a child actively seeking to take control of her opportunities and experiences; not a child who is about to acquiesce in other people's attempts to deny her disability. Faye, on the other hand, reduces rather than expands, use of attention acts and is observed to use a greater proportion of compliance, conventional acts and imitation. These findings show that deaf children were not alone in experiencing the shift to oral/auralism as confounding their best efforts to develop as skilled communicators and competent, creative learners.

Tensions relating to power and oppression in education became increasingly open as Catherine's parents became more and more anxious about her progress once SSE was withdrawn. Whereas before the SSE period, sign usage had not been explicitly sanctioned, after the SSE phase it was officially forbidden (In-Schools Research Report, 1985). Catherine's parents then spent as many days as possible in the nursery, visiting under one pretext or another, but in fact acting as surreptitious interpreters for their child. The class teacher openly regarded these visits as a nuisance and as getting in the way of carefully planned oralist teaching activities which she believed would advantage Catherine much more than involving parents and owning up to oppression of language and culture.

Much later, when re-viewing the video-tapes, I was thinking about Sainsbury's research which she claimed had shown "the exclusion of sign was never as rigorous even in the hey-day of oralism as has sometimes been implied" (Sainsbury, 1986, p.298). In my view, Sainsbury may have pre-empted the hey-day. This feeling is

further borne out in the course of ongoing research exploring the experiences of families with a young deaf child, in which parents repeatedly explain how they are fearful of sign usage for their child because professionals continue to tell them this will prevent the child from ever learning to talk (Beazley and Moore, 1993).

4.4 <u>Conclusion</u>

This chapter then, has provided further necessary critique of individual children's experiences of integrated settings differentiated by availability or non-availability of sign support in an English language context. I have been arguing that the experiences of integration observed reveal a polarised picture of opportunities for communication and learning, determined by mode of communication. Individual differences, which are an inevitable factor in assessment of children's experiences of integration, have been examined. It appears that a number of factors including (but not only) age, language, race, and gender impact on a child's experience of integration. Each of these factors pose their own dilemmas for the practice of integration, but none are found to affect equality of opportunity for children as pervasively as the imposition of an OA policy. Further, OA environments actively discourage equal opportunities for communication and learning, but in addition to disabling deaf children, disable hearing children too.

An adequate account of how integrated settings impact on children's opportunities for communication and learning is not yet provided however. What is needed next is consideration of further issues relating to models of practice. We need to examine whether the nursery settings which have been the focus of analysis so far are unique in the extent to which OA methods are associated with inequalities and oppression. Do alternative models of provision provide more equitable experiences of integration for deaf children and their hearing peers ?

CHAPTER 5 : DIFFERENT MODELS OF EDUCATIONAL PROVISION : DEAF CHILDREN'S EXPERIENCES

5.1 Introduction

This chapter examines some features of alternative educational contexts which were studied exclusively in relation to the deaf children during the course of the study period. The two contexts selected for special consideration are firstly, the period prior to commencement of integration when deaf children were placed in segregated nursery provision using oral/aural communication methods, and secondly, a phase during which three of the deaf children were moved into the reception class and experienced a model of part-time integration with full-time SSE.

As seen in previous chapters, opportunities for interaction and learning in full-time integrated nursery settings are mediated by the nature of the communication environment, and in particular, by sign resources available to the child. Important questions to consider in relation to this, are whether or not different models of education provide deaf children with better opportunities for communication and learning, and whether SSE continues to operate as a determinant of children's opportunities in a variety of environments.

In this chapter a primarily descriptive analysis of the children's experiences of interaction in two further educational environments will be provided. As in previous chapters, data on the six categories of communication behaviour observed is addressed. This permits appraisal of opportunities for communication in the contrasting settings. As explained in Chapter 4, tables summarizing data relating to this chapter are presented in the Appendices. (see Appendix 3).

Once again, it has again proved impossible to resist inclusion of basic details relating to statistical procedures undertaken, for contextual information. In part this reveres both traditions

pertaining to analysis within psychology, and the constraints under which the research was constructed. Thus, a further conventional attempt is made to minimize analytic scepticism. However, as has been recognized, quantitative material attracts an analytic cynicism of it's own, and so the discussion continues to be principally guided by an implicit narrative structure in an attempt to recognize that the audience I am attempting to align myself with consists in educationalists and those looking for recognizable insights into the experiences of young deaf children in integrated settings, and not critics from a single discipline, or a domineering LEA, alone. Although trying to build a persuasive account which meets the requirements of different audiences at such a crossroad, involves the risk of falling between camps, an eclectic approach feels expedient in the context of the present study (and of course, the reader can skip the information on statistics if by now prepared to 'believe' my analysis).

5.1.1 Outline of data

Data relating to this chapter comprises frequency material which has been reviewed in a similar way to that presented in Chapters 3 and 4.

Frequency data was compiled for target deaf children, on each of the six aspects of communication studied, in each of the educational settings studied. For each variable, results are expressed as percentages which indicate the relative distribution of variable specific communication acts per setting, thus meriting the following questions :

> (i) what is the relative distribution of communication acts used by the deaf children in each of the educational settings ?

and

(ii) how is the distribution of communication acts related to the nature of the communication environment the children find themselves in ?

In this chapter, the relative distribution of communication acts has not been directly tested for a comparison between settings because a period of up to fourteen months separated the children's placement in each class. In addition, children who had been in the segregated nursery together were not all transferred to the reception class at the same time, due in part, to a strategy of holding back individual deaf children as a means of maintaining pupil numbers in the nursery (In-Schools Project, 1985).

Data relating to fully integrated settings has already been comprehensively analyzed in Chapters 3 and 4. Analysis of trends in the data relating to the partially integrated nursery settings showed noticeable similarity to those discussed in relation to the fully integrated nursery settings using SSE and OA methods respectively, and so it was not considered sensible to single them out for the purposes of this report. I have chosen instead, to use the remaining space to survey the most diverse findings. Specifically, the intention is to focus now on ways in which the segregated nursery and the partly integrated reception provision affect the children's experiences of communication.

When we look at variation in the children's experience of communication within different models of educational provision, what can be discovered ? This question provides the focus for the rest of this chapter.

5.2 Deaf Children and Specific Ecological Events

A number of questions can be asked about the experiences of non-integrated education that the children were exposed to. Firstly, it is important to think about the consequences of suppressing

children's entitlement to integrated education. The drawbacks to segregated educational provision are thought to consist in provision of a restrictive environment for children and separation between deaf children and their hearing peers (eg, Hegarty, 1980). On the other hand, advantages of segregated education may include scope for highly specialised intervention intended to ameliorate some of the potential consequences of deafness. Data relating to deaf children's experiences in a segregated nursery setting will be examined firstly, with these ideas in mind.

5.2.1 *Segregated nursery using OA methods*

See Appendix 3, Table 5.1 for statistical summary of the data.

For obvious reasons, in the segregated nursery setting the group of deaf children had hardly any experience of interactions with hearing children. Occasional opportunities for such interactions arose if a hearing child visited the nursery with a message, but otherwise the group of deaf children were completely isolated from hearing children of their same age. It could be argued that this state of affairs is desirable for the preservation of Deaf Culture, except that BSL was not valued in the segregated nursery and any sign usage was regarded as a less prestigious means of communication than spoken language.

In this context, segregated nursery provision clearly comprised an oppressive (and retrograde) practice which threatened, had it been prolonged, to negate advances in access to equal opportunities which recent legislation had promised the children. This is not to say that some aspects of segregation might not be useful, but rather that without BSL, many of the underlying assumptions of this type of practice remain suspect in relation to anti-discrimination initiatives.

So, were there any positive features relating to children's opportunities for communication in the segregated nursery setting? Initiation between deaf children and adults comprises more child led contact rather than adult to child, which fits well with Tizard and Hughes (1984) recommendation that listening to children in nursery school should be given higher priority than asking them questions, if children are to improve their communication skills. This may be an advantageous product of the intense adult-child ratio found in the segregated nursery.

The proportion of initiations between deaf children is however, no greater than in integrated settings, and further constrained by the non-availability of potential hearing partners. This suggests integrated settings are, at least, no more socially disadvantageous than segregated settings. Several writers (eg, Antia, 1985; Lindsay and Dickinson, 1987) claim social interaction between deaf children and hearing children in integrated settings is a fiction, based on observations that physical proximity is not necessarily associated with communication or friendships. However the evidence presented here confirms that, similarly, close proximity to other deaf children in segregated settings does not guarantee social interaction between children either.

The highest level of non-communicative response acts recorded was in the segregated nursery setting, where, even if no other advantages could be predicted for this type of environment, we might anticipate benefit from a preferential acoustic environment if only because there was not the chatter of forty other children around. Instead, integrated settings characterised by SSE are associated with least non-communicative response acts, a finding which again challenges advocates of 'learning to listen' to incorporate, rather than exclude, sign usage in their practice. Reasons for the high level of non-communication in the segregated setting become clearer in relation to other variables.

In relation to mode of communication, as in all other settings studied, the children use a combination of manual/visual and oral/aural strategies, irrespective of communication policy. In the segregated nursery, the highest proportion of pointing acts (as compared with other settings) is recorded, indicating the basic and elementary nature of interaction observed in this setting. Pre-verbal communication acts were observed more than in other settings which, because these observations relate to the children at their youngest, helps to confirm that important precursors for communication and language were in place prior to the children's experiences of integration. However very little sign usage was observed in the segregated setting, and all in all the profile of results suggests a bleak picture of opportunities for communication and language development.

Data relating to referential communication further sustains the image of poor quality communication experiences. Referential acts are seen, but consist in the simplest and most elementary social uses rather than more complex referential acts. For example, we see the children's use of referential acts is substantially object related, including referential deictic object acts (which links to the high incidence of pointing), deictic naming, and showing or requesting objects. Other referential acts are completely missing, such as requests for action, or seen only rarely, such as comments on objects or self. A very small fraction of referential imaginary acts is observed which is undoubtedly related both to the children's limited language and to restricted expressive proficiency during this phase.

Interpersonal acts provide further evidence of a narrow range of communication experiences. In the segregated nursery setting deaf children use more attention acts than in other settings. This may be related to the relative availability of adults in a setting with two adults to a small group of children, but is incompatible with independent learning goals. Few interpersonal acknowledgement or agreement acts are seen, which is likely to be associated with the high percentage of non-communicative

response acts. Finally a high level of compliance is observed
which does not herald challenging or stimulating experiences in
the segregated nursery.

Social contexts the deaf children engaged in during the
segregated phase include by far the highest percentage of
solitary observation (19.8, see Table 5.1) almost double the
proportion seen even in the OA integrated nursery. Isolation and
restriction seem inevitable within segregated settings however,
given the small number of children participating in them. If just
one or two children were absent, on a given day, those attending
the nursery found themselves unaccompanied for very long periods
of time. This systematic isolation of deaf children from other
children is profoundly stifling and unnecessary. In addition,
even in the specialised environment of the segregated nursery,
fewer small group interactions were observed as compared with all
other settings studied.

This disheartening inventory of opportunities for communication
in segregated settings begs many questions about the role of
specialist centres and the role of specialist staff. Since the
children observed in the segregated did have such meagre
experiences of communication, how did specialist staff spend the
working day ? As Hegarty (1980) has pointed out, specialist
teachers can spend a great deal of time with specialist duties
that have nothing to do with teaching. In the segregated nursery,
the class teacher had many jobs to do which ordinarily class
teachers would not engage in. The teacher was responsible for
example, for monitoring hearing aids, detailed audiological
assessment, record keeping, and liaison with other professionals
such as speech and language therapists or educational
psychologists. In integrated settings many of these
responsibilities were shared between teachers freeing up the
specialist teacher responsible for deaf children to teach rather
than manage the children. I am arguing that the constraints of
segregated provision simply led to the waste of a good teacher,
and the outcome of this was inadequate pedagogic experiences for

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deaf children. The observation data shows that the segregated nursery did not secure any advantage for deaf children in terms of their access to communication or opportunities for specialist intervention, and so had very little to recommend it. It is easy to see why, as Branson and Miller remark, "segregation is currently a negative concept, associated with not coping, with not being 'normal'" (Branson and Miller, 1993, p.34).

Given this scenario, staff were understandably bewildered when, less than two years later, the decision was taken to return deaf children to partly segregated settings once they entered into the reception class. In the next section, a summary of the findings relating to the part-time model of integration will be provided, in which questions about social equity are a central concern.

5.2.2 Part-time integrated reception class using SSE

Statistical data is presented in Appendix 3, Table 5.2.

In the part-time integrated reception class the proportion of interactions between deaf children and hearing children is almost identical to that seen in the completely segregated setting and there is virtually complete absence of contact between the two groups of children. It seems there is a requirement for integration to be a full-time permanent fixture in children's school lives if interactions between deaf and hearing children are to be sustained, and that any separation of deaf children from their hearing peers reinforces isolation. In the part-time integrated setting the highest level of interactions between deaf children is recorded, but of course this is inevitable given reduced access to hearing children.

If deaf children are to be excluded from part or all of the curriculum experienced by their hearing peers then it is important to think about exactly what criteria will be used to determine segregation, and also, whose needs separation is

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intended to serve. The rationale for part-time segregation in the reception class was that deaf children needed to be removed from the class they shared with their hearing peers for the purposes of specialist help with langauge and learning. However, this situation obliges deaf children to miss out on a variety of events and acquire a set of experiences not shared with hearing children, which in turn, creates fundamental inequalities. In the part-time integrated class studied, when deaf children returned to the mainstream class they were inevitably reproached for not interacting with their hearing peers and taken aside for 'more support for coping with integration'. Thus, part-time models of integration not only reinforce cultural and linguistic discrimination, they also reinforce assertions of the value of remedial options. Unfortunately, we have already seen that separatist provision is no guarantor of optimum tuition.

As when considering the relative merits of different modes of communication, we have to ask ourselves *whose needs* are being met, via implementation of part-time model of integration. In a sense, the benefits of integration, and importance of a child's development as a communicator, are set in opposition to each other by part-time models of integration. Failure to integrate then becomes a product of a specific model of integration, which operates to disable those children it claims to enable. Further review of the data emphasizes the relevance of these arguments.

In the part-time integrated setting the frequency of initiations from children to adults is lower than in any other setting, which could be linked to less dependence with increased maturity as this setting included the eldest children in the sample. It is an interesting finding because despite a beneficial staff-pupil ratio at least during non-integrated parts of the day, as in the segregated setting, children do not avail themselves of more adult interaction than in fully integrated settings.

In direct contrast to the segregated nursery however, where the highest level of non-communicative response acts was seen, in the

part-time integrated reception class the lowest level of such response acts was observed. The key to understanding this contrast may lie in the provision of SSE in the part-time integrated reception, as compared with OA strategies in the segregated nursery. Again there is an association between a high level of exchanges and SSE conditions. In addition, the part-time integrated reception class produces the lowest incidence of ignoring acts which suggests children are ready for communication and eager co-communicators in this setting. Of course any of these advances could be due to age, but they are also, significantly, associated with availability of SSE, and were manifestly interrupted during the OA nursery phase described in Chapter 3.

Other positive features of the part-time integrated reception class include the lowest incidence of pre-verbal strategies used in isolation, and in its place, pre-verbal acts used together with sign strategies. These developments reflect children's growing language systems and also reaffirm that sign usage need not eclipse the emergence of spoken language. The most encouraging trend lies in the high percentage of verbal acts, providing increasingly firm evidence that SSE does not set back spoken language acquisition. I have a slight reservation that the level of verbal acts may be associated with a high proportion of imitation which occurs in this setting. However, in the context of the appalling set backs this group of children had experienced in their development as communicators during the OA integrated nursery phase, these achievements are remarkable, and provide clear evidence that children can recover from the devastating effects of many months immersed in an environment which threatens their access to communication and language and their confidence in themselves as communicators.

The children's referential communication comprises more advanced acts in the part-time integrated SSE reception class, in contrast with OA settings they have experienced. A high level of requests for information suggests, in correlation with the number of

exchanges reported, that the children often engage in processes of enquiry. Imaginary referents are also used more in this setting than has previously been the case, and very simple acts such as referential accomplishment are seen to decline. All of these accomplishments could be related to increased maturity, but given the depressed starting points at which these children entered the reception class following their protracted experience in the OA nursery, their achievements are substantial and I wish to argue that the role of SSE was not coincidental.

Interpersonal aspects of the children's communication also reflect more positive experiences of communication than has been seen in the OA settings. The low proportion of attention acts suggests the children are more autonomous in the part-time integrated setting and this may be because they are no longer bereft of strategies to independently manage their interactions. Similarly, interpersonal compliance is greatly reduced.

The low proportion of greetings acts in the SSE reception class comes as something of a relief given ritualized purposes such acts were utilized for in the OA nursery setting. A huge increase in the use of suggestion acts again shows children taking more responsibility for their own experiences and suggests enthusiasm and confidence for interaction and learning can be regained, even after desultory experiences with OA methods.

Once SSE strategies have been returned to the deaf children, the level of solitary and parallel experiences reduced, and small group activity increased. However, the part-time nature of provision for integration means that hardly any large group interaction is seen, and it is disappointing to see that with best observed repertoire of communication skills at the deaf children's disposal, this model of integration does not provide for communication between deaf children and their hearing peers. The communication strengths of children in SSE settings are undeniable, but full-time integration seems to be required if deaf children are to benefit from interactions with their hearing

peers and vice-versa. Part-time integration, as discussed earlier, comprises an inappropriate and insufficient model if children are to interact and get to know each other in meaningful ways.

The problem looming in the study school was that, should interaction between deaf children and their hearing peers come to be regarded as fragile, then rather than rethink the issue of how to facilitate integration, educators could reaffirm the view that deaf children derive little benefit from integrated placement if they wished so to do. We have already seen in Chapter 1 that commitment to integration at the highest levels was negligible and the desire to reinstate separatist practices was continually reaffirmed by the school's specialist inspector and certain senior staff. All this raises the spectre of whether insistence on OA methods was calculated for particular purposes.

5.3 Conclusion

This chapter has been concerned with different models of education and the question of whether these provide more profitable experiences of communication for deaf children and their hearing peers than fully integrated settings previously examined.

The issue of mode of communication is again revealed to be central to children's educational experiences in a variety of settings, and sign usage an essential resource in the promotion of equality of opportunity for deaf children. However, only full-time integration can adequately contend with the wider experience of oppression deaf children potentially face. It has been demonstrated that part-time integration does not assist deaf children, but undermines their capabilities and so works to subvert their learning and development.

What is meant by an integrated education must be questioned.
While the part-time integrated model could claim to offer the
best of both mainstream and specialist worlds, the ensuing
differences between the experience of deaf children as compared
with their hearing peers map out a series of inequalities which
in turn militate against equal access to opportunities for
communication even when the children later find themselves in the
same circumstances. Thus partial integration does not only
accommodate the differences between deaf children and hearing
children, it also actively contributes to producing them.

So where does this lead us ?

The analyses of segregation, integration and part-time
integration which have been presented portray communication as
central to children's experiences, and corresponding development.
Questions about the effectiveness of integrated education turn
out to be a matter of cultural-political issues associated with
persuasive and emotive arguments about the rights of children to
communicate in particular ways.

What conclusions can be drawn from this research ? And what
questions does it leave unanswered ? These are the concerns of
the final chapter.

CHAPTER SIX : CHALLENGES TO INTEGRATION PRACTICE

6.1 Introduction

In this chapter the main findings of the research will be drawn
together to argue that in general, what is played out in the
integrated O/A environment is a representation of children's
abilities as structured by those with vested interests in
producing and regulating disability. It seems clear that
integration can not work by reinforcing the communication
problems that lie at the root of separatist educational provision
for deaf children, yet this is the outcome not only of oralist
approaches to communication in integrated settings, but also of
part-time models of integration. It is policy which insists on
oral/aural communication however, which is found to epitomize the
practice and promotion of unequal opportunities between children
who are deaf and children who are hearing in a variety of
educational settings. Of course there are contentious aspects in
these claims which require further substantiation, and this task,
together with appraisal of the significance and limitations of
the project undertaken, comprises the aim of this final chapter.

6.2. Review of main findings

It has been possible to look at how communication development
relates to a range of educational environments experienced by
deaf children and their hearing peers. It has been shown that a
range of provisions fall within the rubric of integration, and
an attempt has been made to observe, synthesize and comment on
these. Hypotheses regarding causality are impossible, but the
observations made raise a series of critical challenges for
professionals and policy makers alike. The most pressing of these
challenges relates to the relationship between integration and
mode of communication.

6.2.1 Integration and mode of communication

I wish to argue that availability of sign in an English language context bears enormous influence upon both deaf children's, and hearing children's, experiences of communication, and subsequently, their experiences of integration. This view is directly at odds with the evidence of some other researchers. Wood and Wood (1992,) for example, found that changing teaching style can result in changes in deaf children's classroom interaction, but claim to have found no evidence that use of sign by teachers impacted on deaf children's experiences of conversation. Yet data presented in the report at hand, although not dissecting styles of teacher interaction directly, suggests access to SSE in the classroom impacts directly on initiations children engage in, on responses they make, on their own modes of communication, on their use of referential acts, on interpersonal aspects of their communication and on social contexts in which children find themselves. These findings provide strong evidence that SSE does have a substantial impact on children's styles of interaction, with direct implications for their well-being in integrated environments.

Although previous studies have similarly failed to demonstrate positive outcomes of early education for deaf children when communication is based on oralist principles (Greenberg and Calderon, 1984; Moores, 1987; Weisal, 1988), favourable assessments of the prospects of sign usage for integration have been discouraged by the reluctance of hearing professionals to undertake a full and systematic appraisal of their own predilections.

The vast difference in previous research conclusions can, in my view, be accounted for quite easily : the distance researchers claim from ideological bias is simply illusory. Findings such as those reported by Wood and Wood (op cit), while powerful, are the product of narrowly focused contrived experimental field research which makes little reference to the actuality of deaf children's

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everyday classroom experiences. Denial of critical aspects of what children bring to their experiences of communication, and failure to observe those children in a variety of every day contexts, can easily reproduce a particular account of the researchers own preoccupations. I am not arguing that my own account makes reference to the complete landscape of deaf children's experiences of communication in school, simply that methodologically at least, a serious attempt was made not to shore up any particular view. This has hopefully been achieved by observing the children in ordinarily occurring settings and valuing whatever contributions to communication they were able to provide.

Of course there are various reasons why researchers persist in constructing commitment to OA methods, most of which are not publicly acknowledged. These reasons parallel justifications used by professionals implementing oralism in classrooms and any number of them *might* have prevailed within the study school. Reasons given for adherence to OA policy (such as helping a child to be 'normal') may not be the reasons behind resistance to other approaches. Under the guise of 'normalization', for example, a policy for oralism provides rationale for distancing the 'expertise' of professionals from the experience and first hand knowledge of Deaf/deaf people. I wish to argue, on the basis of the research reported here, that this is a familiar preoccupation of researchers and educationalists alike.

The evidence gathered suggests oralism can provide a means for professionals to protect themselves firstly from having to face up to their own limitations, and secondly from having to reconceptualize firmly embedded preoccupations. Reflection on data presented in earlier chapters suggests difficulties in communication for deaf children are reinforced by oralism which thus provides a means of casting a child in ways which hearing professionals consider appropriate because they justify their own involvement. For defenders of oralism the method perpetuates a sense of their own potency and reassures them of their 'expert'

capacities. Aside from the issue of integration, the issue of professionals defining how children should communicate cannot be ignored in evaluations of deaf children's educational experiences.

Deaf children in the study school were, without doubt, disabled by a particular model, held by able-bodied professionals, of what communication should be. Implementation of OA policy grounded the integration of deaf children in a set of assumptions about equality and sameness that assigned disability to them. Such a process is victim blaming and the outcome ensures deficit views of deaf children's communication abilities are corroborated. The resistance to difference, which underpins oralist philosophy, provides a means of justifying implementation of oppressive communication policies in the education of deaf children. Unlike some researchers and practitioners however, parents of deaf children have recognized the link between oralism and 'remedial' education (eg, Fletcher, 1988; Day, 1992) and continue to call for recognition of BSL in integrated settings. Given this scenario, it is then, cause of considerable anxiety to find the likelihood is still that deaf children in mainstream settings will be expected to cope in an oral environment (Day, op cit).

There is clearly a significant gap between the rhetoric of integration for deaf children and reality. As other researchers have demonstrated, physical proximity in integrated classrooms is not enough to ensure interaction between deaf children and their hearing peers (eg, Antia, 1982; Gresham, 1986; Lindsay and Dickinson, 1987). Of course there are constraints on provision of sign strategies in mainstream settings, such as cost, a supply of good quality hearing teachers and Deaf/deaf teachers who can work effectively together, availability of interpreters and training, and these will be returned to later, but integration will continue to be derided as "a one sided affair" (op cit) unless substantive efforts are made to provide deaf children with both access to their own language and prospective culture, and the opportunity to share these with their hearing peers. Ladd

(1991) notes that separation of deaf children from other children with whom they can develop meaningful peer relations through BSL has infuriated the Deaf community. The actuality of this isolation in OA mainstream settings is demonstrated in the research findings presented here, and the consequences cannot be avoided.

This brings us back to the question of what the benefits of integration are supposed to be. It is becoming increasingly evident that integration for deaf children is at a price if inappropriate methods of communication intensify isolation and create unequal access to learning. We are now familiar with the questionable quality and aptness of decisions made about mode of communication in the education of deaf children in the study school. The data presented in previous chapters puts forward a strong appeal for the right to use sign in integrated settings. However, the thesis does not in itself provide a complete account. What is needed next is an account which can theorize the two sides of the debate and reconcile the struggle between integration and BSL.

The research presented here is limited in the extent to which it can develop theory in relation to BSL, since it attends to provision of SSE. As discussed in Chapter 1, SSE is simply an invented sign system and is an inadequate means of communication in many respects due, for example, to poor quality in the sign signal, frequent omissions, misarticulation and incomplete processing of meaning in the sign signal (eg, Kluwin, 1981; Marmor and Petitto, 1979). However the gains described for deaf children in integrated English language settings accompanied only by SSE, even with its multiple limitations, and lesser interpretation requirement, may generate speculative optimism about the advantages of a complete bilingual approach. The successes of the SSE setting are not fully reflected in the hard statistical indicators. For example, the willingness and enthusiasm of hearing children beyond the target group for joining in with bimodal communication, and the surge of parents

joining BSL classes to encourage their hearing children are not portrayed, but were encouraging trends associated with integration and engagement with SSE. While it is necessary to be mindful of the limitations of SSE, these latter points may prompt recognition of the considerable advantages of SSE, both as a policy, and in practice.

Day declares that "deaf children are capable of learning anything as long as they have a foundation language well before the age of five" (1992, p.6). Certainly, evidence presented in earlier chapters lends abundant support to the view that poor developmental outcomes for deaf children are produced if language is stifled by resistance to what were regarded within the school as manual/visual methods of communication. Deaf children made considerable gains in the integrated nursery setting characterised by a rather poor substitute for a 'foundation language' in SSE. With no sign usage in the OA nursery deaf children's experiences of communication were such that remedial options needed to be invoked and integration was rescinded. Why should these outcomes be so ? How significant are the advances that accompanied provision of SSE? Without entering into a major critique of bilingualism and bilingual education, the partial success of SSE methods in the integrated nursery, clearly suggests potential for the aspirations of a bilingual approach to be linked to positive experiences of integration. In Leeds, where policy initiatives have enabled deafness to be seen as a cultural issue rather than one of disability, bilingual education is enabling deaf children to thrive in integrated settings (eg, Schmidt-Rohlfing, 1993).

But as Fritsch Rudser reminds us, bilingualism is often "born out of frustration and pain" (Fritsch Rudser, 1988, p.106) not least because a major obstacle is the struggle which hearing parents and teachers have to acquire good signing ability. SSE, being a natural pidgin, accommodates much more naturally and easily, the communication barrier between Deaf/deaf and hearing people which causes both groups to be uncertain and ineffective when

communicating with each other (Beazley, 1992). SSE is easier for hearing parents and professionals to learn than full BSL, which means that easy and effective communication with young deaf children can commence without undue delay, satisfying mutual interpersonal needs and enabling both parties to start getting their messages across and enjoying communication. Thus, whilst recognizing that SSE is a pidgin and therefore not ultimately the appropriate language of instruction for young deaf children in integrated settings, it is possible to argue that it may be the most powerful resource with which we can currently satisfy the interface difficulty whenever deaf children and hearing partners come together.

Data presented in Chapter 3 suggests hearing children too, benefit from access to SSE, and that availability of SSE enables hearing children and deaf children to realise their mutual interest in each other as communication partners. Reciprocal exchange of languages and cultures could help prevailing practice, which can amount to little more than physical desegregation, to become genuine provision for integration between deaf children and their hearing peers. SSE may provide a tool with which to start doing something about the damage forced upon young deaf children and their hearing peers in integrated settings which champion hostility towards the language of the Deaf community. Furthermore, appreciation of the strengths of SSE permits acknowledgement of the strengths of good *communicating* teachers, (such as the one responsible for SSE initiatives in the study school), at least until such a time as the pioneering of postgraduate training in Sign Language Studies in the UK pays dividend (eg, University of Durham, Deaf Studies Research Unit).

There are dangers in this view however, which Branson and Miller (1993) stress must not be overlooked. The development of signed forms of English not only risks devaluing BSL, but reinvests power in hearing professionals who then remain the foremost experts in the legitimate form of the signed language being used.

More perilously, hearing people, rather than Deaf/deaf people retain positions of control and set the linguistic goals. Branson and Miller (op cit) advocate segregated education for deaf children, because, they argue, integrated settings necessarily dilute access to a complete and unadultered sign langauge. These authors contend that integration with a partial language, such as SSE, reinforces 'symbolic violence' against deaf children by allowing hearing professionals to commandeer linguistic resources and marginalize the role of Deaf adults (Branson and Miller, 1993, p.21).

Branson and Miller write in inflammatory and emotive style about the ignorance of those who sanction integration, and hence, in their view, fail to understand the way in which disabling barriers and environments are created. While I accept that the basic propositions of integration have to be challenged and re-challenged and challenged again and again however, it seems these authors are as guilty of seeking to "frame policies and promote practices which *they* assume are in the best interests of the Deaf" (op cit p. 37, my emphasis) as the advocates of integration they roundly condemn. Their thesis constructs disabling barriers of its own, and the persistent references these authors make to "the Deaf", although justified in a postscript, is regarded by many disabled people as dehumanising (eg, Barnes, 1992) which suggests their agenda may be further from investing power in Deaf/deaf people than they claim.

These arguments aside, it is clear that the OA nursery setting was associated with two sources of conflict: reproducing negative images of difference by setting deaf children up for failure, and at the same time, producing denial of difference by treating deaf children as if they were hearing. The second of these tensions is described by Burman as a "more insidious form of cultural chauvinism" (Burman, 1993, p.27). More than a decade earlier Hegarty warned "failure to acknowledge differences can be an ostrich-like response that militates against long term acceptance" (1980, p.8). An actual consequence is that parents

of deaf children now openly express dread of "segregating Deaf children by placing them in mainstream schools" (Day, 1992, p.5). Without sharing BSL with hearing children however, the situation whereby Foster (1989) argues deaf children learn "that they are, in critical ways, outsiders" (p.54) will persist. The danger is that BSL and integration may come to be viewed as mutually exclusive if parents look back to a time when, although oralist practices predominated, BSL was associated with the tangible, albeit illicit, Deaf culture found in special schools.

Thus towards the end of this report a variety of tensions have been identified for young deaf children in mainstream settings. Resonance between methods of communication and integration is indisputable and the resounding burden has to be borne by deaf children if professionals refuse to face the consequences of perpetuating unequitable experiences through OA methods. It seems unlikely that domination of OA practices in integrated settings can be dispelled immediately, but modification through recognition of other positions seems imperative. The data strongly suggests that for integration within an English language context to have value in the education of deaf children it must be accompanied by the option for children to use sign. The manifest and latent conflicts that such a view gives rise to however, would require sensitive and non-threatening handling if it were hoped to influence a wide array opinion.

Having examined the main directions in which the data points regarding links between integration and mode of communication, I now want to turn to implications of the findings for policy and practice.

6.2.2. Implications for Education Policy and Practice

Since the 1981 Education Act which prompted the models of integration studied here, the needs of deaf children have not been met in a consistent way. Without doubt, the study school comprises just one example of provision for integration that is

undoubtedly atypical in many respects, and lacks any number of positive features seen in some integrated settings for deaf children (eg, Schmidt-Rohlfing, 1993). Many of the difficulties reported will have been resolved in the school itself by now. However, the case-study throws up many issues which are representative of the situation deaf children continue to face in various educational settings at the time of writing, and all over the country (Moore and Beazley, 1992; Beazley and Moore, 1993). Furthermore, recent legislation threatens both advances of the 1981 Education Act which attempted to assure deaf children the right to education in integrated settings, and access to BSL. These contentions will be examined next.

Following the 1981 Education Act mainstream schools integrating deaf children were allocated extra resources to respond to the children's needs. Since implementation of the 1988 Education Reform Act (ERA) however, this allocation has been linked to individual children. Thus schools which become Grant Maintained and operate their own budget (under other provisions of the ERA, eg, Leonard, 1988,) will be forced to focus attention on the relative cost of providing for each individual child.

Deaf children requiring full-time interpreters for BSL support in mainstream settings may well be perceived as unattractive pupils in terms of cost-benefits. Of course, data presented here suggests this view would amount to false economy because oralism, on the other hand, is likely to make deaf children contribute poorly to a school's examination successes. In addition, Baetens Beardsmore contests the commonly held view that integrated bilingual education is an expensive option citing several well established and relatively widespread European models of bilingual education which "fit into normal budgetary limitations with no or little extra cost attributable to their specific bilingual nature" (Baetens Beardsmore, 1993 p.3).

For schools's insisting on oralism however, but anxious to have results which fare well in local league tables, there will be

strong arguments for exempting deaf children from as many standard assessment tests as possible rather than buying in specialist resources. Thus deaf children in integrated OA settings will find themselves without entitlement to the curriculum which, according to the spirit (though not the letter) of the 1988 Act, all children are entitled to receive. The recent legislation could mean that deaf children in mainstream schools will be offered a curriculum based on parts of a national curriculum that they can be fitted in with. The more their curriculum is watered down the further away deaf children will be from sharing other children's classroom experiences. These factors clearly militate against both integration and equal opportunities for deaf children, and are likely to have serious implications for individual children.

In Chapter 1 some discussion of constraints placed by the 1981 Education Act upon integration were identified, particularly with reference to three caveats which foretold emphasis later to be placed on resource issues. The 1981 Act is widely regarded as having eroded the position of BSL in schools because of it's emphasis on integration. However, providing any sign support for deaf children in mainstream settings will fit even less easily into the system now created by the 1988 Act in which provision is almost entirely bound by market forces. In this context, the philosophy of oral/auralism, embedded in the politics of integration and current resource issues, has a prospective history in which it could be linked with threats to deaf children's entitlement to mainstream education.

From the account provided in Chapter 1, it can be seen that LEAs were not initially perfect in the post 1981 Act period. They are still "by no means perfect now and many parents are frustrated by the restrictive policies of some LEAs" according to the National Deaf Children's Society (NDCS, 1992). However, various features of the 1981 Education Act which helped to provide equal opportunities for deaf children in integrated settings, fall further away in the light of the ERA. For example, the NDCS

points out that the new grant maintained schools are not accountable to LEAs for changes in practice which deeply affect deaf children, including remodelling "the way integration is handled, or changes in communication policy from oral to sign language or vice versa" (NDCS, 1992 p.16). With reduced accountability, more or less any change could be invoked within a school, yet haphazard policy is likely to render a deaf child's education uncoordinated and amateurish. Leonard (1988) notes "it is perhaps not unreasonable to judge a society's priorities for its education service by the manner in which the service provides for pupils who come into their schools at a disadvantage" (p.218); by this yardstick the 1988 Act unquestionably fails deaf children.

Questions of the advantages and limitations of integrated education for deaf children, exemplified within the study school, pose educationalists the challenge of moving beyond the single issue of mainstream placement, to tackle inter-related questions of BSL and integration, whilst warding off the threats to entitlement within the 1988 Education Act. Emphasis in The Children Act (1989), on the development of services which are responsive to the views of children and their parents may help to address some of these issues, but in order for this to happen, the concerns of deaf children and their families must first be elicited in meaningful ways. In addition, the forthcoming Education Act, which is an important piece of Government policy, increasingly requires service providers to base their best endeavours on the perceptions of their clients. The task for those concerned about deaf children's education and development in integrated settings, is to develop practice which attends to cultural diversity without responding to difference with oppression.

It remains now to examine what investments lie within the claims made for the research reported here, and how these intertwine with directions for further research.

6.3 Evaluation of the research

The first question to ask of the research is whether the evidence assembled tells us what real opportunities integration provides for deaf children to interact with their hearing peers and take part in communication.

6.3.1 Unresolved questions

The study goes further in relation to the above aims than many previously reported endeavours. Several researchers have explored deaf children's academic achievement in mainstream settings (Allen and Osborne, 1984; Kluwin and Moores, 1985) and though findings confirm that deaf pupils who are integrated have better academic achievement than their peers in segregated classrooms, the authors have not looked at the prior issue of access to learning through communication. Researchers who do look at communication (for example, Brackett and Henniges, 1976; Lindsay and Dickinson, 1987), have examined the frequency of social interactions between deaf children and their hearing peers in integrated settings, but looked only at interactions initiated by deaf children. Other integration studies, for example Gregory and Bishop (1988), concentrate exclusively on deaf children offered oral/aural methods in mainstream settings.

As well as examining many of these issues, the study undertaken has ventured into relatively unexplored territory of integration and the impact of sign availability in an English language context on children's development. The study treads on particularly shaky ground because unlike other projects which have studied children in optimal testing situations, the children here have been studied in entirely uncontrolled conditions which give no credit for the turbulent circumstances they were often contending with. The hope is that the findings merit attention precisely because their origins are uncontrived in the sense that there has been no attempt to abstract any aspect of deaf

children's classroom experience from the widest context of integrated classroom functioning.

Numerous questions remain unanswered by the material reported here, many of which the data gathered is capable of addressing though analyses was restricted for the purpose of compiling this thesis. An important set of concerns, which future research needs to progress, relate to specific questions about classroom interaction. Frequencies of interaction, individual communication acts and cocurrences of particular interactive sequences all warrant further investigation. Patterns of preferential interaction could be studied in depth. Important questions include to what are preferential patterns of communication related ? Are they related to factors such as, addressee, mode of communication, range of addressees, length of communication, frequency of communication and so on.

Other questions to ask concern the minutia of how the communication resources of deaf children develop during the early years in the range of contexts studied, alongside the question of how communication strategies develop. Detailed comparisons could be made with the communication development of hearing children, and predictions in terms of developmental outcomes explored.

Such questions may, of course, become very specific, and risk the researcher acquiring the narrow view characteristic of so many studies of deaf children's communication such as have previously been singled out, but they could be explored within segments of the data obtained to inform theories of child language acquisition and debates about social-interactive processes.

Wells (1992) maintains that examples depicting episodes of interaction are required if researchers are to get behind the sort of communication which is often reflected in quantitative data. An attempt has been made to provide illustrative examples of what those interested in deaf children communicating and

learning might want to know, backed up by the quantitative information that mainstream psychologists traditionally set so much store by. A persistent problem however, concerns what objective criteria to use (if any) for identifying selected sequences in interactive analysis.

Although I am not convinced of the appropriateness of either 'objectivity' or elaborated statistics in attempts to provide unequivocal insights into children's experiences of communication and learning, I did concede, when the study commenced, that no other form of data would have been countenanced by those authorizing the research. I am not sure, however, that the heavy statistical nature of the findings serves any useful purposes other than providing a mystical frame within which to discuss the children's experiences with ostensible 'expertise'.

Throughout the report, I have endeavoured to avoid asking questions of the data which couch analyses in terms of children's inadequacies. Factors within the child have often been the focus in evaluations of deaf children's education and development, and a great deal of integration research looks to failings within the child rather than within the school, the environment or society (see Jenkinson, 1987). It should be clear by now that such analyses simply reproduce powerlessness and oppression and enable deaf children to be positioned in such a way as to confirm particular ideologies which serve the interests of hearing adults more than the interests of deaf children. Of course biographical factors relating to a child need to be taken into account in evaluations of a child's experience, but I am arguing they should not provide a smoke screen though which professionals simply blame children, in order to regurgitate their own preconceptions and defend their own practice. These arguments are not intended to imply that all children share the same needs; simply that they share the same entitlement to getting those needs met.

Wider questions about the role of the teacher in facilitating integration between deaf children and their hearing peers also

beg investigation but were beyond the remit of the study reported here. Wells (1992) highlights the question of how effectively sign usage enables deaf children to appropriate knowledge to their teachers. A further question to which Wells draws attention (op cit) concerns whether teachers using SSE produce more complex speech according to age as with hearing children. Such questions are fundamental in the quest for theoretical reconciliation between the role of sign and integration. As explained in Chapter 2 however, focus on the role of adults in integration was not permitted in the present study. I should confess the temptation to transcribe some of the conversations between staff and children, which were incidentally recorded because the video picked up everything, has been great and would throw considerable light on the answers to Wells' question, but I finally decided such a breach of trust could simply not be legitimated.

This brings us to consideration of the multiplicity of factors such as social pressures and ideologies which impact upon children's experiences of integration. Analysis of dilemmas in partnership between teachers and parents, as well as dilemmas teachers have imposed upon them by school or local authority policy, would all shed light on integration practices. A number of factors to do with personal identity also require investigation, in particular, what is the role of teachers who are Deaf/deaf and can therefore directly understand the effects of inequalities, denial of rights and lack of opportunities ? (King (1989) addresses the situation of disabled teachers).

Macro factors such as institutional bias with its grounding in a variety of historical tensions, and existence determined by gradual pressure for change and reform, need also to be taken into account. Material constraints, ideological barriers and disabling environments all require further research to analyze the way in which they impact on deaf children's experiences of integration. All of these issues would throw light on the effect integration has on children's well-being, experiences of learning and achievement. Ultimately research will also have to tackle the

way in which integration influences deaf children as a group, both culturally and politically, through into their adult lives.

I have argued that the research presented deals with some of the shortcomings of previous studies, and in the course of discussion I have attempted too, to point out shortcomings of its own, with reference to challenges to conventional intellectual and epistemological paradigms necessitated along the way. Some attempt has also been made to outline many of the unresolved questions to which the research leads. What I have not yet done is fully considered the reasons why, as discussed briefly in Chapter 2, the research could be construed as a waste of time.

6.3.2 Analytic Reservations

The project would need substantial revision if it were to fit with the call by Deaf/deaf people and their representative organizations for research which empowers Deaf/deaf people and is not oppressive (eg, Baker-Shenk and Kyle, 1990; Pullen and Jones, 1992; Oliver, 1993). A better project would seek to build a partnership between researchers and participants to ensure the investigation was fundamentally relevant to education policy and practice, and meaningful to deaf children's lives. Of course in the research context described, achievement of such a collaborative framework for the project would have proved impossible, and some writers who challenge researchers to conduct emancipatory enquiries themselves recognize the lack of autonomy often available to researchers in practice (Parker and Baldwin 1992; Oliver, 1993). However, a collaborative research model would certainly have afforded greater application of research findings in the study school. For sure, more of the "crucial gateways" which Tizard (1990) argues research findings must pass through if they are to come to the attention of policy makers and relevant practitioners, might have been opened (or remained open), had Deaf/deaf people been included not only in "framing and elaborating the research questions" (Parker and Baldwin,

p.201, op cit) but also in determining, and thereby legitimizing, emergent themes and conclusions.

A critical part of the oppression deaf children face arises because researchers determine what research is of use. Discourses defining the experience of deaf children would be more appropriately constructed by deaf children, their families and their representative organizations rather than by researchers working 'on', and without reference to, deaf children. Of course such an enquiry would be partisan in the sense of taking prior positions on issues such as, for example, segregation or integration, or on BSL and bilingualism, yet only by having the starting points determined by Deaf/deaf people themselves, can research empower deaf children and their families to get what they want and need out of services provided.

Further to these reservations, it must also be acknowledged that reviews of integration are relatively common place, and recurring questions have been "is this account of integration worth bothering with ? Does it add anything to what is already known?" Here I initially felt on slightly less shaky ground in terms of the utility of the study than when contemplating the missing perspective of Deaf/deaf people. As Ladd (1989) asserts, "there are few areas of education in such desperate need of improvement as that of deaf children" (p.99), and the evidence accumulated, though enabling no astoundingly original interpretations, does provide a body of information about deaf children's experiences of integration which illuminates some of the realities entailed.

Again, however, as Ladd points out, any work aspiring to be purposeful in the 1990's "will have to focus on a consumer centred approach, exploring and utilising deaf people's own ideas for priorities, practices and insights" (Ladd, 1989, p.99). As outlined in earlier chapters, there was no freedom to shape the research enterprise in this way. Pullen and Jones (1992) argue that research in the area of deafness inevitably crosses cultural divides between hearing and Deaf/deaf people and this was of

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course the case in the project reported here. The only way to adequately account for, and make sense of, cultural differences would have been for Deaf/deaf people to influence the project directly; without this the eventual account is necessarily restricted and impoverished. A more advantageous conceptualization of issues would have been grounded in the understandings of Deaf/deaf people, rather than determined by the researcher and professionals with their own vested interests and objectives.

A recent, more participatory study, examining the post-school reflections of young deaf people who had encountered a wide range of educational provision, revealed resentment of alienation in special school settings and anger where oralism had been emphasised in mainstream environments (Moore and Beazley, 1992). Participants who portrayed themselves as most doubtful of their abilities, disbelieving of their prospects for a fulfilling future and disabled by feelings of difference and inadequacy were those who reported struggling in oral/aural environments (op cit). Preference for integrated education in an English language context with sign availability is common place when young deaf people are asked for their retrospective opinions of school life (NDCS, 1993).

Such affirmations lend persuasive and emotive support to the claims made from the less reflexive data amassed for the purposes of this thesis, and confirm the importance of gathering Deaf/deaf people's own views when trying to make sense of their circumstances. Foster (1989) looked at Deaf/deaf people's reflections on their experiences of integration and recommends that further research should be conducted to discover more about the viewpoint of Deaf/deaf people on their education and to explore with them the long term as well as the immediate consequences of diverse school environments. Aspis (1992), a disabled writer reflecting on her own experience of segregation, argues that integration advantages both pupils with and without disabilities, claiming that integration "unites all pupils and

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gives rise to appreciation for children with varying abilities and disabilities". In a climate of scepticism about integration such views are both encouraging and constructive.

6.4 Conclusions

My findings are based on a confined, outsider perspective of what went on in the name of integration in the study school. They are couched in a wealth of statistical data, but it has been recognized that statistics cannot tell us everything, and so findings are amplified by interpretations which may not be legitimate because I am not deaf. I feel I am saying things everyone in the field of deaf children's education who accepts the validity of BSL already knows, and that the research simply lends support, and one kind of form, to these concerns. Resulting conclusions need to be viewed in this light.

The data poses, however, a number of challenges to those interested in the education and development of young deaf children. Firstly it entreats educators to stop shoring up the prejudices inherent in oralism, which is shown to be a self-centred exploitive method of communication encouraged by those who wish to normalise the experience of being deaf. Ultimately the findings suggest the way in which communication is framed will play an important part in a deaf child's experience of integration.

Further research is needed, which actively realises the contribution of Deaf/deaf people, to explore joint thinking between educators and Deaf/deaf people in pursuit of an adequate theoretical model which will secure the place of BSL in integration. Failure to adopt such an approach has been shown to have devastating implications for both deaf children and their hearing peers in terms of opportunities for communication and subsequent access to learning.

If oralism continues to predominate in the education of deaf children then professionals have license to continue, if they so wish, to mould deaf children into whatever shape they believe will best serve the futures they think these children ought to have. Responsibility lies with those in power to admit the oppressive consequences of oral/auralism for deaf children in integrated school settings, and face the challenge of finding more equitable ways of enabling deaf children to benefit from integration.

It is possible to have inclusive integrated education for deaf children that is not oppressive *if* proper recognition is given to mode of communication, and the fraudulent propositions of oralism are resisted. There are linguistic, cultural and financial costs associated with making BSL available to deaf children in integrated settings, but a far greater price to own up to if hesitation prevails.

REFERENCES

Alegria, J. (1981), The development of referential communication in deaf and hearing children: competence and style, in *International Journal of Behavioural Development*, 4, 295-312

Allen, T. and Osborn, T. (1984) Academic integration of hearing-impaired students: demographic, handicapping and achievement factors, *American Annals of the Deaf*, 129, p. 100-113

Altmann, J. (1974) Observational study of behaviour: sampling methods, *Behaviour*, 49, 227-267

Antia, S. (1982) Social interaction of partially mainstreamed hearing-impaired children, *American Annals of the Deaf*, 129, p.100-113

Antia, S. (1985) Social Integration of Hearing Impaired Children: Fact or Fiction ? *The Volta Review*, October/November, p.279-289

Aspis, S. (1992) Integration, *Disability, Handicap and Society*, 7, 2, p. 281-283

Baetens Beardsmore, H. (1993) *European Models of Bilingual Education*, Avon, Multilingual Matters

Baker, B. (1993) *Teaching English as a Second or Foreign Language: The Relevance of ESOL for BSL Users*, Laserbeam, 20, 13-14

Baker, C. (1993) *Foundations of Bilingual Education and Bilingualism*, Avon, Multilingual Matters Ltd

Baker-Shenk, C. and Kyle, J. (1990) Research with Deaf people : issues and conflicts, *Disability, Handicap and Society*, vol 5, 1, 65-75

Bandura, A. (1977) *Social Learning Theory*, Englewood Cliffs, Prentice-Hall

Barnes, C. (1992) *Disabling Imagery and the Media : an exploration of the principles for media representations of disabled people* Halifax, Ryburn Publishing

Bates, E. (1976) *Language and Context: The Acquisition of Pragmatics*, New York, Academic Press

Bates, E. (1979) *The Emergence of Symbols: Cognition and Communication in Infancy*, New York, Academic Press

Bates, E., Bretherton, I., Snyder, L., Shore, C., and Volterra,V. (1980) Vocal and gestural symbols at 13 months, *Merrill Palmer Quarterly*, 26, 407-423

Beazley, S. (1992) Social Skills Group Work With Deaf people, in Fawcus, M. (Ed) <u>Group Encounters in Speech and Language Therapy</u>, Kibworth, Far Communications

Beazley, S. and Moore, M. (1993) <u>Reflections on life with a deaf child : the way parents see it</u> (working title) in preparation

Begum, N. (1992) Disabled women and the feminist agenda, in <u>Feminist Review</u>, 40, 70-84

Bishop, J. (1982) <u>The Transition of Deaf Children From Home to School</u>, Ph.D Thesis, University of Nottingham

Booth, T., Potts, P. and Swann, W., (1987) <u>Preventing Difficulties in Learning : Curriculum For All</u>, Oxford, Blackwell

Booth, T. (1988) 'Challenging Concepts of Integration' in Len Barton, <u>The Politics of Special Educational Needs</u>, Lewes, The Falmer Press

Bouvet, D. (1990) <u>The Path to Language: Bilingual Education for Deaf Children</u>, Avon, Multilingual Matters

Bracket, D. and Heniges, M. (1976) Communicative interaction of pre-school hearing impaired children in an integrated setting, <u>The Volta Review</u>, 78, 276-285

Branson, J. and Miller, D. (1989) Sign language, oralism and the control of deaf children, <u>Australian Hearing Deaf Review</u>, 6, 19-23

Branson, J. and Miller, D. (1993) Sign Language, the Deaf and the Epistemic Violence of Mainstreaming, <u>Language and Education</u>, 21-41

Brennan, M. (1986) Can Deaf Children Acquire Language ? Supplement to <u>British Deaf News</u>, February

Brennan, M. (1987) 'British Sign Language; the Language of the Deaf Community' in Tony Booth and Will Swann (eds) <u>Including Pupils with Disabilities</u>, Milton Keynes, Open University Press

Breslaw, P., Griffiths, A., Wood, D., and Howarth, C. (1981) The referential communication skills of deaf children from different educational environments, in <u>Journal of Child Psychology and Psychiatry</u>, 22, 269-282

Briggs, L. (1991) A Polytechnic with a Difference, in Taylor, G. and Bishop, J. (Eds) <u>Being Deaf: The Experience of Deafness</u>, London, Pinter in association with The Open University

Bruner, J. (1975) The ontogenesis of speech acts, <u>Journal of Child Language</u>, 2, 1-20

Bruner, J. (1977) Early social interaction and language acquisition, in H.R. Schaffer (Ed) Studies in Mother-Infant Interaction. Proceedings of the Loch Lomond Symposium, September, 1975, Ross Priory, University of Strathclyde, New York, Academic

Burman, E. (1993) Poor Children: Charity Appeals and Ideologies of Childhood, Discourse Unit, The Metropolitan University of Manchester

Caselli, M. C. and Volterra, V. (1990) From Communication to Language in Hearing and Deaf Children, in Volterra, V. and Erting, C.J. (Eds) From Gesture to Language in Hearing and Deaf Children, Berlin, Springer-Verlag

Claire, H., Maybin, J., and Swann, J. (1993) Equality Matters. Case Studies from the Primary School, Avon, Multi-Lingual Matters

Cohen, J. (1960) A coefficient agreement for nominal scales, Education and Psychological Measurement, 20 (1), 37-46

Cohen, L. and Manion, L., (1980) Research Methods in Education, London, Croom Helm

Conrad, R. (1979) The Deaf School Child, Language and Cognitive Function, London, Harper and Row

Corker, M. (1993) Integration and deaf people: the policy and power of enabling environments, in Swain, J., Finkelstein, V., French, S., and Oliver, M. (Eds) Disabling Barriers - Enabling Environments, Sage Publications in association with The Open University

Corson, D. (1993) Language, Minority Education and Gender. Linking Social Justice and Power, Avon, Multi-Lingual Matters

Croll, P. (1986) Systematic Classroom Observation, Lewes, The Falmer Press

Cummins, J. (1984) Bilingualism and Special education: Issues in Assessment and Pedagogy, Avon, Multi-Lingual Matters

Cummins, J. and Swain, M. (1986) Bilingualism in Education, New York, Longman

Day, L. (1992) Principles and Practicalities of Deaf Education - BSL Acquisition: Gesture to Sign, Laserbeam, No.17, 2-6

Department of Education and Science (1978) Special Educational Needs. The Warnock Report, London, HMSO

Department of Education and Science (1981) Education Act, London, HMSO

Department of Education and Science (1985) Education for All. The Swann Report, London, HMSO

Dore, J. (1975) Holophrases, speech acts and language universals, *Journal of Child Language*, 2, 21-40

Dyson, S. (1987) Reasons for assessment: rhetoric and reality in the assessment of children with disabilities, in *Including Pupils with Disabilities*, Tony Booth and Will Swann, **place**, Open University Press

Fitouri, A. (1983) Working with Young Bilingual Children, in *Early Child Development and Care*, 10, p. 283-292

Fish Report (1985) *Educational Opportunities for All ? Report of the Committee reviewing provision to meet special educational needs*, Inner London Education Authority

Fletcher, L. (1988) *Language for Ben*, Souvenir Press Ltd

Foster, S. (1989) Reflections of a Group of Deaf Adults on their Experiences in Mainstream and Residential School Programmes in the United States, *Disability, Handicap and Society*, 4, 1, p.37-56

Galloway, D. and Goodwin, C. (1979) *The Education of Slow Learning and maladjusted Children*, London, Longman

Gipps, C., Gross, H. and Goldsmith, H. 1987, *Warnock's Eighteen Per Cent : Children With Special Needs in Primary Schools*, Lewes, The Falmer Press

Goacher, B. (1988) *Policy and Provision for Special Educational Needs: implementing the 1981 Act*, London, Cassell Educational

Greenberg, M.T. and Calderon, R. (1984) Early intervention: outcomes and issues, *Topics in Early Childhood Education* 3,4, p.1-9

Gregory,S. (1976) *The Deaf Child and his Family*, London, Allen and Unwin

Gregory, S. (1993) The Language and Culture of Deaf People: Implications for Education, in Beveridge, M. and Rediford, G. (Eds), *Language, Culture and Education*, Avon, Multi-Lingual Matters

Gregory, S. and Bishop, J. (1988) *The Mainstreaming of Primary Age Deaf School Children in the United Kingdom*, Paper presented at the International Symposium: Hearing Impaired Pupils in Regular Schools, Berlin

Gregory, S. and Bishop, J, (1991) Mainstreaming of Primary Age Deaf Children, in Gregory, S. and Hartley, G. Constructing Deafness, Pinter Publishers in association with The Open University

Gregory S. and Hartley, G. (1991) *Constructing Deafness*, London, Pinter Publishers in Association with The Open University.

Gregory, S., Bishop, J. and Sheldon, L. (1991) Language and Communication: Changing attitudes of parents, Deafness, 7, (3)

Gresham, F.M. (1982) Misguided Mainstreaming: the case for social skills training with handicapped children, Exceptional Children Vol 32, part 3

Gresham, F. (1986) Strategies for enhancing the social outcomes of mainstreaming: a necessary ingredient for success, in, C.J. Meisel (Ed), Mainstreaming Handicapped Children: outcomes, controversies and new directions, Hillsdale, Lawrence Erlbaum

Hammersley, M and Atkinson, P. (1983) Ethnography: Principles in Practice, London, Tavistock Publications

Hammersley, M. (1990) Classroom Ethnography, Buckingham, Open University Press

Hanen, (1985) Hanen Early Language Parent Program Guidebooks, Hanen Early Language Resource Centre, Ontario, Canada

Hegarty, S. (1980) Integration - Some Questions to Ask, Special Education : Forward Trends, 7, 1, 8-10

Inner London Education Authority, (1985) Equal Opportunities for All ? The Fish Report, published by the Inner London Education Authority

In-Schools Project (1983) Field Reports of the Avery Hill College In-Schools Research Team, Unpublished

In-Schools Project (1984) The Process of Integration of a Unit for Deaf Children Preliminary Report, Avery Hill College, Special Education Needs Section

In-Schools Project (1985) Field Reports of the Avery Hill College In-Schools Research Team, Unpublished

Jenkinson, J. (1987) School and Disability: research and education in practice, Hawthorn, Australian Council for Educational Research

Jones, L. and Pullen, G. (1992) Cultural Differences: deaf and hearing researchers working together, Disability, Handicap and Society, 7, 2, p. 189-196

Jordan, K. (1981) Integration and Total Communication in the education of Deaf Children' in G. Montgomery (Ed), The Integration and Disintegration of the Deaf in Society, Scottish Workshop Publications

Kerlinger, F. (1981 second edition) Foundations of Behavioral Research, Japan, Holt-Rinehart and Winston, Inc.

King, B. (1989) Promoting equal rights for teachers with disabilities, NUT Education Review, Vol 3, no. 2, 24-26

Kluwin, T. (1981) The grammaticality of manual representations of English in classroom settings, <u>American Annals of the Deaf</u> 126, 417-421

Kluwin, T. and Moores, D. (1985), The effects of integration on the mathematics achievement of hearing impaired adolescents, <u>Exceptional Children</u>, 52, p.153-160

Kyle, J., (Ed) (1987) <u>Sign and School</u>, Multilingual Matters, London

Kyle, J., Woll, B. and Deucher (1981) <u>Perspectives on British Sign language and Deafness</u>, London, Croom Helm

Kyle, J.G. and Woll, B.G. (1983) <u>Language in Sign: An International Perspective</u>, London, Croom Helm

Ladd, P. (1989) Book Reviews, in <u>Disability, Handicap and Society</u>, Vol 4, 1, p. 98-99

Ladd, P. (1991) Making Plans for Nigel : The Erosion of Identity by Mainstreaming, in Taylor, G. and Bishop, J. (Eds) <u>Being Deaf: The Experience of Deafness</u>, London, Pinter in association with The Open University

Ladd, P. and John, M. (1991) Deaf People as a Minority Group : The Political Process. Unit 9 of The Open University Course <u>Issues in Deafness</u>, Milton Keynes, The Open University

Lane, H. (1984) <u>When the Mind Hears : A History of the Deaf</u>, New York, Ramsden House

Lemanek, K., Williamson, D., Gresham, F., and Jensen, B. (1986) Social skills training with hearing impaired children and adolescents, <u>Behaviour Modification</u>, 10, 55-71

Leekham, S. (1993) Children's understanding of mind, in Bennett, M. (Ed) <u>The Child as Psychologist: an introduction to the development of social cognition</u>, Hertfordshire, Harvester Wheatsheaf

Levy-Shiff, R. and Hoffman, M.A. (1985) Social behaviour of hearing impaired and normally hearing pre-schoolers, in <u>British Journal of Educational Psychology</u>, 55, 111-118

Leonard, M. (1988) <u>The 1988 Education Act : A Tactical Guide for Schools</u>, Oxford, Basil Blackwell

Lindsay, G. and Dickinson, D. (1987) Integration of Profoundly Hearing Impaired Children into a Nursery Setting, in <u>Journal of the British Association of Teachers of the Deaf</u>, 11, 1-7

Llewellyn-Jones, M. (1987) Bilingualism and the Education of the Deaf Child, in <u>Educating the Deaf Child</u>, proceedings of a conference held in Derby, LASER Publication

Lock, A. J. (Ed) (1978) <u>Action, Gesture and Symbol: The Emergence of Language</u>, London, Academic Press

Lock, A. (1980) <u>The Guided Reinvention of Language</u>, London, Academic

Lock, A. and Fisher, E. (1984) <u>Language Development</u> Beckenham, Croom Helm

Lynas, W. (1986) <u>Integrating the Handicapped into Ordinary Schools: A Study of Hearing Impaired Pupils</u>, London, Croom Helm

Lynas, W., Huntington, A., and Tucker, I. (not dated - published 1988) <u>A Critical Examination of the Different Approaches to Communication in the Education of Deaf Children</u>, Ewing Foundation Publication, University of Manchester

MacKay-Soroka, S., Trehub, S.E., and Thorpe, L.A. (1987) Deaf Children's Referential Messages to Mother, in <u>Child Development</u>, 58, 385-394

Markides, A. (1983) <u>The Speech of Hearing Impaired Children,</u> Manchester, Manchester University Press

Marks, D. (1993) <u>Discourse Analysis of Education Case Conferences</u>, Ph.D Thesis, The Metropolitan University of Manchester

Marmor, G. and Petitto, L. (1979) Simultaneous communication in the classroom: how well is English grammar represented ? <u>Sign Language Studies</u>, 47, 173-180

Mason, C. (1991) <u>School Experiences</u>, in Taylor, G. and Bishop, J. (Eds) <u>Being Deaf: The Experience of Deafness</u>, London, Pinter in association with The Open University

Maxwell, M.M. (1985) Sign language instruction and teacher preparation, <u>Sign Language Studies</u>, 47, 173-180

Meadows, K. P. (1980), <u>Deafness and Child Development</u>, London, Edward Arnold

Mills, R. (1988) <u>Observing Children in the Primary Classroom</u>, London, Unwin

Mohay, H. (1990) The Interaction of Gesture and Speech in the Language Development of Two Profoundly Deaf children, in Volterra, V. and Erting, C.J. (Eds) <u>From Gesture to Language in Hearing and Deaf Children</u>, Berlin, Springer-Verlag

Moore, M., Pound, L. and Sinha, C. (1987) <u>Communicative Development and Communicative Environment of Young Deaf and Young Hearing Children</u>, Paper presented at the International Pragmatics Conference: International Pragmatics Association, Antwerp

Moore, M. and Beazley, S. (1992) <u>The Post-School Reflections of Young Deaf People</u>, Manchester Polytechnic Research Report

Moores, D.F. (1987) <u>Educating the Deaf: Psychology, Principles and Practices</u>, 3rd edition, Boston, MA, Houghton Mifflin

Montgomery, G. (Ed) (1981) <u>The Integration and Disintegration of the Deaf in Society</u> Scottish Workshop Publications

Montgomery, G. (Ed) (1986) <u>Beyond Hobson's Choice: The Appraisal of Methods of Teaching Language to Deaf Children,</u> Edinburgh, Scottish Workshop Publications

Morris, J. (1993) Gender and disability, in Swain, J., Finkelstein, V., French, S., and Oliver, M. (Eds) <u>Disabling Barriers - Enabling Environments</u>, Sage Publications in association with The Open University

Moyles, J.R. (1989) <u>Just Playing ? The role and status of play in early childhood education</u>, Milton Keynes, Open University Press

NDCS, (1992) Deaf Children and the Education Bill 1992 : a briefing for the Second Reading, Monday 9 November, in <u>TALK : The Magazine of the National Deaf Children's Society</u>, Issue No: 142, 16-17

NDCS, (1993) School's Out! Hopes and dreams on leaving school, in <u>TALK : The Magazine of the National Deaf Children's Society,</u> Summer issue, 18-21

Ninio, A. and Bruner, J. (1978) The achievement and antecedents of labelling, in <u>Journal of Child Language</u>, 5, 1-15

Norwich, B. (1990) <u>Reappraising special education</u>, London, Cassell

Oliver, M., Zarb, G. Silver, J. Moore, M. and Salisbury, V. (1988) <u>Walking into Darkness. The Experience of Spinal Cord Injury</u>, Hampshire, The MacMillan Press Ltd

Oliver, M. (1990) <u>The Politics of Disablement,</u> London, MacMillan Education

Oliver, M. (1992) <u>Disability Research: a time of waste or a waste of time ?</u> Disability Research National Conference, Unpublished paper

Oliver, M. (1993) Re-defining disability: a challenge to research, in Swain, J., Finkelstein, V., French, S., and Oliver, M. (Eds) <u>Disabling Barriers - Enabling Environments</u>, Sage Publications in association with The Open University

Parker, G. and Baldwin, S. (1992) Confessions of a Jobbing Researcher, <u>Disability, Handicap and Society</u>, 7, 2, p.197-203

Phillips, E. and Pugh, D.S. (1987) How to Get a Ph.D., Milton Keynes, Open University Press

Phoenix, S. (1986) Some Foundations for Mental Health : the Importance of Total Communication for Pre-School Deaf Children, in Montgomery, G. (Ed) Beyond Hobson's Choice: The Appraisal of Methods of Teaching Language to Deaf Children, Edinburgh, Scottish Workshop Publications

Pickersgill, M. (1990) Bilingualism and the education of deaf children. Part I, Theories, models and factors. Deafness and Development, 1,1.

Potter, J. and Wetherell, M. (1987) Discourse and Social Psychology, beyond attitudes and behaviour, London, Sage

Pound, L. and Moore, M. (1989) in Roy Evans (ed) Special Educational Needs: Policy and Practice, Blackwell

Pye, J. (1988) Invisible Children, Oxford, Oxford University Press

Quigley, S.P. and Kretschmer, R.E. (1982) The Education of Deaf Children: Issues, Theory and Practice, London, Edward Arnold

Rampton, M.B.H. (1992) Scope for Empowerment in Sociolinguistics, in Cameron, D., Frazer, E., Harvey, P., Rampton, M.B.H., and Richardson, K. Researching Language : Issues of Power and Method, London, Routledge

Reagan, T. (1985) The Deaf as a Linguistic Minority : educational considerations, Harvard Educational Review Vol 55, part 3

Reed, M. (1981) The Strategy of Integration, in G. Montgomery (Ed), The Integration and Disintegration of the Deaf in Society, Scottish Workshop Publications

Riseborough, G. (1993) Recent policy, the numbers game and the schooling of the hearing impaired: a study of one teacher's career, European Journal of Special Needs Education, Vol 8, No. 2, 134-152

Sachs, O. (1989) Seeing Voices, St Ives, Picador

Sackett, G.P. (1978) Observing Behaviour : Theory and Applications in Mental Retardation (Volume 1) Maryland, University Park Press

Sainsbury, S. with Lloyd-Evans, P. (1986) Deaf Worlds, London, Hutchinson

Schmidt, C.R., and Paris, S.C., (1984) The development of verbal communicative skills in children, in Reese, H.W. (Ed), Advances in Child Development and Behaviour Vol 18, 1-47, New York, Academic Press

184

Schmidt-Rohling, B. (1993) Signing in class, in Claire, H., Maybin, J., and Swann, J. (1993) <u>Equality Matters. Case Studies from the Primary School,</u> Avon, Multi-Lingual Matters

Sinha, C., Moore, M. and Pound, L. (1988) Coding Communicative strategies and development: issues, methods and a preliminary report of a naturalistic study. <u>International Journal of Sign Linguistics Monograph</u>

Spender, D. (1989) <u>Invisible Women: The Schooling Scandal,</u> London, The Women's Press

Stobart, G. (1986) Is Integrating the Handicapped Psychologically Defensible ? <u>Bulletin of the British Psychological Society,</u> 39, 1-3

Stokes, J. and Bamford, J. (1990) Transition for pre-linguistic communication in hearing-impaired infants, in, <u>British Journal of Audiology, 24, 217-222</u>

Stokoe, W.C. (1987) Tell me where is grammar bred ? Critical evaluation or another chorus of 'Come Back to Milano'? <u>Sign Language Studies,</u> Vol 71, 107-114

Strong, M. (1988) <u>Language Learning and Deafness,</u> Cambridge, Cambridge University Press

Stuart, O. (1993) Double oppression: an appropriate starting point ? in Swain, J., Finkelstein, V., French, S., and Oliver, M. (Eds) <u>Disabling Barriers - Enabling Environments,</u> Sage Publications in association with The Open University

Sylva, K, Roy, C. and Painter, M. (1986), <u>Childwatching at Playgroup and Nursery School,</u> Oxford, Blackwell

Taylor, G. and Bishop, J. (Eds) (1991) <u>Being Deaf: The Experience of Deafness,</u> London, Pinter in association with The Open University

Tizard, B. (1990) Research and policy: is there a link ? <u>Psychologist,</u> 435-440

Tizard, B. and Hughes, M. (1984) <u>Young Children Learning. Talking and Thinking at Home and at School,</u> London, Fontana

Vandell, D.L., and George, L.B. (1981) Social interaction in hearing and deaf pre-schoolers: successes and failures in initiations, <u>Child Development</u> 52, 627-635

Vandell, G., Anderson, L., Ehrhardt, G., and Wilson, K. (1982) Integrating hearing and deaf pre-schoolers : an attempt to enhance hearing children's interactions with deaf peers, <u>Child Development</u> 53, 1354-1363

Van Uden, A. (1986) <u>Sign Languages Used by Deaf People, and Psycholinguistics: A Critical Evaluation</u>. Lisse, Swets and Zeitlinger, B.V.

Vaughn, M. (1983) unpublished letter to Bernard Peaty, Assistant Secretary, Department of Education and Science, November 23rd, London, <u>The Spastics Society</u>

Volterra, V. (1986) 'What Sign Language Research Can Teach Us About language Acquisition,' in Tervoot, B. (Ed) <u>Signs of Life; Proceedings of the Second European Congress on Sign Language Research,</u> The Institute of General Linguistics of the University of Amsterdam, publication number 50

Volterra, V. and Erting, C.J. (Eds) (1990) <u>From Gesture to Language in Hearing and Deaf Children</u>, Berlin, Springer-Verlag

Vygotsky, L.S. (1962) <u>Thought and Language</u>, Wiley, New York

Warnock Report (1978) <u>Special Educational Needs. Report of the Committee of Enquiry into the Education of Children and Young People</u>, London, HMSO

Warnock, M. (1988) <u>A Common Policy for Education</u> Oxford, Oxford University Press

Webster, A. and Wood, D. (1989) <u>Children With Hearing Difficulties</u>, London, Cassell

Weisal, A. (1988) Early Intervention programs for Hearing Impaired Children : early outcomes, <u>Early Childhood Development and Care</u>, vol 42

Wells, G. (1987) <u>The Meaning Makers. Children Learning Language and Using Language to Learn</u>, London, Hodder and Stoughton

Wells, G. (1992) Learning and teaching in Signed English, in <u>First Language</u>, 12, 147   156

Whitehurst, G.J. and Sonnenschein, S. (1985) The development of communication: a functional analysis, in <u>Annals of Child Development</u>, 2, 1-48

Woll, B. (1987) 'Historical and Comparative aspects of BSL', in Jim Kyle, (Ed) <u>Sign and School</u>, Multilingual Matters, London

Wood, D. (1988) <u>How Children Think and Learn</u>, Oxford, Blackwell

Wood, D., Wood, H., Griffiths, A., and Howarth, I. (1986) <u>Teaching and Talking With Deaf Children</u>, Chichester, John Wiley and Sons

Wood, D., and Webster, A. (1989) <u>Children With Hearing Difficulties</u>, London, Cassell

Wood, D. and Wood, H. (1991) Signed English in the classroom, I. Teaching style and child participation, <u>First Language</u>, 11, 189-217

Wood, D. and Wood, H. (1992) Signed English in the classroom, IV. Aspects of children's speech and sign, in <u>First Language</u>, 12, 125 - 145

Wood, D. and Wood, H. (1992) Learning and teaching in Signed English : a response to Gordon Wells, in <u>First Language</u>, 12, 157 -167

Woolgar, S. (1993) <u>Epistemological Issues in Scientific Explanation</u>, Brunel University, Qualitative Research Methods for Psychologists Workshop. Unpublished paper.

Yard, L. (1993) Children Who Don't Stand Out in Claire, H., Maybin, J., and Swann, J. (1993) <u>Equality Matters. Case Studies from the Primary School,</u> Avon, Multi-Lingual Matters

APPENDICES

APPENDIX ONE

APPENDIX 1.1 : CODING CATEGORIES FOR THE OBSERVATION SYSTEM

VARIABLE 1 : INITIATION

In order for an initiation to be coded the target child must be observed to either utilize for the purpose of making, or be the subject of, an intentional communication strategy which attempts, for interactive purposes, to appropriate the attention of another person where the child initiates, or the attention of the target child, where the child is the subject of an initiation.

This category thus records initiations the target child makes or receives. Permissable codes are constructed by combining two of the following labels:

A = ADULT - FAMILIAR
C = DEAF CHILD
CH= HEARING CHILD
S = SELF
G = GROUP

   (T) = DENOTES TARGET CHILD: this notation is used to denote
   target child in interactions involving only children.

X = No initiation observed, if the child is not observed either to make or receive an initiation, only variable six, Interactive Context is coded for that interval.

Examples of Coding Categories for Initiation:

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AC          = adult to deaf child
CA          = deaf child to adult


CHC(T)      = hearing child to deaf child (who is the target child)
C(T)CH      = deaf child (who is the target child), to hearing child


CH(T)C      = hearing child (who is the target child), to deaf child
CCH(T)      = deaf child to hearing child (who is the target child)


CHS         = hearing child to self
CS          = deaf child to self


CH(T)G      = hearing child (who is the target child), to group
CHG(T)      = hearing child to a group which the target child is in


AC          = familiar adult to deaf child
ACH         = familiar adult to hearing child
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VARIABLE 2 : RESPONSE

In order for response to be coded the target child must be observed
to knowingly or unknowingly, be the intended recipient of an
initiation which has been appropriately recorded within the previous
category. A response *must* be recorded if an initiation to the child
is observed. If no response is coded, then the target child will not
have *received* a previous initiation during the observation interval.
This category allows the nature of responses the target child makes
to be described. One of 4 types of response can be recorded here.
Permissable codes are:

E   = EXCHANGE

An active response that becomes a dialogue or two-way exchange

A   = ACKNOWLEDGE

Providing brief notice that previous initiation was received, eg nodding. Very slight behaviours, for example, fleeting eye contact, can be coded, if recognition of a previous initiation is conveyed.

I   = IGNORE

Providing notice that previous initiation was received, but no account taken of it. An active non-responding behaviour, such as looking but then turning away.

N   = NON-COMMUNICATIVE

It can be observed that the target child was not able to perceive previous initiation, or that the child is not able to perceive an ongoing initiation to which they are attending; therefore, no response, or no change in state is observable.

For example, (i) verbal initiation is made to deaf target child, but initiator is not within target child's perceptual range,

   or

(ii) the target child attends to an initiation but is not able to perceive the communicator's input, for example where there is no clear lip pattern.

In the latter example, the target child's attending behaviour would merit coding an INTERPERSONAL aspect to the interaction; in the first example however, this would not be appropriate (see below).

X   = No response involved

VARIABLE 3 : MODE OF COMMUNICATION

The observation system allows the physical mode of communication used by the target child to be described.

On each occasion where an initiation has been encoded, *except* where the child's response reveals that previous initiation was either non-communicative or ignored by the child, the physical nature of the child's contribution to the interaction is recorded. Permissible codes are constructed by using a single, or combining any *two*, of the following labels.

V   = VERBAL: a vocally articulated communication act which is recognized to those familiar with target child. No attempt to evaluate the verbal act is required beyond the observer's being able to interpret it; thus no formal measure of intelligibility is applied.

S   = SIGN: a conventional manual form, typically, though not necessarily, from British Sign Language. Also, non-manual sign codes and complex sign expressions such as spatial articulation, mime-like and depiction-like phrases where the criteria to recognize and code is the 'requirement' to 'translate' using lexical items. Finger spelling.

NV   = NON-VERBAL: a communication strategy which does not involve vocalization. Gestural elaborate communication acts would be coded here, including marker gestures such as nodding or shaking the head. Facial expression, and communication strategies involving other parts of the target child's body (*except* pointing, manual or non-manual sign codes) can be coded here. The code may record speed or force of behaviour where these are communicative features. Characterizing gestures including pantomime can be coded here.

PV   = PRE-VERBAL: a communication act involving vocalization but lacking recognizable lexical form

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P          = POINTS: deictic gestures used to locate or identify a
referent

T          = TOUCH: a tactile communication act.

X          = No mode of communication
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Examples of Coding Categories for Mode of Communication:

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V+NV       = verbal plus non-verbal communication act
S+PV       = sign plus pre-verbal communication act
PV+P       = pre-verbal plus pointing communication act
T+NV       = touch plus non-verbal communication act
```

VARIABLE 4 : REFERENTIAL COMMUNICATION

Referential communication acts are those acts in which the child is
intending to gain or share the attention of another person with
respect to some object, attribute of an object or state of affairs in
the external world, with or without the involvement of any direct
action upon the referent. Within this category are also included acts
in which the topic of communication is self, an action of self, or
state of self, where these are treated as 'objects.' In order to be
coded as a referential act then, an act must minimally be an intention
to specify for other person a topic defined by the sharing of the
attention of initiator and respondent with respect to a referent.
Referential communication acts may be very simple, as in pointing to
an object in order to draw the attention of another person to it;
they may be relatively complex, as in the case when the act consists
in informing the other person about a state of affairs in the world
existing outside of the immediate 'here and now' situation. Between
these extremes of complexity lie acts such as naming objects, denoting
distinct concepts, commenting on events and so forth. The defining
feature of all acts is that they are all governed by the *referential*

function of language, and the relationship between initiator and respondent is one of exchanging information about the world. Obviously, exchange of information is not necessarily done simply for it's own sake, and the 'point' of the exchange may be to get something done with the objects referred to, or to establish a referential framework within which social interaction can be negotiated. In other words, communication acts which are coded as referential may also be, or at least closely linked to, characterised by communicative intent encoded in the interpersonal domain of analysis. However, all acts which involve some referential communicative intention *must* be coded as such, whatever other codings they receive. Only one referential communication act can be coded during one observation interval. Where one or more referential communication acts are observed together, the most advanced act category is coded where act categories are developmentally relate to each other.

REFERENTIAL COMMUNICATION CODING CATEGORIES:

Codes referential aspects of the target child's communication, focusing on communication or signifying acts establishing joint reference with another person seemingly 'about' an aspect of the external or linguistically represented environment. One of 14 types of referential communication can be recorded. Permissable codes, always prefixed R, are outlined below.

The examples given are mostly of verbal utterances. Interpretation of the referential component of non-verbal communication acts is also required. Sign glosses are additionally provided to illustrate acts which could be appropriately encoded within this category, and are given in upper case. These examples are mostly based on approximations of Sign Supported English observed when preparing this guide. They are interesting in themselves because they portray the difficulty inherent in trying use sign in English word order, and expose some of the scope for message confusion which is associated with invented sign systems. The illustrations are of course, incomplete, since the coding system is in principle, modality independent. Therefore communication acts which are pidgin, mouthed, devoiced, or dependent on facial expression

and/or idiosyncratic gesture are not ignored and can be interpreted within the terms of coding system as having possible contributions to the referential component of a child's communication repertoire.

RDO = DEICTIC OBJECT
An intentional behaviour in which the child calls the attention of the respondent towards an observable referent object, person, action, event without naming the referent. Typically characterised by pointing or looking, or saying 'this,' 'that,' etc.

RDN = DEICTIC NAME
An intentional behaviour in which the child calls the attention of the respondent towards a named observable referent, where name is preceded by deictic, or follows deictic.

RDN Examples:
'there shoe,'
'shoe there,'

RSO = SHOWING OBJECT
An intentional behaviour in which the child calls the attention towards an observable referent with a clear intention to show, but *not* to give it; holding an object out to that person for example, but offering no other comment about it.

RNO = NAMING OBJECT
Provision of a label for an object which may or may not be observable. An intentional behaviour in which the target child provides a name for an object.

RRN = REQUEST NAME
Solicitation of a nominal from a respondent, where the target child awaits a response. An intentional behaviour that directs the respondent to provide a name.

Requests may, though do not necessarily, include interrogative word and/or intonation contours that are recognized as a request by those familiar with the target child.

RRN Examples:
'What's it called?'
'WHAT NAME?'

RCT = COMMENT - OBJECT /EVENT / ATTRIBUTE

R - Comment on Object

Direction of the respondent's attention to a state, location or attribute of some observable referent. An intentional behaviour that appears to call the respondent's attention to some object (not person) identified by the child.

R - Comment on Action / Event

Direction of the respondent's attention on some observable referent. An intentional behaviour that appears to call the respondent's attention to the movement of the indicated subject, or change of state, rather than the subject per se.

RCT Examples :
                - observable referent : picture cards -
'Not the same as that' RCT CODING DECISION; 'same' = attribute, 'as that' = directs to observable referent, here, object
'They're all the same but they're different' RCT CODING DECISION: 'same/different' = attributes, 'they're' - directs to observable referent, in this example, picture cards.

'Yellow' RCT CODING DECISION: = attribute

'Falled down!' RCT CODING DECISION: comment on event, object related

'Raining,'
'RAIN,'   RCT CODING DECISION: comment on event

'There's different colours on mine'
'DIFFERENT COLOURS ON MINE'   RCT CODING DECISION: 'different colours' = attribute, 'on mine' - directs to observable referent, here, object (picture card)

'It's the same as mine'
'SAME MINE'   RCT CODING DECISION: 'same' = attribute, 'it/mine' = directs to observable referents

'It's like my Dad's'   RCT CODING DECISION: 'like' = attribute; 'it' = indicates observable referent

'We've all got the same' RCT CODING DECISION: 'same' = attribute, assuming observable referent is established

'We've got more than you' RCT CODING DECISION: 'more' = attribute, assuming observable referent is established
         whereas
'We've got more than he has,' = RCO CODING DECISION: 'more than' = attribute, 'he has' = indicates observable referent is another child ie, not object.

RRO = REQUEST OBJECT
Solicitation of services from a respondent where child awaits a response intended to yield possession of an indicated object. An intentional behaviour that directs the respondent to provide some object for the child; typically, the object is out of reach due to some physical obstacle, spatial barrier, or prohibition. The intent is to facilitate object transfer to the target child.

RRO Examples:
'Can I have the scissors?'
'SCISSORS ME'

RRA = REQUEST ACTION

Solicitation of services from a respondent where child awaits a response. An intentional behaviour that directs the respondent's attention to act upon some object indicated by the child (eg object / person / event) to make the subject 'do' something. The child's interest appears to be in the action required, rather than the subject per se. The intent is for an action to be carried out which does not involve object transfer to the target child, but the action may be intended to be directed towards the child.

RRA Examples:
'please may you open the door?'
'Will you do my shoe?'

'Water spilt,' - would be coded RRA where some extra linguistic feature of the communication act, such as intonation or gesture, gave precedence for coding an intended request, say for an adult to wipe the spill up. In other cases 'water spilt,' might be coded as a simple comment, (RCT) rather than request. Similarly, 'Ummm Sophie's spilt the water,' could be coded as a comment about another person (RCO) but, according to extra-linguistic features, may comprise an intended request.

RRI = REQUEST INFORMATION

Solicitation of services from respondent where child awaits an informative response. An intentional behaviour that directs the respondent to provide information about a subject indicated by the child. Information is requested concerning location, action, function, time etc.

RRI Examples:

'What's it for?'
'Who do you want to play with?'
'What you doing Miss?'
'Where is it?'
'Why?'
'Can we go out to play?'
'Can I choose?' and so on.

RCS = COMMENT   SELF - STATE / ACTION / ROLE

Direction of the respondent's attention towards some attribute / action of the target child's own.   An intentional behaviour that appears to call the respondent's attention to something about the target child, which can be locative, attributive state, or change of state of self, including expressing internal experiential state of self, and comments on the initiation, implementation or completion of an action performed by the target child.   The communication act may or may not involve specific request or rejection of an action by another person.   In commenting about one's self, the communicator might not say or sign 'I' but still speak or intend it.

RCS Examples:

'Here I am!'   RCS CODING DECISION: calls respondent's attention to target child's location.

'I'm sick now,' RCS CODING DECISION: calls respondent's attention to internal experiential state of target child.

'I like it,'   RCS CODING DECISION: 'I'   = explicitly calls the respondent's attention to something about the target child; 'I like it' = comment on internal experiential state of child.

'Done it!'   RCS CODING DECISION; calls respondent's attention to completion of an act by the target child.

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'I've got the same colour,'   RCS CODING DECISION: 'same colour' = attribute, 'I've got' = calls the respondent's attention to something about the target child's state.

'I want one the same,'   RCS CODING DECISION: 'I want' = appears to call the respondent's attention to something about the target child's state.

'I went in my Mummy's car,'   RCS CODING DECISION: 'I' = calls the respondent's attention to something about the target child, 'in my Mummy's car' = directs the respondent's attention to something about the target child's action.

'It's all I can think of,'
'ALL I THINK...'   RCS CODING DECISION: 'I' - calls the respondent's attention to something about the target child, here, the target child's state.

'Yesterday I went for a walk,'
'YESTERDAY WALK ME (or I),'   RCS CODING DECISION: 'I / ME' = calls the respondent's attention to something about the target child, here, the child's action.

RCO = COMMENT - OTHER   STATE / ACTION / ROLE
Direction of the respondent's attention towards some attribute / action of another person (s). An intentional behaviour that appears to call the respondent's attention to something about another person - including respondent's self.

RCO Examples:
                - observable referent is another person

'You've got the same thing as Alice,'   RCO CODING DECISION: 'You've' (also, 'Alice',) = directs the respondent's attention to a person other than the target child, including respondent's own self; got the same as = calls the respondent's attention to an attribute (of the nominated persons) state.

'My Dad's got one,' RCO CODING DECISION: Dad = directs the respondent's attention to a person other than the target child; 'got another one' = calls the respondent's attention to an attribute (of the nominated persons) state - possession.

'She's naughty,' RCO CODING DECISION: 'she' = directs the respondent's attention to a person other than the target child; 'naughty' = calls the respondent's attention to an attribute (of the nominated persons) state.

'Jonathan wants a wee,' RCO CODING DECISION: 'Jonathan' = directs the respondent's attention to a person other than the target child; wants a 'wee' = calls the respondent's attention to an attribute (of the nominated persons) state.

'They're hiding under the clothes,' RCO CODING DECISION: 'they' = calls the respondent's attention to a person other than the target child; 'hiding' = calls the respondent's attention to an event concerning, or attribute (of the nominated persons) state.

'She can't hear,' RCO CODING DECISION:
'SHE NOT HEAR,' 'she' = directs the respondent's attention to a person other than the target child, here, about the other person's state
     similarly,
'He's wearing headphones,'
'HE WEARS HEADPHONES,'

RIR = REFER TO ABSENT OBJECT / IMAGINARY
Direction of the respondent's attention to some referent that is not perceptible, or to an observable referent where the target child attributes the referent with attributes that cannot be observed. The target child employs a 'new' meaning to take precedence over literal meaning.   An intentional behaviour that appears to call the respondent's attention to an imaginary or absent subject determined by the target child.   Communication acts involving fantasy, often, though not necessarily, seen in pretend play.

RIR Examples:

'This is my baby asleep,' - observable is a doll - RIR CODING DECISION: the observable referent is an object which is not a sleeping baby

  similarly,

'She can't hear,'

'SHE NOT HEAR,' where, for example, the observable referent is a doll

'POOR DOLLY' for example, expressing empathy for dolly's injuries.

'You're in the space-ship,' - observable referent comprises two over-turned chairs

'I'm the dentist,'

'I'm being a guinea-pig,'

'Amad's in our lorry,'

'He's A-Team!' and so on.

'Father Christmas is going to come when we're all asleep and when we wake up we'll see loads of presents..!'

'FATHER CHRISTMAS COME WE SLEEP... WAKE UP.. SEE LOTS PRESENTS..!'

The imaginary component, or fantasizing element comprises the most advanced aspect of thee communication acts, and thus criteria for using RIR act category. Hence, 'My sister's the best at football in the whole world,' = RIR, although possibly not 'My sister's the best at football in our road.'

RDE = REFER TO NON-EXISTENCE - DENY

Direction of the respondent's attention to the absence or non-existence of some subject or object (real or perceived). An intentional behaviour that appears to call the respondent's attention to the real or supposed absence or non-existence of a subject indicated by the target child. Other participants may have knowledge to the contrary of what the target child is 'saying.'

RDE Examples:

`It wasn't me,'
`I didn't do it,'

`There isn't really one!' RDE CODING DECISION: `isn't' = directs the
respondent's attention to the child's rejection of the proposal
          similarly,
`Emma's not a monster!'

RA = REFERENTIAL ACCOMPANIMENT
An intentional behaviour that appears to call the respondent's
attention to selected properties of an established referent, or to
provide accompaniment for a shared referent, eg clapping, or
onomatopoeia.

RA Examples:
`whooosh!'
`brmmm brmmm,'
`moo,'
`choo choo chooo,'

X   = No referential communication

VARIABLE 5 : INTERPERSONAL COMMUNICATION

Interpersonal aspects of communication are communication acts and
strategies oriented to the negotiation of roles and actions in joint
co-operative action.

INTERPERSONAL COMMUNICATION CODING CATEGORIES:

Codes interpersonal aspects of the target child's communication. One
of 11 types of interpersonal communication can be coded here.

Permissible codes, always prefixed I, are outlined below. Again, the examples given are mostly of verbal utterances. Interpretation of the interpersonal component of non-verbal communication acts is also required. Further examples are given in upper case, of signed communication acts which could be appropriately encoded within the category. As before, communication acts which are pidgin, mouthed, devoiced, or dependent on facial expression and/or idiosyncratic gesture are not ignored and can be interpreted within the terms of the coding system as having possible contributions to the interpersonal component of a child's communication repertoire.

IATN = ATTENTION

An intentional behaviour that attempts to call the respondent's attention to the target child.

'Hey!'
'Look at me!'
'Miss....'

IG = CONVENTIONAL FORM / GREETING
An intentional behaviour in which the target child provides some conventional communication. A gesture or linguistic expression habitually used, such as a greeting. Stereotypic phrases used in conventional form may be coded here. Choral speaking or singing might be coded here where the target child behaves according to local convention.

'hello,'
'scuse me,'

'I'm going home bye-bye,' was observed to be a stereotypic utterance in the study reported here, occurring only in the context of a daily ritual enacted as children departed at the end of the day, and as such, would be coded IG.

similarly,

'Tidy up time! Tidy up time!'

IS = SUGGEST

An intentional behaviour in which the child appears to offer or propose a possible course of action either for their self, or for another person to follow

'Let's go and play,'
'You be the lady,'
'Let's get the bikes,' - alternatively, the similar utterance, 'Come on, let's get the bikes,' might be coded as a (referential) request for action (RRA) depending on extra-linguistic features of the target child's behaviour.

IO = OFFER

An intentional behaviour in which the target child appears to propose contributing an observable referent, including action, to the respondent

'You have it,'
'I'll do it for you,'
'I (or me) DO IT FOR YOU,'

IR = REJECT

An intentional behaviour in which the target child resists compliance with previous initiations, or refuses to act in accordance with previous request or proposal. Resistance to locally accepted rules may characterize acts in this category.

'Don't want it,' - refusal to wear coat in cold weather
'I'm not coming,'   refusal to come and sit down for story
'Jenny *didn't* do that one!'   disputing possession very strongly
'I said go away I said!'   rejecting approach from adult
'DON'T CARE,' - resisting threat of punishment

ICT = CONTEST

An intentional behaviour in which the target child appears to express disapproval of initiator's action, gesture, utterance or communication. The target child disputes a turn by self or others, or disputes possession of an object or activity. Acts coded here can include behaviours typical of those included in category IR, which escalate towards a point of conflict.

'You're not having it, it's mine!'
'Don't want to play,'
'They've took my one,'

IAG = AGGRESSION

An intentional behaviour in which the target child expresses active hostility towards another. Physical behaviour to another person, often of a forceful nature, such as pinching, punching, kicking, pulling hair, biting, scratching, spitting at, fighting etc., are coded here. Volume or pitch of utterance may characterize communication acts in this category.

'I'll push you off if you don't get off now,'
'kick him in,'

ICP = COMPLY

An intentional behaviour in which the target child concedes to act in accordance with previous request or proposal.

Teacher tells class to sit down and target child is observed to do so.

Child asks target child to pass the milk and the target child does so.

IA = AGREE

An intentional behaviour in which the target child expresses accordance with previous initiations.

IAC = ACKNOWLEDGE

An intentional behaviour in which the target child expresses recognition of a previous initiation. Any expression or remark recognizing a previous initiation, or action.

'mmmmm,'

'Yeah,'

'Okay,'

II = IMITATE

An intentional behaviour in which the target child copies a previous behaviour, or repeats someone else's action.

eg, teacher initiates a repair move and the child imitates accordingly.

X   = No interpersonal aspect

Using Referential and Interpersonal codes in combination

Referential features of the target child's communication behaviour often require to be coded in *combination* with Interpersonal features and vica-versa, in order that the description of the communication act encoded is complete.

Examples of Referential and Interpersonal codes in combination

1. The target child is standing with two other children on top of a large pile of cushions. They are calling out and waving to their teacher 'We up the castle Miss, we up the castle!'

The coding decision would look like as below ('context' is described on page 208) :

INIT'TN	RESPONSE	MODE	REFERENT'L	I'PERSONAL	C'TXT
CA	X	V+NV	RIR	IATN	SG

2.   A deaf target child is trying to encourage her deaf partner
     to repeat her words. The target child says 'Say 'black and
     white'', simultaneously signing 'BLACK' and 'WHITE,'

The coding decision would look like this:

INITIAT'N	RESPONSE	MODE	REFERENT'L	I' PERSONAL	C'TXT
C(T)C	X	V+S	RRA	IS	CC

3.   A hearing child is trying to persuade the deaf target child
     to allow her to help fasten the target child's shoe. She
     says to the target child 'I'll help you Ali, I'll help
     you,' and proceeds to pick up the shoe. The target child
     pushes the helper away, and gestures a response,
     interpreted as 'I can do it myself!'

The coding decision would look like this:

INITIAT'N	RESPONSE	MODE	REFERENT'L	I' PERSONAL	C'TXT
CHC(T)	E	T+NV	RCS	IR	CCH

4.   The target child wants to pass by an adult and says 'Excuse
     me please'

The coding decision would look like this:

INITIAT'N	RESPONSE	MODE	REFERENT'L	I' PERSONAL	C'TXT
CA	X	V	RRA	IG	CA

VARIABLE 6 : INTERACTIVE CONTEXT

Codes the interactive context in which the target child communicates or functions during the observation interval. One of 10 interactive contexts can be coded here. Permissable codes are:

S   = SOLITARY : target child is observed to be playing or working independently, with material different from that used by other persons nearby. Interest is focused on the child's own activity, and the child does not refer to what others are doing.

P   = PARALLEL : target child is observed to be playing or working near others, using some or all of the same materials as others, but does not interact with others to influence activities of others.

SG   = SMALL GROUP : target child is observed to be paying or working in a group of six or less.

LG   = LARGE GROUP : target child is observed to be playing or working in a group of more than six.

CC   = DEAF CHILD / DEAF CHILD : deaf target child is observed to be playing or working with one other deaf child.

CCH   = DEAF CHILD / HEARING CHILD : deaf target child is observed to be playing or working with one hearing child or hearing child is observed to be playing or working with one deaf child.

CHCH = HEARING CHILD / HEARING CHILD : hearing target child is observed to be playing or working with one other hearing child.

CA   = DEAF CHILD / ADULT : deaf target child is observed to be playing or working with one adult.

Contextual information may also be written down if desired.

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APPENDIX 1.2 : EXAMPLES OF CODED INTERACTION

Example 1

INITIAT'N	RESPONSE	MODE	REFERENT'L	I'PERSONAL	C'TXT
1. TC	N	X	X	X	SG
2. AC	A	NV	X	ICP	SG
3. TC	E	V+S	RNO	II	SG
4. CHC(T)	E	PV+S	RIR	IO	SG
5. C(T)CH	X	PV+NV	RRO	IS	CCH
6. AC	E	PV+NV	RRI	X	SG
7. C(T)CH	X	S	RCS	IS	CCH

Interpretation reads from left to right for each row;

1. **First 15 second interval:**
    Teacher initiates to deaf target child, child does not
    perceive initiation, thus no communication occurs, during
    the observation interval the child was in a small group.

2. **Second 15 second interval:**
    Adult initiates to deaf target child, and the child
    acknowledges this non-verbally. There is no referential
    element in the interaction but the interpersonal nature of
    the child's response is one of compliance. Again, during
    the observation interval the child was in a small group.

3. **Third 15 second interval:**
    Teacher initiates to deaf target child, and the child
    responds with an exchange which comprises verbal and signed
    referential naming of an object. The interpersonal nature
    of the interaction is one of imitation, and took place
    within a small group.

4. **Fourth 15 second interval:**
    A hearing child initiates to the deaf target child, who responds with an exchange, pre-verbally and using sign. The referential component of the interaction is imaginary, and the interpersonal aspect involves the target child offering. Interaction took place within a small group.

5. **Fifth 15 second interval:**
    Deaf target child initiates to a hearing child, (and in doing so, is thus not involved in making a response). The mode of communication is pre-verbal and non-verbal. The child requests an object and makes a suggestion. Interaction took place within a hearing child-deaf child dyad.

6. **Sixth 15 second interval:**
    An adult initiates to the deaf target child who responds with an exchange, pre-verbally and non-verbally requesting information. There is no other interpersonal aspect and the interaction took place within a small group.

7. **Seventh 15 second interval:**
    The deaf target child initiates to a hearing child (and in doing so, is thus not involved in making a responses). The mode of communication is sign, and the child comments about themself and makes an interpersonal suggestion. Interaction was observed within a hearing child-deaf child dyad.

1.   The deaf target child comes down the slide and loses a shoe. The child picks up the shoe and runs to an adult, tapping the adult with the shoe, and signing a request for the shoe to be put back on.

2.   The adult is fastening the shoe. The child pushes the adult's arm away from her foot, and signs her to hurry up.

3.   Adult pushes the target child's are and reprimands, signing for her to wait. The child shrugs and complies.

4.   The target child again pushes the adult's arm away and signs, with facial expression, that it doesn't matter about the shoe, and she want to go back to the slide.

Coding decisions to describe the four observations above would look like this:

INITIAT'N	RESPONSE	MODE	REFERENT'L	I'PERSONAL	C'TXT
CA	X	T+S	RRA	IATN	CA
CA	X	T+S	RRA	IR	CA
AC	A	NV	X	ICP	CA
CA	X	S+NV	RCS	IR	CA

Example 3

A teacher calls the target child's name. The child hears and turns attention to the speaker. Facial expression reveals they are not able to perceive the teacher's message, although conforming to the interpersonal requirement of the initiation.

The coding decision would look like this:

INITIAT'N	RESPONSE	MODE	REFERENT'L	I'PERSONAL	C'TXT
TC	N	X	X	IAC	CA

APPENDIX 1.3 : AN EXAMPLE OF THE OBSERVATION CODING SCHEDULE
[reduced]

CHILD :   PAGE NUMBER :
DATE :   TIME :
SETTING :   OBSERVER :

INIT'N	RSPNSE	MODE	RF'TIAL	I'PRSNL	CONTEXT	NOTES

APPENDIX TWO

APPENDIX 2 : DATA ON INDIVIDUAL DIFFERENCES

The material presented in sections A to E inclusive, gives individual difference data for children referred to throughout Chapter 4. Tables are prefixed '4' for cross-referencing purposes.

A. *The eldest children in the sample : Nicholas and Darren*

Comparison of Initiation in the SSE Nursery setting vs Initiation in OA Nursery setting : Nicholas and Darren

'Are the two children equally likely to use the initiation categories in the SSE setting ?' and 'are they equally likely to use the initiation categories in the OA setting ?' Analysis of data presented in Table 4.1, shows that in both settings the children are not likely to use the initiation categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 484.4 (df 16), p<.0001 and chi-square value = 312.6 (df 16), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of initiation categories in both SSE and OA contexts.

Table 4.1

Table to compare frequency of Initiation Experienced by Nicholas (deaf) vs Darren (hearing) in Integrated Nursery settings distinguished by availability of Sign Supported English.

Type of Initiation	Nicholas (deaf) SSE	Darren (hearing) SSE	Nicholas OA	Darren OA
AC(T)	19.0	19.7	21.2	8.5
C(T)A	35.0	28.3	35.8	17.0
CC(T)/CHCH(T)	4.9	7.3	6.7	24.8
C(T)C/CH(T)CH	1.9	13.3	6.1	27.9
CHC(T)/CCH(T)	3.8	3.4	7.9	---
C(T)CH/CH(T)C	3.8	7.3	14.5	---
C(T)S	12.9	2.6	4.4	4.2
C(T)G	1.4	5.1	1.1	1.8
AG(T)	17.1	12.9	2.2	15.7

Comparison of Response in the SSE Nursery setting vs Response in OA Nursery setting : Nicholas and Darren

'Are the two children equally likely to use the response categories in the SSE setting ?' and, 'are they equally likely to use the response categories in the OA setting ?'

Analysis of data presented in Table 4.2 shows that in both settings the children are not likely to use the response categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 40.9 (df 4), p<.0001 and chi-square value = 45.6 (df 4), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of response categories in both SSE and OA contexts.

Table 4.2

Table to compare frequency of Response Categories in the Integrated Nursery setting distinguished by availability of Sign Supported English : Nicholas and Darren

Type of Response	Nicholas SSE	Darren SSE	Nicholas OA	Darren OA
E	31.9	52.8	39.0	53.6
A	37.5	33.0	42.2	1.2
I	5.0	14.2	6.3	19.0
N	25.6	---	12.5	26.2

Comparison of Mode of Communication in the SSE Nursery setting vs Mode of Communication in OA Nursery setting : Nicholas and Darren

Questions asked of the data were : 'are the two children equally likely to use the mode of communication categories in the SSE setting ?' and 'are they equally likely to use the mode of communication categories in the OA setting ?' Analysis of data presented in Table 4.3, shows that in both settings the children are not likely to use the mode of communication categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 99.4 (df 13), p<.0001 and chi-square value = 83.9 (df 15), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of mode of communication categories in both SSE and OA contexts.

Table 4.3

Table to compare frequency of Mode of Communication in Integrated Nursery settings distinguished by availability of Sign Supported English : Nicholas and Darren

Mode	Nicholas SSE	Darren SSE	Nicholas OA	Darren OA
S+V	4.1	- - -	2.0	- - -
V	35.4	65.6	32.2	77.2
V+NV	0.9	- - -	1.8	3.1
V+P	2.5	- - -	3.6	- - -
NV	29.1	30.7	35.5	12.6
NV+PV	0.3		1.8	
PV	24.7	1.8	20.6	7.1
PV+P	2.2	- - -	1.8	- - -
P	0.6	1.8	- - -	- - -

Comparison of Referential Acts in the SSE Nursery setting vs Referential Acts in OA Nursery setting : Nicholas and Darren

'Are the two children equally likely to use the referential acts in the SSE setting ?

'Are they equally likely to use the referential acts in the OA setting ?'

Analysis of data presented in Table 4.4, shows that in both settings the children are not likely to use the referential act categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 52.4 (df 14), p<.0001 and chi-square value = 94.9 (df 12), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of referential act categories in both SSE and OA contexts.

Table 4.4

Table to compare frequency of Referential Communication in Integrated Nursery settings distinguished by availability of Sign Supported English : Nicholas and Darren

Referential Communication	Nicholas SSE	Darren SSE	Nicholas OA	Darren OA
RCT	15.0	18.0	23.2	- - -
RNO	3.7	1.6	4.6	- - -
RCO	12.8	19.5	4.7	32.5
RSO	2.8	2.3	11.6	- - -
RCS	4.8	10.9	3.5	27.7
RRI	11.2	8.6	15.1	7.2
RRO	1.1	2.3	7.0	- - -
RRA	17.6	9.4	12.8	14.5
RIR	- - -	2.4	3.5	2.4
RA	26.2	5.5	11.6	- - -
RDN	0.5	3.1	- - -	10.8
RDO	4.3	16.4	2.3	4.8

Comparison of Interpersonal categories in the SSE Nursery setting vs Interpersonal Categories in OA Nursery setting : Nicholas and Darren

'Are the two children equally likely to use the interpersonal categories in the SSE setting ?

'Are they equally likely to use the interpersonal categories in the OA setting ?'

Analysis of data presented in Table 4.5, shows that in both settings the children are not likely to use the interpersonal categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 38.2 (df 10), p<.0001 and chi-square value = 90.3 (df 11), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of interpersonal acts in both SSE and OA contexts.

Table 4.5

Table to compare frequency of Interpersonal Communication in Integrated Nursery settings distinguished by availability of Sign Supported English : Nicholas and Darren

Interpersonal Communication	Nicholas SSE	Darren SSE	Nicholas OA	Darren OA
IATN	24.9	19.7	42.6	20.4
IG	8.5	9.8	8.2	5.5
IS	7.5	5.6	7.4	- - -
ICT	3.3	8.4	3.3	33.3
IR	0.9	1.4	5.7	- - -
IAC	31.0	22.5	15.6	1.8
IO	5.2	2.1	2.4	5.5
ICP	14.1	12.7	9.0	12.9
IA	0.9	15.5	1.6	11.1
II	3.7	2.1	3.3	9.3
IAG	- - -	- - -	0.8	- - -

Comparison of Social Context in the SSE Nursery setting vs Social Context in OA Nursery setting : Nicholas and Darren

'Are the two children equally likely to use the social context categories in the SSE setting?

'Are they equally likely to use the social context categories in the OA setting ?'

Analysis of data presented in Table 4.6, shows that in both settings the children are not likely to use the social context categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 176.5 (df 8), p<.0001 and chi-square value = 92.1 (df 8), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of social context categories in both SSE and OA contexts.

Table 4.6

Table to compare frequency of Social Contexts in Integrated Nursery settings distinguished by availability of Sign Supported English : Nicholas and Darren

Social Context	Nicholas SSE	Darren SSE	Nicholas OA	Darren OA
S	3.8	8.4	1.8	0.9
P	28.4	20.0	13.3	20.0
CC/CHCH	2.2	5.3	8.0	5.0
CCH	4.8	5.9	2.2	---
SG	37.7	28.1	49.3	53.6
LG	8.1	20.6	7.6	17.7
AC/ACH	15.0	11.6	17.8	2.7

B. The youngest children in the sample : Charlotte and Katy

Comparison of Initiation in the SSE Nursery setting vs Initiation in OA Nursery setting : Charlotte and Katy

'Are the two children equally likely to use the initiation categories in the SSE setting ?

'Are they equally likely to use the initiation categories in the OA setting ?'

Analysis of data presented in Table 4.7, shows that in both settings the children are not likely to use the initiation categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 485.4 (df 17), p<.0001 and chi-square value = 731.1 (df 22), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of initiation categories in both SSE and OA contexts which will be examined below.

Table 4.7

Table to compare frequency of Initiation Experienced by Charlotte (deaf) vs Katy (hearing) in Integrated Nursery settings distinguished by availability of Sign Supported English.

Type of Initiation	Charlotte (deaf) SSE	Katy (hearing) SSE	Charlotte OA	Katy OA
AC(T)	22.3	20.2	22.0	23.4
C(T)A	34.1	23.5	37.2	18.8
CC(T)/CHCH(T)	5.2	7.0	8.3	11.3
C(T)C/CH(T)CH	3.4	7.4	11.0	15.5
CHC(T)/CCH(T)	4.7	4.5	6.1	1.3
C(T)CH/CH(T)C	7.8	5.3	7.0	1.3
C(T)S	4.5	10.3	1.7	3.8
C(T)G	1.8	1.6	0.5	0.8
AG(T)	15.8	19.8	5.7	23.8

Comparison of response in the SSE Nursery setting vs Response in OA Nursery setting : Charlotte and Katy

'Are the two children equally likely to use the response categories in the SSE setting ?

'Are they equally likely to use the response categories in the OA setting ?'

Analysis of data presented in Table 4.8, shows that in both settings the children are not likely to use the response categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 65.7 (df 4), p<.0001 and chi-square value = 109.0 (df 4), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of response categories in both SSE and OA contexts which will be examined below.

Table 4.8

Table to compare frequency of Response in Integrated Nursery settings distinguished by availability of Sign Supported English : Charlotte and Katy

Type of Response	Charlotte SSE	Katy SSE	Charlotte OA	Katy OA
E	26.3	34.9	30.4	44.4
A	44.0	33.3	44.9	1.4
I	4.3	29.4	4.5	17.4
N	25.4	2.4	20.2	36.8

Comparison of Mode of Communication in the SSE Nursery setting vs Mode of Communication in OA Nursery setting : Charlotte and Katy

'Are the two children equally likely to use the mode of communication categories in the SSE setting ?

'Are they equally likely to use the mode of communication categories in the OA setting ?'

Analysis of data presented in Table 4.9, shows that in both settings the children are not likely to use the mode of communication categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 300.7 (df 12), p<.0001 and chi-square value = 437.0 (df 16), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of mode of communication categories in both SSE and OA contexts which will be examined below.

Table 4.9

Table to compare frequency of Mode of Communication in Integrated Nursery settings distinguished by availability of Sign Supported English : Charlotte and Katy

Mode	Charlotte SSE	Katy SSE	Charlotte OA	Katy OA
S	5.2	---	2.2	---
S+NV	2.3	---	3.2	---
S+PV	3.6	---	5.4	---
V	0.3	59.5	0.2	66.6
NV	48.7	33.2	45.7	29.6
NV+PV	1.0	---	15.2	1.9
NV+P	2.1	---	4.7	---
PV	28.1	5.4	12.0	1.9
PV+P	2.9	---	5.9	---
P	5.7	1.9	5.4	---

Comparison of Referential Acts in the SSE Nursery setting vs Referential Acts in OA Nursery setting : Charlotte and Katy

'Are the two children equally likely to use referential categories in the SSE setting ?

'Are they equally likely to use referential categories in the OA setting ?'

Analysis of data presented in Table 4.10, shows that in both settings the children are not likely to use the referential categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 62.9 (df 13), p<.0001 and chi-square value = 139.4 (df 12), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of referential act categories in both SSE and OA contexts which will be examined below.

Table 4.10

Table to compare frequency of Referential Communication in Integrated Nursery settings distinguished by availability of Sign Supported English : Charlotte and Katy

Referential Communication	Charlotte SSE	Katy SSE	Charlotte OA	Katy OA
RCT	20.1	17.1	23.2	---
RNO	1.0	---	2.6	---
RCO	15.5	11.7	11.6	21.5
RSO	15.5	3.6	13.6	---
RCS	2.1	10.8	6.7	15.0
RRI	3.6	12.6	4.6	14.0
RRO	3.1	3.6	8.4	---
RRA	15.4	8.1	12.7	15.0
RIR	1.0	---	3.8	4.3
RA	17.5	9.0	5.5	---
RDN	0.5	13.5	---	22.6
RDO	4.6	9.9	7.2	7.5

Comparison of Interpersonal Acts in the SSE Nursery setting vs Interpersonal Acts in OA Nursery setting : Charlotte and Katy

'Are the two children equally likely to use the interpersonal categories in the SSE setting ?

'Are they equally likely to use the interpersonal categories in the OA setting ?'

Analysis of data presented in Table 4.11, shows that in both settings the children are not likely to use the interpersonal categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 23.6 (df 11), $p<.0001$ and chi-square value = 114.5 (df 12), $p<.0001$ respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of interpersonal categories in both SSE and OA contexts which will be examined below.

Table 4.11

Table to compare frequency of Interpersonal Communication in Integrated Nursery settings distinguished by availability of Sign Supported English: Charlotte and Katy

Interpersonal Communication	Charlotte SSE	Katy SSE	Charlotte OA	Katy OA
IATN	17.0	24.0	16.3	16.7
IG	11.8	3.9	8.5	4.4
IS	1.1	1.3	10.8	1.1
ICT	6.3	10.4	7.5	10.0
IR	2.2	0.6	10.0	---
IAC	24.7	31.8	19.5	1.1
IO	4.4	5.2	1.5	16.7
ICP	19.6	8.4	14.5	22.2
IA	2.2	2.6	3.5	17.8
II	9.2	11.0	6.0	8.9
IAG	1.5	0.6	1.5	1.1

Comparison of Social Context in the SSE Nursery setting vs Social Context in OA Nursery setting :   Charlotte and Katy

'Are the two children equally likely to use the social context categories in the SSE setting ?

'Are they equally likely to use the social context categories in the OA setting ?'

Analysis of data presented in Table 4.12, shows that in both settings the children are not likely to use the social context categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 362.4 (df 8), p<.0001 and chi-square value = 225.4 (df 9), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of social context categories in both SSE and OA contexts which will be examined below.

Table 4.12

Table to compare frequency of Social Contexts in Integrated Nursery settings distinguished by availability of Sign Supported English : Charlotte and Katy

Social Context	Charlotte SSE	Katy SSE	Charlotte OA	Katy OA
S	2.0	12.0	4.0	5.0
P	25.6	33.0	9.8	18.1
CC/CHCH	3.5	3.4	5.1	5.3
CCH	5.4	3.7	4.2	0.3
SG	42.5	19.2	61.5	47.6
LG	1.6	20.0	6.5	21.4
AC/ACH	19.4	8.5	8.5	2.2

C. Children using more than one spoken language : Serena and Julie; Shula and Sian

Comparison of Initiation in the SSE Nursery setting vs Initiation in OA Nursery setting : Serena and Julie

'Are the two children equally likely to use the initiation categories in the SSE setting ?

'Are they equally likely to use the initiation categories in the OA setting ?'

Analysis of data presented in Table 4.13, shows that in both settings the children are not likely to use the initiation categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 632.0 (df 16), p<.0001 and chi-square value = 218.4 (df 16), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of initiation categories in both SSE and OA contexts.

Table 4.13

Table to compare frequency of Initiation Experienced by Serena (deaf) vs Julie (hearing) in Integrated Nursery settings distinguished by availability of Sign Supported English.

Type of Initiation	Serena (deaf) SSE	Julie (hearing) SSE	Serena OA	Julie OA
AC(T)	19.1	15.3	42.7	18.5
C(T)A	29.4	13.5	38.7	9.7
CC(T)/CHCH(T)	11.2	9.3	3.7	14.4
C(T)C/CH(T)CH	10.7	20.5	3.7	19.5
CHC(T)/CCH(T)	4.2	10.2	9.2	1.0
C(T)CH/CH(T)C	2.3	7.4	- - -	2.6
C(T)S	1.5	5.1	- - -	21.5
C(T)G	0.8	4.2	- - -	0.5
AG(T)	20.8	14.4	1.9	12.3

Comparison of response in the SSE Nursery setting vs response in OA Nursery setting : Serena and Julie

'Are the two children equally likely to use the response categories in the SSE setting ?

'Are they equally likely to use the response categories in the OA setting ?'

Analysis of data presented in Table 4.14, shows that in both settings the children are not likely to use the response categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 63.1 (df 4), p<.0001 and chi-square value = 44.1 (df 4), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of response categories in both SSE and OA contexts.

Table 4.14

Table to compare frequency of Response in Integrated Nursery settings distinguished by availability of Sign Supported English : Serena and Julie

Type of Response	Serena SSE	Julie SSE	Serena OA	Julie OA
E	37.9	59.3	29.0	52.2
A	46.3	18.5	51.6	2.2
I	1.7	17.6	6.5	23.3
N	14.0	4.6	12.9	22.2

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Comparison of Mode of Communication in the SSE Nursery setting vs Mode of Communication in the OA Nursery setting : Serena and Julie

'Are the two children equally likely to use the mode of communication categories in the SSE setting ?

'Are they equally likely to use the mode of communication categories in the OA setting ?'

Analysis of data presented in Table 4.15, shows that in both settings the children are not likely to use mode of communication categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 258.3 (df 14), p<.0001 and chi-square value = 86.9 (df 9), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and mode of communication in both SSE and OA contexts.

Table 4.15

Table to compare frequency of Mode of Communication in Integrated Nursery settings distinguished by availability of Sign Supported English : Serena and Julie

Mode	Serena SSE	Julie SSE	Serena OA	Julie OA
S	4.3	---	---	---
S+V	2.9	---	2.1	---
S+PV	4.8	---	---	---
V	10.4	66.7	8.3	77.3
V+NV	---	0.5	---	1.3
V+P	1.7	0.5	---	---
NV	39.5	27.1	68.7	13.0
NV+PV	1.2	---	4.2	0.6
NV+P	2.5	---	2.1	---
PV	28.2	5.2	8.3	7.1
PV+P	4.4	---	6.3	---

Comparison of Referential Acts in the SSE Nursery setting vs Referential Acts in the OA Nursery setting : Serena and Julie

'Are the two children equally likely to use referential acts in the SSE setting ?

'Are they equally likely to use referential acts in the OA setting ?'

Analysis of data presented in Table 4.16, shows that in both settings the children are not likely to use referential acts in the same ways.

Differences between the children are significant in both settings (chi-square value = 71.1 (df 14), p<.0001 and chi-square value = 64.9 (df 11), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of referential categories in both SSE and OA contexts.

Table 4.16

Table to compare frequency of Referential Communication in Integrated Nursery settings distinguished by availability of Sign Supported English : Serena and Julie

Referential Communication	Serena SSE	Julie SSE	Serena OA	Julie OA
RCT	16.4	5.2	13.6	---
RNO	8.8	1.7	4.5	---
RCO	15.3	15.6	4.5	28.2
RSO	10.9	4.3	31.8	---
RCS	10.2	20.0	4.5	17.6
RRI	10.6	3.5	18.2	3.5
RRO	3.6	4.3	13.6	---
RRA	10.2	26.0	9.1	14.1
RIR	1.1	---	---	14.1
RA	9.8	4.3	---	---
RDN	1.4	8.7	---	20.0
RDO	1.4	6.1	---	2.4

Comparison of Interpersonal Acts in the SSE Nursery setting vs
Interpersonal Acts in the OA Nursery setting : Serena and Julie

'Are the two children equally likely to use the interpersonal
categories in the SSE setting ?

'Are they equally likely to use the interpersonal categories in
the OA setting ?'

Analysis of data presented in Table 4.17, shows that in both
settings the children are not likely to use the interpersonal
categories in the same ways.

Differences between the children are significant in both settings
(chi-square value = 146.5 (df 11), p<.0001 and chi-square value
=34.2 (df 10), p<.0001 respectively). As chi is highly
significant in both settings, null hypotheses, predicting no
difference between the children must be rejected. So far as can
be told from this data, there is an association between hearing
status and use of interpersonal categories in both SSE and OA
contexts.

Table 4.17

**Table to compare frequency of Interpersonal Communication in
Integrated Nursery settings distinguished by availability of Sign
Supported English : Serena and Julie**

Interpersonal Communication	Serena SSE	Julie SSE	Serena OA	Julie OA
IATN	10.1	30.9	6.3	8.6
IG	5.6	3.0	12.5	47.5
IS	5.9	4.2	3.1	---
ICT	2.4	11.3	---	6.3
IR	2.8	0.6	6.3	---
IAC	23.7	5.4	12.5	2.5
IO	2.4	1.2	---	3.7
ICP	24.0	17.8	43.8	13.7
IA	10.1	1.2	12.5	11.3
II	12.5	23.2	3.1	6.3
IAG	0.3	1.2	---	---

Comparison of Social Context in the SSE Nursery setting vs Social Context in the OA Nursery setting : Serena and Julie

'Are the two children equally likely to use the social context categories in the SSE setting ?

'Are they equally likely to use the social context categories in the OA setting ?'

Analysis of data presented in Table 4.18, shows that in both settings the children are not likely to use the social context categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 262.0 (df 8), p<.0001 and chi-square value = 154.2 (df 8), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of social context categories in both SSE and OA contexts.

Table 4.18

Table to compare frequency of Social Contexts in Integrated Nursery settings distinguished by availability of Sign Supported English : Serena and Julie

Social Context	Serena SSE	Julie SSE	Serena OA	Julie OA
S	2.3	9.7	27.1	10.3
P	23.9	21.7	14.7	35.9
CC/CHCH	6.2	11.4	2.3	10.0
CCH	1.9	5.3	12.4	3.3
SG	51.5	35.0	24.0	27.0
LG	2.7	10.3	---	5.6
AC/ACH	11.3	6.6	19.4	7.8

D. Children using more than one spoken language : Shula and Sian

Comparison of Initiation in the SSE Nursery setting vs Initiation in OA Nursery setting : Shula and Sian

'Are the two children equally likely to use the initiation categories in the SSE setting ?

'Are they equally likely to use the initiation categories in the OA setting ?'

Analysis of data presented in Table 4.19, shows that in both settings the children are not likely to use the initiation categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 611.8 (df 17), p<.0001 and chi-square value = 483.2 (df 19), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of initiation categories in both SSE and OA contexts.

Table 4.19

Table to compare frequency of Initiation Experienced by Shula (deaf) vs Sian (hearing) in Integrated Nursery settings distinguished by availability of Sign Supported English.

Type of Initiation	Shula (deaf) SSE	Sian (hearing) SSE	Shula OA	Sian OA
AC(T)	16.6	14.2	27.3	17.4
C(T)A	33.8	18.0	40.0	25.7
CC(T)/CHCH(T)	11.2	11.1	3.7	11.6
C(T)C/CH(T)CH	17.4	18.0	3.3	16.1
CHC(T)/CCH(T)	1.5	1.9	2.4	0.6
C(T)CH/CH(T)C	3.9	4.6	0.4	3.5
C(T)S	3.6	6.1	0.4	4.5
C(T)G	3.4	1.1	0.8	3.5
AG(T)	8.4	25.0	21.6	17.0

Comparison of Response in the SSE Nursery setting vs Response
in OA Nursery setting : Shula and Sian

'Are the two children equally likely to use the response
categories in the SSE setting ?

'Are they equally likely to use the response categories in the
OA setting ?'

Analysis of data presented in Table 4.20, shows that in both
settings the two target children are not likely to use the
response categories in the same ways.

Differences between the children are significant in both settings
(chi-square value = 25.31 (df 4), p<.0001 and chi-square value
= 70.78 (df 4), p<.0001 respectively). As chi is highly
significant in both settings, null hypotheses, predicting no
difference between the children must be rejected. So far as can
be told from this data, there is an association between hearing
status and use of response acts in both SSE and OA contexts.

Table 4.20

**Table to compare frequency of Response in Integrated Nursery
settings distinguished by availability of Sign Supported English.**

Type of Response	Shula SSE	Sian SSE	Shula OA	Sian OA
E	54.6	44.5	38.9	61.8
A	37.2	35.8	45.8	8.3
I	1.5	11.7	0.8	11.1
N	6.6	8.0	14.5	18.8

'Are the two children equally likely to use mode of communication categories in the SSE setting ?

'Are they equally likely to use mode of communication categories in the OA setting ?'

Analysis of data presented in Table 4.21, shows that in both settings the children are not likely to use mode of communication in the same ways. Differences between the children are again significant in both settings (chi-square value = 440.4 (df 14), p<.0001 and chi-square value = 330.0 (df 13), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and mode of communication in both SSE and OA contexts.

Table 4.21

Table to compare frequency of Mode of Communication in Integrated Nursery settings distinguished by availability of Sign Supported English.: Shula and Sian

Mode	Shula SSE	Sian SSE	Shula OA	Sian OA
S	6.4	0.8	1.8	---
S+V	0.8		0.9	---
S+NV	1.0	---	2.2	---
S+PV	16.2	---	10.1	---
V	0.8	60.2	1.3	69.4
V+NV	0.2		---	2.6
NV	28.5	35.6	40.5	24.2
NV+PV	0.6	---	7.0	0.1
NV+P	0.6	---	2.2	---
PV	38.3	3.4	24.7	3.6
PV+P	5.9	---	7.5	---
P	0.8	---	1.8	---

Referential Communication

'Are the two children equally likely to use referential acts in the SSE setting ?

'Are they equally likely to use referential acts in the OA setting ?'

Analysis of data presented in Table 4.22, shows that in both settings the children are not likely to use the referential categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 93.8 (df 13), p<.0001 and chi-square value = 135.1 (df 12), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. As far as can be told from this data, there is an association between hearing status and use of referential acts in both SSE and OA contexts.

Table 4.22

Table to compare frequency of Referential Communication in Integrated Nursery settings distinguished by availability of Sign Supported English : Shula and Sian

Referential Communication	Shula SSE	Sian SSE	Shula OA	Sian OA
RCT	20.0	20.3	24.6	- - -
RNO	6.7	- - -	3.8	- - -
RCO	19.7	16.9	9.2	23.5
RSO	8.7	0.8	12.3	- - -
RCS	6.7	11.9	3.8	20.8
RRI	7.8	14.4	20.0	19.5
RRO	0.9	- - -	3.8	- - -
RRA	12.7	14.4	8.5	14.8
RIR	0.9	6.8	2.3	6.7
RA	13.6	5.9	6.9	- - -
RDN	- - -	5.1	- - -	11.4
RDO	2.3	3.4	4.6	3.3

'Are the two children equally likely to use the interpersonal categories in the SSE setting ?

'Are they equally likely to use the interpersonal categories in the OA setting ?'

Analysis of data presented in Table 4.23, shows that in both settings the children are not likely to use the interpersonal categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 58.2 (df 11), p<.0001 and chi-square value = 81.4 (df 10), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of interpersonal categories in both SSE and OA contexts.

Table 4.23

Table to compare frequency of Interpersonal Communication in Integrated Nursery settings distinguished by availability of Sign Supported English.

Interpersonal Communication	Shula SSE	Sian SSE	Shula OA	Sian OA
IATN	24.8	14.4	13.7	14.1
IG	9.3	9.8	12.5	18.0
IS	9.7	4.6	5.0	3.9
ICT	3.2	10.9	0.6	14.1
IR	2.9	1.7	0.6	0
IAC	11.9	31.6	27.5	7.1
IO	5.4	3.4	1.3	8.4
ICP	16.9	8.0	14.4	11.6
IA	10.0	6.9	15.6	15.5
II	5.7	8.0	8.7	7.1
IAG	---	0.6	---	---

'Are the two children equally likely to use the social context categories in the SSE setting ?

'Are they equally likely to use the social context categories in the OA setting ?'

Analysis of data presented in Table 4.24, shows that in both settings the children are not likely to use the social context categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 208.6 (df 8), p<.0001 and chi-square value = 186.2 (df 8), p<.0001 respectively). As chi is highly significant in both settings, null hypotheses, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of initiation categories in both SSE and OA contexts.

Table 4.24

Table to compare frequency of Social Contexts in Integrated Nursery settings distinguished by availability of Sign Supported English : Shula and Sian

Social Context	Shula SSE	Sian SSE	Shula OA	Sian OA
S	1.2	3.9	---	5.9
P	12.0	26.7	---	14.8
CC/CHCH	8.0	6.4	1.3	7.8
CCH	1.9	---	---	1.1
SG	61.5	41.9	70.0	47.5
LG	5.9	17.5	16.0	15.9
AC/ACH	9.5	3.6	12.7	7.0

*E. Children using a signed language and a spoken language :
Catherine and Faye*

**Comparison of Initiation in the SSE Nursery setting vs Initiation
in OA Nursery setting : Catherine and Faye**

'Are the two children equally likely to use the initiation
categories in the SSE setting ?' and 'are they equally likely to
use the initiation categories in the OA setting ?'

Analysis of data presented in Table 4.25, shows that in both
settings the children are not likely to use the initiation
categories in the same ways.

Differences between the children are significant in both settings
(chi-square value = 623.1 (df 17), p<.0001 and chi-square value
= 416.6 (df 17), p<.0001 respectively). As chi is highly
significant the null hypothesis, predicting no difference between
the children must be rejected. So far as can be told from this
data, there is an association between hearing status and use of
initiation categories in both the SSE and OA contexts.

Table 4.25

**Table to compare frequency of Initiation Experienced by Catherine
(deaf) vs Faye (hearing) in Integrated Nursery settings
distinguished by availability of Sign Supported English.**

Type of Initiation	Catherine (deaf) SSE	Faye (hearing) SSE	Catherine OA	Faye OA
AC(T)	19.5	16.0	25.4	12.9
C(T)A	18.8	11.2	25.0	11.2
CC(T)/CHCH(T)	15.4	19.1	8.3	26.4
C(T)C/CH(T)CH	12.7	15.9	6.2	18.1
CHC(T)/CCH(T)	3.4	2.2	1.7	---
C(T)CH/CH(T)C	2.2	3.6	7.1	0.6
C(T)S	3.8	6.2	2.9	12.5
C(T)G	5.1	1.8	0.4	1.0
AG(T)	18.6	22.0	23.0	17.1

Comparison of Response Acts in the SSE Nursery setting vs Response Acts in the OA Nursery setting : Catherine and Faye

Are the two children equally likely to use the response categories in the SSE setting ? Are they equally likely to use the response categories in the OA setting ?'

Analysis of data presented in Table 4.26, shows that in both settings the children are not likely to use the response categories in the same ways.

Differences between the children are significant in both settings (chi-square value = 64.6 (df 4), $p < 0.0001$ and chi-square value = 79.0 (df 4), $p < .0001$). As chi is highly significant the null hypothesis, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of response categories in both SSE and OA contexts.

Table 4.26

Table to compare frequency of Response in Integrated Nursery settings distinguished by availability of Sign Supported English : Catherine and Faye

Type of Response	Catherine SSE	Faye SSE	Catherine OA	Faye OA
E	34.8	49.6	20.7	58.5
A	40.9	24.4	46.4	8.8
I	3.6	20.6	4.3	12.3
N	20.7	4.8	28.6	20.5

Comparison of Mode of Communication in the SSE Nursery setting vs Mode of Communication in OA Nursery setting : Catherine and Faye

'Are the two children equally likely to use the Mode of communication categories in the SSE setting ? Are they equally likely to use the mode of communication categories in the OA setting ?'

Analysis of data presented in Table 4.27, shows that in both settings the children are not likely to use the mode of communication categories in the same ways.

Differences between the children are significant in both settings (chi-square = 278.4 (df 15), p<0.0001 and chi-square value = 236.7 (df 16), p<.0001 respectively). As chi is highly significant, the null hypothesis, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of mode of communication categories in both SSE and OA contexts.

Table 4.27

Table to compare frequency of Mode of Communication in Integrated Nursery settings distinguished by availability of Sign Supported English : Catherine and Faye

Mode	Catherine SSE	Faye SSE	Catherine OA	Faye OA
S	9.7	---	5.7	---
S+NV	3.6	---	2.6	
S+PV	2.8	---	1.6	---
V	0.4	62.0	0.5	63.2
V+NV	---	5.3	0.5	5.3
NV	64.1	27.8	62.9	28.3
NV+PV	0.4	---	4.2	---
NV+P	1.6	---	6.3	---
PV	14.9	5.0	6.2	3.2
PV+P	0.8	---	4.7	---
P	1.6	---	4.2	---

Comparison of Referential Acts in the SSE Nursery setting vs
Referential Acts in OA Nursery setting : Catherine and Faye

Are the two children equally likely to use the referential
categories in the SSE setting ? Are they equally likely to use
the referential categories in the OA setting ?'

Analysis of data presented in Table 4.28, shows that in both
settings the children are not likely to use the referential
categories in the same ways.

Differences between the children are significant in both settings
(chi-square value = 64.4 (df 14), p<0.0001 and chi-square value
= 87.8 (df 13), p<.0001) respectively. As chi is highly
significant, the null hypothesis, predicting no difference
between the children must be rejected. So far as can be told from
this data, there is an association between hearing status and use
of referential categories in both the SEE and the OA context.

Table 4.28

Table to compare frequency of Referential Communication in
Integrated Nursery settings distinguished by availability of Sign
Supported English : Catherine and Faye

Referential Communication	Catherine SSE	Faye SSE	Catherine OA	Faye OA
RCT	9.0	15.1	10.7	---
RNO	4.9	1.4	2.4	---
RCO	13.1	16.8	7.1	21.5
RSO	4.1	3.8	7.1	---
RCS	11.5	14.3	10.7	13.2
RRI	12.3	8.3	15.5	8.3
RRO	8.2	4.2	4.8	---
RRA	11.5	9.0	23.8	9.9
RIR	5.7	---	4.8	28.9
RA	18.0	7.0	5.9	0.8
RDN	---	11.4	---	15.7
RDO	1.6	8.6	7.1	---

Comparison of Interpersonal Acts in the SSE Nursery setting vs Interpersonal Acts in OA Nursery setting : Catherine and Faye

'Are the two children equally likely to use the interpersonal categories in the SSE setting ? Are they equally likely to use the interpersonal categories in the OA setting ?'

Analysis of data presented in Table 4.29, shows that in both settings the children are not likely to use the interpersonal categories in the same ways.

Differences between the children's interpersonal communication are significant in both settings (chi-square = 48.2 (df 11), p<0.0001 and chi-square value = 57.6 (df 10), p<.0001) respectively. As chi is highly significant, the null hypothesis, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of interpersonal acts in both the SSE and the OA context.

Table 4.29

Table to compare frequency of Interpersonal Communication in Integrated Nursery settings distinguished by availability of Sign Supported English : Catherine and Faye

Interpersonal Communication	Catherine SSE	Faye SSE	Catherine OA	Faye OA
IATN	9.2	20.6	14.2	9.7
IG	5.4	8.9	8.1	18.2
IS	3.8	1.5	7.4	0.6
ICT	8.7	8.4	2.7	10.4
IR	1.6	0.6	4.1	---
IAC	34.8	28.1	27.7	10.4
IO	3.8	4.9	2.0	5.8
ICP	24.4	13.7	20.9	21.4
IA	1.1	8.3	7.4	12.3
II	4.9	4.4	5.4	11.0
IAG	2.2	0.6	---	---

Comparison of Social Context in the SSE Nursery setting vs Social Context in OA Nursery setting : Catherine and Faye

Are the two children equally likely to use the social context categories in the SSE setting ? Are they equally likely to use the social context categories in the OA setting ?'

Analysis of data presented in Table 4.30 shows that in both settings the children are not likely to use the social context categories in the same ways.

Differences between the children are significant (chi-square value = 282.6 (df 8), p<0.0001 and chi-square value = 219.5 (df 8), p<.0001) respectively. As chi is highly significant in both settings, the null hypothesis, predicting no difference between the children must be rejected. So far as can be told from this data, there is an association between hearing status and use of social context categories in both the SSE and the OA context.

Table 4.30

Table to compare frequency of Social Contexts in Integrated Nursery settings distinguished by availability of Sign Supported English : Catherine and Faye

Social Context	Catherine SSE	Faye SSE	Catherine OA	Faye OA
S	5.3	8.0	1.4	10.3
P	23.9	30.7	19.4	30.6
CC/CHCH	9.0	5.4	4.1	19.3
CCH	3.1	4.8	1.9	0.4
SG	49.7	24.0	53.0	26.3
LG	1.5	20.4	13.9	9.5
AC/ACH	7.5	6.6	6.3	3.6

APPENDIX THREE

1. Segregated Nursery Setting with OA Communication Methods

Table 5.1

Table to show frequency of communication acts engaged in by the group of deaf children in the segregated nursery setting with OA communication methods

Init'n	%	Response	%	Mode	%	Ref'tial	%	Interp's	%	Social	%
AC(T)	20.8	E	37.8	S	1.2	RCT	5.6	IATN	19.7	S	19.8
C(T)A	31.6	A	25.4	S+V	- - -	RNO	5.0	IG	8.8	P	23.3
CC(T)	8.3	I	7.5	S+NV	0.8	RCO	17.8	IS	7.7	CC	8.6
C(T)C	16.0	N	29.3	S+PV	1.1	RSO	21.4	ICT	7.2	CCH	0.2
CHC(T)	0.8			V	17.2	RCS	4.5	IR	5.2	SG	31.9
C(T)CH	0.6			V+NV	- - -	RRI	4.1	IAC	9.7	LG	3.9
CS	9.7			NV	27.4	RRO	12.8	IO	4.1	AC	12.3
C(T)G	2.0			NV+PV	0.4	RRA	- - -	ICP	28.7		
AG(T)	10.0			NV+P	0.7	RIR	4.1	IA	0.9		
				PV	39.2	RA	15.8	II	7.5		
				PV+P	3.7	RDN	0.7	IAG	0.5		
				P	6.3	RDO	8.2				

2. Part-time Integrated Reception Class with SSE

Table 5.2

5.2 Table to show frequency of communication acts engaged in by the group of deaf children in the part-time integrated reception class with SSE

Init'n	%	Response	%	Mode	%	Ref'tial	%	Interp's	%	Social	%
AC(T)	21.6	E	45.9	S	1.7	RCT	26.9	IATN	12.7	S	1.1
C(T)A	34.3	A	37.9	S+V	1.2	RNO	9.8	IG	6.5	P	6.2
CC(T)	11.1	I	1.8	S+NV	1.6	RCO	10.1	IS	17.6	CC	7.1
C(T)C	12.1	N	14.4	S+PV	10.1	RSO	6.7	ICT	2.2	CCH	1.4
CHC(T)	0.7			V	25.0	RCS	8.8	IR	3.5	SG	70.4
C(T)CH	0.8			V+NV	---	RRI	12.4	IAC	26.0	LG	2.9
CS	2.4			NV	33.9	RRO	2.1	IO	1.1	AC	10.9
C(T)G	0.7			NV+PV	6.9	RRA	7.5	ICP	14.6		
AG(T)	16.5			NV+P	1.7	RIR	6.7	IA	7.6		
				PV	12.3	RA	3.4	II	8.1		
				PV+P	4.9	RDN	0.3	IAG	0.5		
				P	0.5	RDO	3.4				