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Home-Education: Rationales, Practices and Outcomes

Paula-Jane Rothermel
PhD Dissertation
University of Durham
School of Education
2002



- 8 NOV 2002

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Home-Education: Rationales, Practices and Outcomes

Paula Rothermel

PhD Dissertation, University of Durham, 2002

ABSTRACT

This research explores the aims and practices of home-educating families throughout the UK. The methodology involved a questionnaire survey completed by one parent from each of 419 home-educating families, and 196 assessments to evaluate the psychosocial and academic development of home-educated children aged eleven years and under. The aim was to gain an understanding of children's education outside school. This is the first UK study to be conducted with home-educated children and their families incorporating such diverse methodologies, broad aims and large sample.

Analysed questionnaire data revealed no clear 'type' of home-educator. They came from diverse socio-economic backgrounds and at least 25% of parents did not have a university degree. There was more or less an even division between children who had been withdrawn from school and those who had never attended. Families welcomed involvement within their communities and home-education tended to be a lifestyle choice rather than a statement about state education.

The quantitative results showed that 64% of the home-educated Reception aged children scored over 75% on their PIPS Baseline Assessments (achieved by 5.1% of children nationally). The National Literacy Project assessment results revealed that 80.4% of the home-educated children scored within the top 16% band (of a normal distribution bell curve), whilst 77.4% of the home-educated children assessed on PIPS Year 2 achieved placement within this band. Results from the psychosocial instruments confirmed that the home-educated children were socially adept and did not display behavioural problems beyond the norm.

The home-educated children demonstrated high levels of attainment and good social skills. Common to all families involved was their flexible approach. Children benefited from parental attention and the freedom to develop their skills at their own speed. Families enjoyed strong bonds and parents were committed to providing a

Dedication

This thesis is dedicated to my children Genevieve & Verity,

to my mother Rita and to my partner Jonathan.

Thanks

For making this thesis possible I would like to thank my supervisor, Professor David Galloway. Also, Professor Peter Tymms and all his staff at Durham's CEM Centre and Professor Carol Aubrey. My thanks go to all the necessary and very many families who assisted with and supported, this research.

Notes on the text

Where quotations are provided without page references, this indicates that none were available. In most of such cases the quotation has been taken from a newspaper article or from an academic paper that was in a digital format, thus making page numbers arbitrary.

[...] in quoted text represents unquoted portions of the text.

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CHAPTER 1: INTRODUCTION TO THE THESIS

1.1 STRUCTURE OF THE THESIS

This thesis is set out over eleven chapters. The first four make up the Introduction, Literature Review (2 chapters) and Methodology; Chapters 5 to 9 report the results of the research and Chapters 10 and 11 provide the Discussion and Conclusion. The research reported is based on a questionnaire to home-educating parents, followed by educational and psychosocial assessments of sub-samples of children. In addition, interviews were conducted with parents and children, but for reasons of time and space the results were not reported in detail. However, reference to these interviews is made when relevant to the results of the questionnaires and assessment data.

1.2 LEGALITY OF HOME-EDUCATION

Learning from home is becoming more popular (Lines 1999). Increasingly publicised by the press (e.g. Garavelli 2002, Douglas 2002, Curtis 2002) public awareness is also growing. Section 7 of The Education Act 1996 (England and Wales) reads as follows:

> The parent of every child of compulsory school age shall cause him to receive efficient full-time education suitable:
> (a) to his age, ability and aptitude, and

> (b) to any special educational needs he may have, either by regular attendance at school or otherwise.
>
> Section 7 of The Education Act 1996 (England and Wales)

Taylor and Petrie (2000) provide a thorough discussion of the current law. At present, there is a choice, under the Education Act (1996, s.7) for children to receive their education either at school or 'otherwise' (The Education (Scotland) Act 1980, s.30, makes similar provision); whilst the school option involves formal assessment and inspection, the 'otherwise' alternative involves neither in any legislative form[1].

> 'LEAs, however, have no automatic right of access to the parent's home. Parents may refuse a meeting in the home, if they can offer an alternative way of demonstrating that they are providing a suitable education, for example, through showing examples of work and agreeing to a meeting at another venue.'
>
> DfEE (1998a, point 4)

To home-educate children in the UK, one does not need a teaching qualification or any specialist equipment and whilst some families follow a routine for learning, others do not. There are families known to their LEA as home-educators and there are others that are not (Muckle 1997). Currently, families home-educating children in England and Wales who have never been to school, are under no obligation to inform anyone. The law states that the name of a child at school and who is of compulsory school age is to be removed from the school register, if:

> 'he has ceased to attend the school and the proprietor has received written notification from the parent that the pupil is receiving education otherwise than at school.'
>
> Regulation 9 (1) (c) Education (Pupil Registration) Regulations 1995 (England and Wales)

Thus, to deregister a child the parent needs only to inform the proprietor or headteacher that they are withdrawing their child from school for education otherwise than at school. The school then has a legal obligation, according to Regulation 13 (3) of the Education (Pupil Registration) Regulations 1995, to inform the local authority of any child that is withdrawing and provide the reason, insofar as they are aware of it.

In Scotland the law in respect of withdrawal differs: under section 35(1) of The Education (Scotland) Act 1980 the education authority must:

> [...] have consented to the withdrawal of the child from the school (which consent shall not be unreasonably withheld) [...]
>
> The Education (Scotland) Act 1980, s. 35(1)

As of January 2002, draft guidance was issued for consultation (closing date March 2002) under the Standards in Scotland's Schools etc. Act 2000. Objecting to the draft, SNP MSP Irene McGugan put down a Parliamentary

Motion calling for the draft guidance to be withdrawn immediately. Her motion referred to:

> 'unfounded and insulting inferences that home educated children are in need of extraordinary measures of care and protection [...] the guidance exhorts local authorities to act beyond their powers under section 37 of the Education (Scotland) Act 1980 and seeks to condone unlawful breaches of data protection and human rights legislation [...] that the Scottish Executive should end the discrimination against home educating families in Scotland forthwith'

By April 2002, Ms McGugan's motion had received substantial support from her colleagues. Further, in response to the level of monitoring advised under the draft, were it adopted, Meighan [2](2002) published a strongly worded statement:

> 'The guidance demonstrate [..that those..] trained in the methods of crowd instruction and crowd control that schools require, are therefore seldom equipped to judge other learning systems, especially the personalised learning style adopted by most home-based educators. It is outside their competence, experience and often their imagination. They usually resort to 'judging tennis by the rules of basketball', as it were, even though they are different games with different logistics. The intelligent response, [...] will

> be to either, hand the monitoring over to a home-based education committee, or defer to the expertise of experienced home-based educators and researchers.'
>
> Meighan (2002)

At the time of writing the matter was still unresolved. The concern for home-educators nation-wide was that this draft document, if formally adopted, might set a precedent for the UK, substantially curbing the right of parents to educate according to their own wishes, as per the S. 9 of The Education Act 1996.

This Chapter briefly reviews definitions of 'home-education', relevant legislation, home-education prevalence and LEA perspectives.

1.3 DEFINITIONS OF HOME-EDUCATION

There is no simple definition of home-education. Some LEAs might, for example, define home-educating families only as those known to, and approved by, the LEA[3]: many families however, are not known to their LEA (Muckle 1997). Petrie, Windrass and Thomas (1999) wrote that:

> 'Home education can be defined as the full-time education of children in and around the home by their parents or guardians or by tutors appointed by the parents or guardians'
>
> Petrie, Windrass, and Thomas (1999, p. 6)

But in the absence of a universal concept of 'education' this definition is rather ambiguous: no explanation of 'full-time' is provided and it is implied that the hiring of professional tutors qualifies as home-education despite a common perception that hired full-time tutors are not necessarily synonymous with parental commitment. Petrie (1999) however, expanded and modified her explanation thus:

> '[home-education is] where the parents are committed to their [children's] education and home-educating'
>
> (Petrie 1999)

The mention of a necessary commitment by parents narrowed the definition by inferring that there were some parents 'educating' or arranging an education but who were not fully committed to their children's education. Commitment however, takes many forms and what is commitment to one may not be perceived to be so by others. A conversation with the DfEE in 2000[4] confirmed that most travellers who are not registered either with schools or with their LEA nevertheless view themselves as committed home-educators, apprenticing the children to their trade and viewing the input from the children as integral to the family's social and economic fabric: it is likely however, that many such families would escape the Petrie et al. (1999 p. 6) definition.

The North American term, 'homeschooling' implies an element of schooling is involved, whilst the UK term lacks such inference. Home-education

however, suggests that the education takes place at home, whereas the home is more often a base rather than the actual full-time locus (Meighan and Brown 1980).

The terms 'schooling', 'education', 'learning' and 'teaching' are often used synonymously whereas they may have little in common in the eyes of the home-educator. Petrie (1995) provides an overview of the confusion between compulsory education and compulsory school, quoting amongst others, John Patten, Secretary of State for Education, during a speech given on the 26th November, 1993:

> 'We must continue to drive home to parents that they have a moral as well as a legal duty to ensure that their children go to school and stay there.'
>
> John Patten, cited by Petrie (1995)

There are home-educators who neither 'school' nor 'teach' their children, preferring to leave the children free to follow their own inclinations, whether or not that involves any formal learning and whether or not such incidental learning would be determined as 'educational' by more authoritative bodies. The confusion between 'education' and 'schooling' is apparent in the term, 'Educational Psychologist': at Manchester University[5] for example, the reading syllabus for this qualification relies almost exclusively on books pertaining to children's learning and behaviour in school.

In a 1999 speech, Abbot pondered the difference between schooling and learning:

> 'By the time I was 13 I was quite a good wood carver, and then I went off to a conventional boarding public school. [...] I memorised vast chunks of Caesar's Gaelic War and Virgil's Aeneid. Night after night I lay awake testing myself on conjugations and declensions. And of course I passed Latin. Six months later I had forgotten most of it ..... but I still woodcarve! [...] at that early stage in life I came to realise that learning and schooling were not synonymous. [...] Learning is a consequence of thinking [...] Thinking – not simply instruction.'
>
> Abbot (1999)

Education is compulsory despite there being no clear definition of what an education is. At a local level, LEAs must determine this for themselves, leaving interpretation open to disparity between Local Authorities. A family may be considered to be home-educating by one LEA, but not by another.

> 'The LEA will need to satisfy itself that a child is receiving suitable education at home.'
>
> DFEE (1998a, point 3)

There is a further anomaly as the government, by inference, places compulsion upon learning, which is a human instinct. This is peculiar

because the government fails to clarify just what it is that they are making compulsory. The UK Educational Reform Act (1988) stated that a school curriculum should be 'broad and balanced', descriptions open to broad interpretation. Furthermore, the Education Act 1996 requires that a child's education is 'suitable to his age, ability and aptitude' but does not stipulate what it considers to be 'suitable'. In an attempt to give some guidelines as to what an education should be, the United Nations Convention on the Rights of the Child, Article 29,1 (1989)[6] states that an education should be directed to:

(a) The development of the child's personality, talents and mental and physical abilities to their fullest potential;

(b) The development of respect for human rights and fundamental freedoms, and for the principles enshrined in the Charter of the United Nations;

(c) The development of respect for the child's parents, his or her own cultural identity, language and values, for the national values of the country in which the child is living, the country from which he or she may originate, and for civilizations different from his or her own;

(d) The preparation of the child for responsible life in a free society, in the spirit of understanding, peace, tolerance, equality of sexes, and friendship among all peoples, ethnic, national and religious groups and persons of indigenous origin;

(e) The development of respect for the natural environment.

UN Convention on the Rights of the Child (1989)

The document, 'Convention on the Rights of the Child: Appendix General Comment No. 1 The Aims of Education Article 29 (1) (2001)', elaborates further.

Article 26.2 of the United Nations Universal Declaration of Human Rights, adopted by the United Nations General Assembly in 1948, offers some indication, if not clarification, of what an education should entail:

> 'Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.'
>
> Article 26.2 of the United Nations Universal Declaration of Human Rights

With confusion over what constitutes an education, deciding what makes a 'home-educator' is complex. After all, until their children begin school, most families are practising home-education and even after that date, children continue to learn outside of school hours, often under parental guidance; perhaps this is no more sophisticated than assisting with the family shopping but it is nevertheless, home-education. If home-education includes all those children not registered with a school (eg. sick children, travellers, preschoolers, those in pupil referral units, exclusions) the numbers of children involved may be substantial (Rothermel 2000, calculated the figure

to be as high as 560,000), but just how many of the children out-of-school, aged between five and sixteen-years might be considered as home-educated is debatable. Many home-educators, for example would not consider travellers to number amongst their comrades; yet the DfEE note:

> 'Traveller children make up a significant group of those whose parents choose to educate them at home.'
>
> DFEE (1998a, point 6)

Some home-educators dispute other's right to the title, 'home-educator', where tutors are involved: the use of tutors may vary from full-time, to the weekly hour's gym class. If a family employ full-time tutors, are they home-educating? Where the LEA pay the tuition for say, two hours a week (e.g. perhaps for a child with special needs), there are those home-educators who would dismiss such a family's claim to be 'real' home-educators. A similar distinction might be drawn between those who home-educate by ideological choice and those who do it under extreme duress, e.g. as a result of many years of school related problems.

> 'The pressure schools are under to meet Government exam and discipline targets was underlined by the case of Firfield school [...]. The fresh start school has admitted removing "five or six" persistent truants from its rolls by persuading their parents to educate them at home. '
>
> Slater (1999)

Long term sick children are often cared for at home, attended by a visiting tutor (DfES 2001b). Children excluded or expelled from school and pregnant or young mothers might be taught at home by a tutor employed by the LEA or may have education, in part, arranged at an LEA pupil referral unit (HMI, 1994). Part-time or flexischoolers (Meighan 1988a), occasionally consider themselves home-educating, yet to their LEAs and the DfEE they are full-time school attendees[7]. For all these categories of children, there is perhaps inherently, an element of home-based learning involved.

Because of the diversity involved, defining what constitutes a 'home-education' is complex. The support organisations for home-educators are generally inclusive, without rigid membership criteria, numbering among them some families who might not be home-educating in any established format. The LEAs on the other hand, operate exclusive categorisation so that, for example, home-educating travellers are not dealt with by the same department that administers the home-education operations and similarly for children excluded from school or sick:

> 'For this group [travellers] specialist support in securing children's integration into schools and continuity of learning may be available through an LEA Traveller Education Service.'
>
> DfEE (1998a, point 6)

The 16,124 registered traveller children (OFSTED 1996) might be considered as legally flexischooling[8]. This is because Section 444(6) of the 1996

Education Act (OFSTED 1996) allows children whose families follow an itinerant lifestyle to attend school for just 200 half days per year.

1.4 THE LAW CONCERNING HOME-EDUCATION

Further to the lack of direction given at governmental level as to how an education should be defined, the law clearly imposes the duty to ensure a child is being educated, whatever that may be, upon the parents. Despite the DfEE statement that LEAs can define a suitable education[9], it would appear from the literature (Petrie 1992; Lowden 1993) that LEA powers to define what is appropriate, are confined to their schools.

Decisions concerning how and where children are educated and of what that education should consist lie ultimately with parents, as detailed in Protocol 1, Article 2 of the European Convention on Human Rights (1952), adopted through the Human Rights Act 1998 into UK law, 2nd October 2000.

> 'No person shall be denied the right to education. In the exercise of any functions which it assumes in relation to education and to teaching, the State shall respect the right of parents to ensure such education and teaching in conformity with their own religious and philosophical convictions.'
>
> Protocol 1, Article 2 of the European Convention on Human Rights (1952)

However, S. 9 of The Education Act 1996 (England and Wales), reads:

> 'In exercising or performing all their respective powers and duties under the Education Acts, the Secretary of State, LEAs and the funding authorities shall have regard to the general principle that pupils are to be educated in accordance with the wishes of their parents, so far as that is compatible with the provision of efficient instruction and training and the avoidance of unreasonable public expenditure.'
>
> Section 9 of The Education Act 1996 (England and Wales)

Section 28 (1) of The Education (Scotland) Act 1980 reads similarly.

This implies that parents' choice has priority only so far is it does not conflict with the public purse. When the UK signed up to the European Convention on Human Rights in 1952 the stipulation regarding unreasonable public expenditure was noted as a reservation and remains the case today (Council of Europe 2001).

Considering a further restriction on the extent of parents' wishes, Rothermel and Fiddy (2001) reported that whilst parents who home-educate their children do not need to follow the national curriculum, provide formal lessons or keep school hours, LEAs may nevertheless seek information from parents about the education they are providing to their children. If such a request is ignored or the LEA believe that information provided indicates that the education is inadequate, the LEA may seek further information:

> 'If it appears to a local education authority that a child of compulsory school age in their area is not receiving suitable education, either by regular attendance at school or otherwise, they shall serve a notice in writing on the parent requiring him to satisfy them within a period specified in the notice that the child is receiving such education'.
>
> Education Act 1996, s.437(1)

According to Rothermel and Fiddy (2001), in the case of Phillips v Brown (20 June 1980, Divisional Court, unreported), the LEA sought information from the parents concerning the child's home-education programme. When the Browns informed the LEA that they were providing a suitable education, but did not submit any details, the LEA then served notice under s.437(2) Education Act 1996 requiring the parents to satisfy them that the child was receiving a suitable education. Despite the parents' argument that the LEA could only serve a notice where something had come to their attention which led them to believe that the parents were failing to perform their duty to educate the child, the court held that the LEA request had been reasonable. Thus, although there is no duty on the parent to respond to LEA demands, if they fail to do so, it would seem that the LEA is within their rights to issue a notice.

Moreover, the Care Standards Act 2000 amended the Children Act 1989 so that Ofsted would regulate provision for early years education (day care, crèches, out of school care and childminding) through an Early Years

Directorate, effective from September 2001, thus bringing under national inspection the education of most pre-school and school children but not those who are home-educated. Were such inspections to be made compulsory for home-educated children, questions might well be raised as to whether such diversity of provision involves 'unreasonable public expenditure'. By stating that the authorities should 'have regard' to the 'principle' of parents wishes, S. 9, (The Education Act 1996) ambiguously avoids making a commitment that the Authorities *must* adhere to them. This is not to suggest any government might wish to outlaw home-education but one might foresee a situation where it could happen inadvertently, as has occurred in some other countries (Petrie 2000).

1.5 PREVALENCE OF HOME-EDUCATORS

Establishing the number of home-educators is difficult. The DfES do not maintain records of families known to LEAs in England and Wales. Estimates relating to how many families home-educate within the UK have been portrayed variously as 10,000 families (Budge 1997, p. 11), 20,000 (TES 1997), 20,000 children and 20,000 families (Welsh 1997 p.5), 50,000 children (Meighan 1997) and 15,000 children (Taylor and Petrie, 2000). These contrasting figures illustrate the confusion that abounds and are perhaps indicative of the guesswork used. Nevertheless it is notable that growth from an estimated 10 known families home-educating in 1976 (Midgley 1996) to a possible 20,000 in 1997 (Welsh 1997 p.5), implies a two thousand-fold increase in home-educators over a 21 year span. Calculations by this writer to some extent support an increase, albeit less

sensational: Petrie's (1992) work implies that in 1988 there were 20.39 children per LEA, Lowden's (1993) research suggested 37.70 children per LEA and Bates' (1996) revealed 49.08 children per LEA. This indicates a 140% growth in home-educators over the 8 years 1988 to 1996[10].

Where definitions and calculations are so fuzzy, counting home-educated children will always create problems. What can be suggested as a very rough estimate of the wider picture is that as many as 25% of the population's 0-16 year olds may be learning outside a formal educational environment. This figure combines the Rothermel (2000) estimate of unregistered 5-16 year olds with the population's 'at home' under fives[13].

Disparity between, and uncertainty over, the figures mentioned stems from the following: census information in this country asks about people but not about education. It tells us for example, how many children there are, aged between 5 and 16 years old in the United Kingdom. The DfES collects data on schools, permitting them to report on the number of 5-16 year olds at school in this country. The difference between these figures represents, in only the loosest terms, children who may be outside any official counting mechanism. Whilst some children can be accounted for, others cannot, at least not with accuracy. The Office for National Statistics in Britain does not collate data on home-educated children. Therefore, unless families come to the attention of their local authority, they are 'lost'. Child benefit is paid out to children living in Britain, aged from 0 to 16 or 18[14] but, there are no routine checks on whether such children actually live in the country[15] and the

information that the Child Benefit agency has on children is not studied in conjunction with census and DfEE data. Discussions with DfEE officials have confirmed this).

Schoolchildren and their families participate, knowingly or otherwise, in numerous surveys and data gathering exercises. The DfEE, for example, is continually collating, amongst other data, statistics on schools, teachers, pupils, examinations and social groupings of pupil families. The University of Keele holds a database of 35,000 pupil survey responses to questions concerning their education. Health checks take place on schoolchildren regularly, but home-educated children, once they are out of the system, are not involved in these automatic medical check ups; thus, medical data on children does not normally include the home-educated children. The above, adds up to a system in the UK whereby monitoring of children is, debatably, far from adequate.

1.6 LOCAL EDUCATION AUTHORITY PERSPECTIVES

Petrie (1992) investigated the relationship between home-educators and LEAs. She wanted to document the various LEA procedures and suggest guidelines for future LEA/home-educator interactions. Petrie interviewed LEA officers to assess their personal experiences and also gathered questionnaire data from 83 UK LEAs (a response rate of 69%) with a view to ascertaining LEA practices and attitudes towards home-educating families in the UK. She established that the improvements LEAs wanted were:

- an increased awareness of home-education by their officials

- the effective monitoring of education at home.

Petrie (1992) found that in terms of evaluating a family's educational situation, most LEA's rated the happiness of the child as most important, followed by an estimation of the parent's ability to teach, the maintenance of a record of current work and the parental attitude to the child's integration with peers. Parental qualifications, social background, the child's ability and current academic attainments were seen as less important. Petrie (1992) found that generally speaking, LEA's believed parents chose to home-educate because they believed that they could provide a better education for their children than a school could, or because the parents were dissatisfied with existing school provision; of the forty-seven LEAs replying to a question on this topic 38% believed that religious motives were often behind the decision to home-educate. Whilst both religion and ideology were seen as strong motivators, child giftedness, demographic issues, psychological problems and special educational needs were seen as less decisive factors in families' home-educating. Petrie (1992) concluded that amongst LEA staff, misconceptions about home-education stemmed from a lack of understanding rather than from a straightforward disregard for non-school alternatives in education. However, there was little evidence to suggest that LEAs were implementing remedial policies. Finally, Petrie argued that a clearer definition of an 'efficient education' should be formed and that the DfEE should ensure that LEA's were better informed about home-education[16].

Bates (1996), an LEA employee, was commissioned to investigate the LEAs' role in home-education in order to identify good practice amongst the LEAs and produce good practice guidelines. Using a questionnaire, he surveyed 108 English LEA's (his return rate was 35%). Bates' data showed almost equal numbers of boys and girls. Having proposed that parents would be more likely to homeschool their children only until eleven-years-old, he found 52% of the children in the sample to be over twelve-years-old.

All LEA's whose catchment area included over one hundred home-educated children said that they divided their time between monitoring and advising home-educating families, whilst other LEAs with under a hundred home-educated children tended only to monitor home-education. Home-education was considered ineffective by 38% of LEAs responding to a related question: Bates attributed these negative evaluations to a lack of understanding of home-educators' aims, by LEAs. According to Bates, the LEAs who considered the home-education option as synonymous with parents renouncing their responsibility for ensuring their children's attendance at school, either ignored home-educating families, pleaded lack of funds as a reason for not monitoring them or co-operated with families only where there was an intention to return the child to school: such authorities responded to home-educators by hindering them with bureaucratic procedures. Bates considered that since metropolitan LEAs were unenthusiastic about home-education, this could be attributed to the smaller numbers of home-educating children within their boundaries than within the boundaries of the county authorities, who with greater numbers of home-educated children to deal

with, had more experience with home-educators, leading them to intensify their understanding of home-educators' motivations and actions. Bates discovered that LEAs varied considerably in their attitudes towards home-educators and that their policy, or absence of policy had been formulated according to criteria that varied between LEAs.

Promotion of good practice could be implemented, he concluded, by:

- better communication;
- home-educators receiving two visits from the LEAs:

  -one by the educational welfare officer,

  -and a second by an education advisor to assess the education received and given;
- a request that families describe their educational aims prior to the LEA visit;
- documentation provided by the LEA in plain English;
- LEAs striving for good working relationships with home-education support organisations.

Bates described families who did not follow an educational programme based around a pre-determined curriculum, as 'weak', further concluding that LEAs should ask families for this information. However Bates omitted to consider, as Petrie (1992) had proposed, that it is just such demands that lead to conflict.

1.7 SUMMARY

This chapter has briefly reviewed some of the difficulties associated with defining home-educators and calculating their numbers; however, it has been established that home-education is legal, subject to criteria specified by law (i.e. procedure for withdrawal from school), and LEA inspections of home-educating families are not compulsory. Furthermore, home-educators in England and Wales need not inform anyone of their decision to home-educate, although in Scotland, parents must have permission from the education authority before they can withdraw their children from school. Whilst the legislation uses some ambiguous wording, the large numbers of children outside school might contribute towards making any tightening up procedures difficult.

1.8 CONTRIBUTION OF THIS THESIS TO THE FIELD

This thesis seeks to build upon what is known about home-education, and in doing so complements the work of UK home-education researchers such as, Thomas (1998), Meighan (1997), Lowden (1993), Petrie (1992), Webb (1990) and Blacker (1981). The thesis examines home-education by employing a methodology that has not previously been incorporated into home-education research, that is, a methodology combining questionnaire data from parents, with educational and psychosocial assessments of children. These are supplemented with data from preliminary analyses of interviews with families. The aim is to provide a robust view of home-education today.

It was important to establish whether children learning at home were able to attain the academic standards of schoolchildren and explore how, in the absence of formal school structure they coped, academically, socially and psychologically. In terms of reading and mathematics particularly, the thesis seeks to evaluate the importance of age-related expectations and the value of acquiring such skills in the context of home-education. The value of testing beyond the school gate was also a source of investigation. It was necessary to explore the psychological effect of home learning upon the children and their families, and important also, to establish what, if any, were the social consequences for home-educated children.

The thesis used home-education as a catalyst through which it might be possible to conceive of non-institutional methods of education in a commercially, industrially and technologically advanced society. In effect, the home-education sample would be a control group, contrasting with the majority of children, educated at school. Home-education remains the most accessible method of learning available in many families, communities and societies internationally, particularly for primary aged children. Thus it was anticipated that this study would provide insights into whether home-based education was an acceptable, or even advantageous, addition to mainstream educational practice. In summary, the value of this thesis is not only in the light that it casts upon children educated at home, but also in its relevance to the broader applications of learning.

Introduction Endnotes

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[1] However, LEAs can apply for a compulsory attendance order if they can show that education is not taking place (Lowden, 1993; DfES 2001a).
[2] Former Special Professor at Nottingham University.
[3] LEAs often use the term 'approved' to described families they have visited and whose home-education they have been satisfied with even though LEA permission is not necessary unless the family lives in Scotland or has children with SEN statements (SEN statements specify educational provision for 'statemented' children and LEAs need to approve any changes to statements.)
[4] Telephone conversation between P. Rothermel and G. Anderson, Traveller Section Department for Department for Education and Employment, January 5th 2000.
[5] As at 1999.
[6] The UK Government agreed to be bound by the Convention in 1991
[7] The child is granted 'leave' under the Education Act 1996, S444 (3-5), not to attend some classes. This practice is adopted because the Education Act 1996 states that part-time schooling is not legal. In 2000 this became more flexible, at least at secondary age, with the adoption of the Social Inclusion Policy (see Circular 10/99 Social Inclusion: Pupil Support, DfEE, 1999). Legislation (section 112 of the School Standards and Framework Act 1998) enables 14-16 year olds to participate in schemes of work experience.
[8] OFSTED (1996) believe the total number of traveller children, registered and unregistered, to be closer to 50,000).
[9] The DfEE state that the definition of a 'suitable education' is the responsibility of each LEA (telephone conversation with a DfEE officer 27 February 1997).
[10] Petrie (1992) found that in 1988 that there were 1,693 home-educated children within 83 of the LEAs across the UK; Lowden (1989), estimated that there were 2,300 in the 61 LEAs in England and Wales that responded to his survey; Bates found that amongst 34 LEAs in England, there were 1,669 known home-educated children.
[11] The DfEE does not collect data on the under 2s but the figure of 750,000 holds fairly constant as the population figure for each year group from 0-17: hence an estimation of 3 x 750,000 (0-2yrs), plus aged three to four 40% of children (DfEE 1997) are still based at home as opposed to a formal setting (ONS 1995) (thus, 300,000 x 2) creates an estimate of 2,850,000 0-4 year olds not placed in nurseries, playgroups or pre-schools etc..
[12] 750,000 per year x 18 (0-17) = 13,500,000 children and 2,850,000+ 560,000 = 25.25%
[13] The DfEE does not collect data on the under 2s but the figure of 750,000 holds fairly constant as the population figure for each year group from 0-17 (DfEE 1999): hence an estimation of 3 x 750,000 (0-2yrs), plus, at aged three to four 40% of children are still based at home as opposed to a formal setting (ONS 1995) (thus, 300,000 x 2) creates an estimate of 2,850,000 0-4 year olds not placed in nurseries, playgroups or pre-schools etc. and therefore, 750,000 per year x 18 (0-17) = 13,500,000 total children and 2,850,000+ 560,000 = 25.25% of that total.
[14] Depending on whether the children remain in full time pre-university education.
[15] Following birth and registration for Child Benefit, the Child Benefit Agency do not systematically enquire whether children continue to live in the UK. They pay Child Benefit, often directly into a bank account, with only occasional spot checks on selected claimants.
[16] The DfEE do, however, publish home-education information on their website.

CHAPTER 2: LITERATURE REVIEW I: A review of home-education research

Chapter 1 set out the parameters for home-education in the UK and this chapter, the first of a two chapter literature review, moves to provide an overview of previous home-education research from both the UK and the USA.

2.1 QUESTIONNAIRE DATA ON HOME-EDUCATING FAMILIES

Lyman (1998) reported that North American federal government household surveys have begun including questions on homeschooling numbers, thus opening the way for more to be known about homeschoolers generally. In the UK, the 2001 Census, for the first time, asked questions that might reveal data on home-educated children[1]. LEAs in the UK usually send questionnaires to home-educators as and when they hear about them but there is not as yet any systematic collating and sharing of information on home-educators[2]. The information that is available from surveys of home-educators consists in the main, of feedback in the form of qualitative narration (e.g. Muckle 1999), or data relating to North American homeschoolers (e.g. Rudner 1999) although there have been attempts, albeit less recently, to collect quantitative data (e.g. Grant 1983, cited by Webb 1990) in the UK.

2.1.1 NORTH AMERICAN QUESTIONNAIRE SURVEYS OF HOMESCHOOLERS

Following analysis of 312[3] questionnaires Gustavsen (1981) suggested that moral issues were the main reason to home-educate, followed by character development, a desire to avoid competitiveness and ridicule, the poor quality

of education in schools and the desire to enjoy the children at home. Gustavsen found homeschooling families, most typically: consisted of two adults and two children; came from diverse religious backgrounds; lived in rural areas; had access to learning resources; had an annual income between $15 and $20,000; included parents with 1-3 years of college each; included a mother at home; and had a father working either as a professional or in a skilled occupation.

Gladin (1987), based on questionnaire responses from 253 families[4] found that, in general, parents were college trained with above average incomes, the mother was the primary teacher and the family held religious convictions. Parents wanted to control what their children learned and both they and the children were satisfied with the home-education given and received: the homeschooling day averaged 6.06 hours per day. This latter finding accords with the Washington Department of Public Instruction 1985 finding that 56% of home-educators in their survey spent 20-30 hours a week in directed[5] activities: the WDPI further reported that 14% of known home-educators were of Hispanic, Black, Asian or Native American origin (Van Galen and Pitman 1991).

Rakestraw (1987) distributed questionnaires to 60 homeschooling families in Alabama[6]. Her purpose was to compare achievement between groups of homeschooled children, based on gender and family background, and to identify the characteristics of these families. Academically, Rakestraw found little difference between the homeschooled and traditionally schooled

children. In terms of characteristics, she found that 98.3% of the main home-educators were female and 71.7% of main educators had some college education with 31.7% having completed 4 years of higher education. Only 3.3% had received no education beyond school[7], 73.3% were not certified to teach. In 96.7% of families the father earned the main income, whilst the mother was the main earner in just 1 family (1.7%). The most frequent wage earning occupations were, Engineer, Business Manager, Salesman and Minister. All the families consisted of 2 heterosexual parents and most were Caucasian (96.7%) with 4-6 children (90%). The largest group of families lived in suburban areas (48.3%), with 13.3% living in urban locations and 8.3% rurally. Rakestraw found that 91% of the families were religiously affiliated[8]. Day-to-day issues were identified: 41.7% of families home-educated in the kitchen, 26.7% used a special classroom area, 11.7% the bedroom and 8.3% the sitting-room; 20% studied up to 2.5 hours daily, 60% up to 4.5 hours and 18.3% up to 6.5 hours although 65% of the sample said that only a very small proportion of the day (up to 2.5 hours) was teacher directed. Just two families stated that they did not follow a daily plan. The families tended to make use of a wide variety of resources[9]. Instructional techniques varied with over 80% referring to field trips, direct instruction, oral work, one-to-one tutoring, household work, informal discussion, silent reading and crafts and hobbies; other methods mentioned were, projects, peer tutoring and learning centres. Evaluation was by observation (90%), grading (76.7%), Scholastic Assessment Tests (SAT®)[10] (71.7%), published tests, unpublished tests, self-evaluation and diagnostic tests. Within 76.7% of families there were no plans for the children to go to

school although 65% of parents wanted their children to achieve a college degree. The nine most popular reasons for homeschooling were as follows[11]: it was the parent's responsibility to educate the children; to avoid negative peer influences; to control the instructional materials used; to preserve the child's natural instincts; to provide discipline; to retain religious freedom in education; to ensure a warm and loving environment for the children; an opportunity to instil religious, spiritual and moral values in their children; and to maintain a close relationship with the children whilst young.

Mayberry (1988) also analysed the reasons that parents opted to home-educate, finding that 65% of the sample returning questionnaires reported that they had been motivated to homeschool by religious values. Academic achievement was the main concern of 22%, social development the concern of 11% and just 2% of respondents were driven by idealistic values. Mayberry found that home-educators could be classified as either religious (65.2%), academically motivated (21.6%), social-relational[12] (11.1%), and new age (2.1%) (Taylor 1993). Mayberry (1991) found the 'Religious' and 'New Age' families to have ideology in common, in that both home-educated in order to preserve their way of life.

Mayberry, Knowles, Ray, and Marlow, (1995) distributed questionnaires to legally authorised homeschoolers in three American states, resulting in a 25% response rate. They concluded that the homeschooling movement expansion is a response to increasing criticism of state education, growing through the sophisticated networking that now occurs between home-

educating families. Networking, they conclude, can resolve concerns about isolation and to an extent demolish the argument that homeschooled children become socially handicapped. Fifty percent more homeschooling parents than state schooling parents were college graduates and 63% of the mothers were responsible for 90% of the homeschooling. Parents felt that they were more able than schoolteachers in educating their children. Home life was stressful for the mother because of the interruption to normal routine that arose as a result of the children being continually at home and, particularly so if the family followed a time-table or simulated school. Families taking a holistic approach where learning was an extension of normal life were less stressed: physical, academic, psychological and moral development was central to the families' activities and to these parents' teaching. Support from family and friends was essential. The majority of parents also wanted access to academic courses in school and to extra curricula activities. Flexi-schooling, described in Meighan (1988a) was an educational model that appealed to many families. Generally, homeschooling families shunned bids by authorities to organise their educational programme. Families were often absorbed with the gathering of resources, preferring to search outside conventional sources.

Ray (1997) (n=5,402) found homeschooling fathers to be most commonly working as accountants, engineers, professors, lawyers and small business owners. Further, Lyman (1998) reported on a Florida Department of Education survey finding that in Florida, 42% of homeschoolers (n=695[13]) said they homeschooled because of school-related concerns.

Rudner (1999) conducted a survey of 11,930 homeschooling North American families. He found that the parents tended to have a more formal education than those in the population generally, i.e. 66.2% of fathers and 56.7% of mothers[14], had a Bachelors degree and above, and that they had significantly higher incomes than the national average. Most of the homeschoolers (97.2%) lived in married couple families and 33.5% of families had more than 4 children (as opposed to the 6.1% national average).

Whilst the US studies provide a context to the current research, their limitations should be noted, namely, many of the samples do not represent homeschoolers at a national level (ie. Mayberry et al. 1995, Rakestraw 1987, Shyers 1992) and studies often rely upon information from organised and legally authorised homeschoolers (ie. Mayberry et al. 1995), often with religious affiliation (eg. Ray 1991, 1997). There is little US research involving secular and ethnic minority families or research focusing on the qualitative experience of parent and child homeschoolers there. The overarching concern to be considered from the US research is the reliance upon data from middle-class white religious America (NcfES 2001).

2.1.2 British Questionnaire Surveys of Home-educators

Following the distribution of her questionnaire through the 'Education Otherwise' newsletter in 1983, Grant received 173 replies from home-educators (Webb 1990). She found that 74.5% of parents had been concerned with the moral and social attitudes prevalent in schools; 36.42%

of parents believed that they could educate their children as well as school; 34% were motivated by a desire for an alternative lifestyle, 31.7% of respondents' children had experienced difficulty in school and 15% were motivated by religious values.

In 1995 Paterson conducted a postal questionnaire survey of Scottish Grampian home-educators, identifying 35 from a possible 50 families in the region and obtaining responses from 28 families. She found that the three main reasons for home-educating were dissatisfaction with school, a belief that the parents were the best placed to provide an education, and religion. Most of the families did not have a set structure or routine to the day and were willing to negotiate with their children over the timing and content of their learning.

Brunton (1996) also undertook a questionnaire study of 20 Scottish families[15] in order to establish their motivation to home-educate and families' attitudes towards the Internet. Parental reasons for home-educating were religious and moral (20%); because the parents had their own 'value system' (20%); because they did not like school (15%); they objected to school's emphasis on technology (10%); and one family home-educated because they came from overseas (5%)[16]. Modern technology was used by 55% of families but disregarded by 25%: 70% said they would or did, use the Internet, whilst 10% said they would not. Asked what they wanted from the Internet, 70% said they valued its accessibility to resources and people, 65% said it was

useful for information and 55% wanted access to journals and books through the Internet. Brunton concluded that the Internet alleviated isolation.

Dix (1998) used a questionnaire survey to compare schooled and home-educated teenage girls[17]. She found that whilst 'fitting in' was an issue for home-educated teenagers whose behaviour was in some ways similar to schooled teenagers, there was no evidence that they minded being 'different', some even relishing that difference. She also cited possible evidence that the cost of home-education in terms of the loss of one income impinged upon the children's dress style, with the home-educated children being more likely to purchase their clothes in second-hand shops than fashion shops[18]. It was conceivable however, that the home-educated children's standards of dress resulted from their 'different' values and or, from their lack of exposure to school-based social pressures.

Muckle (1997) collated information from 20 members of 'EO'[19] who returned questionnaires during 1996/7. Rather than analyse the data, Muckle chose to organise and present it as a compilation of responses from children and their parents. Her research therefore provided an unusual insight into the experiences of these families. Muckle found that, together, the comments illustrated the diversity amongst home-educators, concluding:

> 'The experiences vary and sometimes contradict each other, just like life.'
>
> Muckle (1999)

2.2 INTERVIEWS WITH HOME-EDUCATING FAMILIES

In recent years, there have been a number of UK studies involving interviews with home-educators (Blacker 1981; Webb 1990, 1999; Lowden 1993; Page 1997; Thomas 1997 and 1998) besides a number of overseas studies, for example, Taylor (1993) and Knowles (1991).

Blacker (1981) represents one of the earliest studies of home-education in the UK and remains one of the most comprehensive. Blacker interviewed 16 families[20] to ascertain whether Kitto's[21] categorisation of home-educators into one of three groups, 'Competitors', 'Rebels' or 'Compensators', would be supported. Kitto had proposed that 'competitors' were competing with the system, 'rebels' rebelling against it and 'compensators' trying to make amends after a problem in school. As a result of the interviews, Blacker concluded that members could indeed be classified into these three categories:

- 'Competitors' were formally qualified, well read parents, who were competing with school to give their children a better education; often, such parents had made the decision to home-educate before the birth of the children, believing that learning begins at birth; the child centred curriculum was balanced and private tutors incorporated as necessary, together with participation in events attended by other similar minded families.
- 'Compensators' agreed with the philosophy of school but had taken one of their children out of school for a specific reason and were attempting to make up for the school's failure with their child: seven of the ten

'Compensators' in Blacker's study intended returning their children to school and each of these families considered that their situation was unique.

- 'Rebels' were those parents who had chosen an 'alternative' life style, they were concerned for their individual freedom and rejected social institutions; they believed education should be autonomous and that a parent's role in education was to facilitate learning: such notions were a source of friction with the local education authority.

Blacker classified five families as 'Competitors' and one family as 'Rebels'. Despite a sample size that prevented in-depth exploration of families within these categories, Blacker's research revealed an unusual insight into home-educators' motives during the 1980's. Contrasted with later studies, (i.e. Webb 1990; Knowles 1991; Knowles and Muchmore 1995; Lowden 1993) Blacker's categories appear over simplistic: it may be that home-educators' motivations have become more complex in the 1990s or that contemporary researchers have far wider access to a larger and more diverse cross-section of home-educators than was the case for Blacker 20 years ago, as can be inferred from the work of Thomas (1998).

On the theme of classification, Webb in 1988 (Petrie1992)[22] concluded that Blacker's categorisation of UK home-educators was inappropriate. However, Webb's (1990) case studies appear to classify their reasons for home-educating into categories broadly sympathetic to Blacker's.

In 1991 Van Galen (Van Galen and Pitman 1991) divided North American homeschoolers into two groups, 'ideologues' and 'pedagogues':

- 'Ideologues' object to what is taught in schools and seek to strengthen intra-family relationships: they hold traditional, conservative and specific values, following a philosophy of Christian fundamentalism. The reasons that 'Ideologues' turn to home-education may be as a quest for an alternative to school, for health reasons, academic difficulties or because they disagree with the curriculum taught in school. These reasons then shift, however, as they meet with other homeschooling families and absorb a shared philosophy, coming to believe they are following God's will by accepting an imposed responsibility for their children.
- 'Pedagogues' have educational reasons for homeschooling: school teaching is viewed as inept and the parents want to foster a broader interest in learning. 'Pedagogues' hold teaching skills and read up on education and child developmental issues: they tend to see homeschooling as symbolic of independence and as way to avoid the inefficient, non-professional bureaucracy of society. Although their reasons for home-educating may be similar to the 'ideologues', some 'pedagogues' may never have experienced difficulties with institutionalised schooling, believing that children learn in unique and natural ways, and that they are 'claiming' responsibility for their children as opposed to the 'ideologues' idea of 'accepting' it. 'Pedagogues' publicly proclaim their competence at educating their children without interference from institutions.

'Ideologues' follow structured learning routines whereas 'pedagogues' follow a child-led curriculum, using household resources in self directed, individual learning. 'Pedagogues' take a light-hearted view of opposition to their decision to home-educate and feel less need for support groups. The opposite is true of 'Ideologues'. Van Galen's 'pedagogues' and 'ideologues' equate loosely with Blacker's 'competitors' and 'compensators', albeit without the religious intent, and therefore can be raised in support of her theory of home-educator 'types'. Conceivably 'rebel' home-educators do not exist in the United States, but it is more likely there were no such families in Van Galen's study. The categorisation of home-educators is questionable; sample characteristics may vary, but within and between national cultures there may be many more 'types', with new ones emerging, or there may be no such clearly definable types at all.

Webb (1990) focused on home-educated children above 14 years of age, conducting twenty interviews with twenty families, each interview lasting two hours. Most of Webb's sample self-selected in response to a request in the 'EO' newsletter. Webb expected to find families motivated to home-educate by the writings of Ivan Illich, John Holt, Freire, Ian Lister and Roland Meighan, and that ideological values along with a quest for an alternative life style, lay behind decisions to home-educate. These expectations were probably based on the influences that had subsequently led her to partially home-educate her own child and also upon Grant's questionnaire returns in 1983 (Webb 1990 p.35). Webb pondered the profound influence which she believed Holt to have had on contemporary home-educators; however, only

two of her study's twenty families appear to have mentioned Holt at all, leading Webb to hypothesise that the other eighteen families were perhaps, 'untypical of home-educators generally'. Her support for this theory is taken from a 'casual reading' of the 'EO' literature, citing particularly the 'Aims'[23] of 'EO'. Van Galen and Pitman (1991) describe networks, such as 'EO', as self perpetuating bodies with primary motives displaced by group attributes[24]. Displacement of parent's initial reasoning as the group influence is absorbed, is possibly one reason why Holt appears to have been a major motivating influence on home-educators: whilst most members of 'EO' may have heard of John Holt, only a very few would name him as an initial motivation or even have heard of him before joining 'EO'. Perhaps there are parents turning to home-education who initially had no philosophy beyond feeling that their children, for whatever reason, would benefit by not being at school.

Writing in 1990, Webb made scant reference to the religious groups who may account for such a large proportion of home-educators today[25]. She found little to suggest that parents used their children's educational curriculum to promote their own ideals, suggesting, however, that this might be the case with the 'American fundamentalist-style parent, home-educating for religious reasons, who is becoming evident in the UK'.

Webb (1990) found that the two main reasons for home-education amongst her sample were an interest in alternative education and school based problems; a number of home-educated children in her study had suffered

psychologically from previous attendance at several schools, sometimes being labelled as 'maladjusted'. Meighan (1995) supported Webb in this observation. Yet other children, those who had spent part or all of their education outside school, felt they were victims of ostracism by their schooled peers. Many of the parents in Webb's study would have preferred an alternative school such as Steiner, had such a school been accessible to them. Some parents saw home-educating as a compensation for their not being able to pay for private school education. Although not stated, Webb inferred that the parents who home-educated because they wanted total responsibility for their children and to spend as much time as possible with them, were in the minority. Webb discovered, that eleven of her twenty families had at least one parent who was a teacher: she held that amongst the home-educators who did not join 'E.O.' there would be even more, the teachers having less need to join a support group. Webb conjectured that children learning at home experienced true involvement in directing their learning and concluded that more people would home-educate if they knew this to be a legitimate option.

Lowden (1993) studied the scope and implications of home-based education and included interviews with twenty-two families from England and Wales, all 'EO' members who had publicised themselves in some way. Eight of the selection were teachers and Lowden perceived them as interesting cases for further study, having made a different choice for their children to that made for children in their daily working life. From the interviews conducted and from his own previous research, Lowden believed that most families made

their decision to home-educate when their child was around five years of age rather than at birth or from philosophical reasoning. He found generally that parents home-educated as a response to difficulties their child was facing at school, although an important concern was a dissatisfaction with the values of schools and the loss of control over their child's educational experiences. He further surmised from a reading of 'EO' literature, that 20% of the children in home-educating families in England and Wales have special educational needs. Lowden concluded with a suggestion that home-educating families might be categorised as either Ideologues or Pedagogues, categories broadly similar to those of Van Galen (Van Galen and Pitman (1991); although discussing Kitto's three classifications, Lowden considered families to be transient, moving between those categories.

Taylor (1993)[26] spent over 100 hours studying three Christian households in the USA, finding that whilst traditional academic outcomes could be replicated in the home, the introduction of such objectives inhibited some of the finer qualities of home-based learning. She surmised that school-style 'testing' introduced a philosophy at variance with Christian family values and that the tasks set in schools carried little merit in the home. Taylor further determined that family life organised around 'school' at home was at the cost of richer, more productive pursuits. Despite finding varying degrees of school replication in the four homes visited, Taylor concluded that above all, there was a 'family closeness' unchallenged by the demands of school and peer pressure, and the opportunity for families to access 'rich educational experiences'. Page (1997) interviewed twenty Christian families, the majority

Catholics, exploring mothers' and fathers' reactions to home-education and the effect on the children of the individual attention received. He perceived the children to be academically competent and found the families to be close, with far more involvement from fathers than might ordinarily be the case had the children been at school.

Thomas (1997, 1998)[27] described an investigation of children's informal learning processes. The research used home-education as a vehicle upon which to base theories of children's informal learning that could not be so well tested with schoolchildren. Thomas challenged the view that school age children need to be taught in order to learn. One hundred interviews with home-educating parents in Australia and the UK were conducted with parents describing how they taught their children and how the children learned. Thomas found that over time, most home-educating families adopted less formal learning patterns than those originally initiated. He attributed this change to a manoeuvre by the children, possibly without conscious intent, to orchestrate a learning programme to suit their needs: just as the parents of young babies respond to signals from their infant, home-educating parents were seen to take cues from their children beyond school age and in more advanced learning situations, avoiding the necessity for formal teaching. Thomas hypothesised that on entering school, children lost the art of informal learning, at least to the degree experienced by children who had not been at school. The type of learning that occurred naturally was very different from that of school; the children at home were able to freely follow streams of thought that linked in with everyday life and

although this learning style was slow and not always apparent, links were gradually made that showed themselves at a later date. Thomas observed that even in formal home learning, topics of interest were allowed to surface and be discussed that did not necessarily relate to the lesson being addressed at that time. In this way children developed a motivation for independent learning. Thomas did not deny that schoolchildren also learn in this way, but that children might not *need* to undergo the style of learning normally associated with schools. Thomas concluded that intellectual development, particularly during early years, might happen naturally and incidentally without formal learning and moreover, if such an education was not better than school learning, it was at least equal to it.

Thomas' findings appeared to expound the scaffolding and social constructivist theories of Bruner and Vygotsky. Thomas believed that the natural learning he observed was not happening in isolation but was the result of interactions, some level of intervention being necessary, at least to facilitate the learning that enabled developmental unfolding and maturation. This viewpoint is echoed, for example, in Thomas (1998 pp 71, 129).

Webb (1999) interviewed twenty adults who had formerly been home-educated, with the aim of establishing how such children had developed. None of the young adults was unemployed, three having graduated from Oxford University. Only about 30% of the sample contemplated home-education for their own children; a finding that contrasts with that of Knowles (1991) who found that the 10^{28} adults he interviewed (all themselves

homeschooled as children), who had become parents (n=7[29]) had all chosen to homeschool their own children. The grandchildren of one participant were currently being homeschooled, creating a third generation of homeschoolers. Webb, however, explained that many of her sample believed that their parents had made 'sacrifices' that they in turn, would not wish to make. The sample were positive about their home-education, believing themselves to have benefited from the experience. Socially, Webb found, as did Knowles (1991), that the home-educated were at ease with a broad cross-section of the community; she described their social skills as 'often very exceptional', finding too, that the home-grown home-educated sample were independent thinkers.

2.3 SUMMARY OF THE US AND UK RESEARCH ON HOME-EDUCATORS

The above research suggests home-educators to be a very diverse section of the community and one that is, perhaps, difficult to segregate into 'types'. Earlier attempts to identify classes of home-educators (e.g. Blacker 1981) have been supported, indirectly, by Van Galen (Van Galen and Pitman 1991) and Lowden (1993), despite some criticism (e.g. Webb 1988).

Literature Review I Endnotes

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[1] Question 5 asked, 'Are you a schoolchild or student in full-time education?'. Analysis of results from this question compared with date of birth information for those under 16, may provide data about the numbers of children who were not considered by their parents to be either 'schoolchildren' or 'students'.
[2] Although Bates' (1996) reported LEA procedures with home-educators (Bates was an LEA Officer).
[3] A return rate of 70.8%.
[4] Questionnaires were randomly sent to 6,850 families.
[5] Activities directed by the parent.
[6] She suggests that there were between 450 and 2,000 homeschooling families in Alabama.
[7] Middle/Junior.

[8] But no Catholics or Jews.
[9] Workbooks (95%), children's literature (88%), textbooks (86.7%), reference books (83.3)% household objects (80%), art supplies (75%), learning games (68.3%), newspapers (55%), chalkboards (50%), audio-visual material (43.3%), bulletin boards and learning charts (35%), manipulatives (20%), displays (16.7%) and microcomputers (6.7%).
[10] State School tests published by The College Board, New York (The College Board 2000).
[11] In order and in each case having been cited by over 70% of families.
[12] 'Social-relational' families believe children are better off at home, socially and developmentally.
[13] This is the 31% that, by August, had returned the questionnaire forwarded to 2,245 homeschool families.
[14] As opposed to 24.1% of fathers and 20.6% of mothers nationally in North America (Rudner 1999).
[15] Brunton established from the Department of Education in Scotland that there were a total of 746 children learning outside school (of which only 235 were described as 'home-educating'). This number conflicted with the 350 Scottish families in Education Otherwise.
[16] 2% did not respond to the question.
[17] Dix, 1998: n= 48 aged 12-17 (19 questionnaires from schoolgirls, 5 from girls home-educated in the past but now attending school, 13 from those home-educated all their lives, and 11 from girls previously in school but now home-educated).
[18] The school cohort preferred to purchase their clothes in fashion shops.
[19] Education Otherwise
[20] Blacker selected the families from amongst those who responded to a questionnaire that had been administered through 'E.O.' to its members (4-600 at the time).
[21] Dick Kitto was a founder member of 'EO'. He named these categorisations during a taped interview for the Open University (Webb 1990).
[22] Webb (1988) relates to a PhD thesis unavailable for loan but cited in Petrie (1992).
[23] The Aims are generally carried on the front inside cover of the 'EO' newsletter. However, these 'Aims' make no reference to Holt and there is no reason for anyone to suppose the aims represent anything more than the thoughts of the 'average' British home-educator. 'E.O.' supports the publication of Holt books and this may have lead Webb to suppose members of 'E.O.' were influenced *en masse* by Holt.
[24] Usually in the USA, religious.
[25] According to conversations with various LEA's and with Dr Petrie who estimates that these groups may account for up to 40% of British home-educators.
[26] Taylor is British and now lives in the UK.
[27] Thomas (1997) was a summary paper relating to the later publication by Thomas (1998).
[28] Knowles mailed 327 questionnaires to homeschooled adults in the USA and Canada, receiving 53 responses of which 46 agreed to an interview and a subset 10 were actually interviewed.
[29] Seven of the adults home-educated approximately twenty children.

CHAPTER 3: LITERATURE REVIEW II: Children's educational and psycho-social development

This chapter expands upon the previous chapter by exploring some of the issues that are relevant to a study of home-education. More precisely, the chapter reviews some of the literature relating to themes highlighted by this research.

3.1 CHILDREN AGED 4 - 5 YEARS[1]

3.1.1 THE FIRST YEAR AT SCHOOL

The performance of children during their first year at school is said to predict their later development. Pederson, Faucher and Eaton (1978) found, by 'backtracking' through school report cards, a correlation between one group of children's academic attainment and the boost they had received from the 'exceptional', reception class teacher they had all shared. Further evidence from Tizard, Blatchford, Burke, Farquhar and Plewis (1988) has suggested that progress during the reception year is greater than that associated with other years and that early high achievers retain their lead throughout their early schooling. Interestingly, Tizard et al. (1988) also found that teachers were more responsive to the children to whom they were most partial. Riley (1996) cited research by Mortimore, Sammons, Stoll, Lewis and Ecob in 1988 that concluded, as did Thomas (1994), that the first year at school (at aged 4.5 years) constituted a powerful influence on the children (cited by Riley 1996).

3.1.2 BASELINE RESEARCH AT THE UNIVERSITY OF DURHAM

Tymms, Merrell and Henderson (1997) also concluded that the initial year at school is the one where pupils make the greatest advance in learning. They claimed that prior to their research project using the Performance Indicators in Primary Schools (PIPS) Baseline assessment, other such assessments had failed to recognise the predictive value of the number of letters recognised by children, their early phonological skills and their maths ability. Evaluation of children's attainment in these areas at the PIPS 'Start' and 'End of Reception', according to Tymms et al. (1997), could be used to calculate children's value-added scores and thus predict the levels of attainment that might be expected for each child. A description of the PIPS assessment appears in Tymms (1999).

Table 3.1 illustrates the data produced by Tymms et al. (1997) with respect to their PIPS Baseline results. The 'End of Reception', 'Maths', 'Reading' and 'Total' scores demonstrate an increase over the 'Start of Reception' scores, thus indicating the progress that children made during their school 'Reception' year; an increment that Tymms et al. attribute to the effects of school.

TABLE 3. 1: DETAILS OF PIPS 'START' AND 'END OF RECEPTION' RAW SCORES (TYMMS ET AL. 1997)

n=1700	Mean	*SD*	Minimum	Maximum
Start Maths	20.7	11	1	46
Start Reading	14.5	10	1	47
Start Total	35.4	19	2	92
End Maths	39.3	14	1	86
End Reading	49.5	23	1	86
End Total	88.8	34	3	170
Age in June1995	5yrs 0mths	3.5mths	4yr 6mth*	5yr 5mth**

*One pupil was actually 4yrs 2mths
**Five pupils were actually 6yrs I mth.

Beyond the information displayed in Table 3.1, Tymms et al. (1997) found good correlations between the 'Start' and 'End of Reception' scores[2]. They described the 'Start Total' as a good predictor of 'End Maths' or 'Reading' (see Table 3.2).

TABLE 3. 2: CORRELATIONS BETWEEN VARIABLES[3] (FROM TYMMS ET AL. 1997)

n=1700	END MATHS	END READING	END TOTAL
START MATHS	**0.67**	**0.62**	**0.68**
START READING	**0.56**	**0.72**	**0.71**
START TOTAL	**0.67**	**0.72**	**0.76**

Tymms et al (1997)

Tymms et al (1997) reported that by knowing a child's starting point it was possible to make reasonable predictions on future attainment: however, there were other variables that affected performance and that whilst some of these differences could be accounted for, others could not. After dismissing testing procedures as a cause, variables considered were as follows:

- children's position on the 'achievement continuum' at the start of Reception;
- the school attended;
- where attainment is high, teachers teach to a higher standard so benefiting all the children in that group;
- pupil interaction stimulated performance and the quality of these interactions was more beneficial in schools with high pupil intake levels (this supports Rich Harris' (1995) conclusion that peer groups have a greater effect on development than any other factor);
- better schools attract more effective teachers.

Riley (1996), supporting Tymms, Merrell and Henderson's (1995) conclusions that pre-school attainment was more important than on-entry age, reported that by knowing children's baseline scores (relating to prior knowledge), she could predict with 80% accuracy the children whose reading would advance most quickly.

Reporting on gender differences, Tymms et al. (1997) found that 'End of Reception' differences in maths were negligible, whilst girls performed to a higher standard in 'Reading'. Similarly, progress in 'Maths', over the year, was similar for boys and girls whilst girls progressed more in 'Reading'. Tymms et al. also found that children from more affluent areas performed to a higher standard than their peers from less prosperous districts; however in studying progress, it was found that there was no correlation between affluence and 'Maths' attainment, and only marginal difference in the 'Reading'/affluence correlation ($p<0.02$).

The most interesting part of Tymms et al.'s (1997) paper was the belief that in comparing attainment between children who had not been to school and those of the same age who had attended for one year, the variance in scores signified that school made a 'massive difference' (in 'Reading' and 'Maths'). They reported that:

> '[...] it is hardly an unexpected finding to discover that teaching advances learning [...]. [...] For progress what really mattered was

> attendance at school, the pupil's prior achievements and the school that they attend.'
>
> Tymms et al. (1997)

The researchers had found that at the 'Start of Reception' with an age difference of eleven months across the group, there was approximately 18 raw-score points difference between the scores of the oldest and youngest children in the group (all assessed during the same period). By the 'End of Reception' the group progress scores (defined as the difference between the 'Start of Reception' and 'End of Reception' scores) measured approximately 60 points, thereby indicating an association between schooling (the children had by then spent a year at school) and the 42 marks (2 SDs) increase in scores[4]. Whilst Tymms et al. (1997) used these figures as evidence of the effectiveness of school there may, however, be other reasons why the progress score is greater than the score difference between the 'Start of Reception' oldest and youngest children. The apparent leap during the Reception year might be unconnected either with school effectiveness or with the extent of prior learning, but rather the result of the transition to school, suggested by Riley (1996) to be a traumatic experience for some children. Cleave, Jowett and Bate (1982), Bennett and Kell (1989) and Tizard and Hughes (1984) all described the upset that starting school can cause to children. It is conceivable therefore, that the transition to school impacts upon some children's baseline assessment scores (hence the large SD reported by Tymms et al. 1997 and Riley 1996) and that the 'enormous progress' found by Tymms et al. (1997) is, in fact, the result of artificially low

'Start of Reception' scores caused by the children's disorientation and acclimatisation to their new situation.

3.1.3 School Starting Age

Britain has one of the youngest starting ages in the world. Finnish, Danish and Swedish children's formal education starts at seven years of age (Hodges 1997), as do the children in 20 States of North America, whilst in Pennsylvania and Washington formal education is not legally initiated before eight years of age (Home School Legal Defence Association 2002). Although the legal school starting age in Britain is five, the reality is that many children begin much earlier than this, at four years of age, following many LEAs' policy of accepting 'rising fives', whereby a child enters school during the fifth year of life. North American children begin compulsory education 2, 3 or 4 years after their British counterparts, yet their nation is the world's leading economy (Funk and Wagnalls 1999). Aubrey, Tancig, Magajna and Kavkler (2000) and Aubrey and Godfrey (1999) found that the school maths performance of some continental children, who by reason of their country's later school starting age received less formal schooling than their English counterparts, was soon level with that of their English peers, thus implicitly questioning the relevance of British children's early induction into formal schooling. International comparisons of primary schoolchildren's academic performance have shown the UK to be a poor performer (Third International Mathematics and Science Study (TIMSS) 1995). The argument that the first year of school, at four to five years, does make a difference

(Riley 1996, Tymms et al. 1997) is somewhat weakened by such evidence or at least, might lead one to question the value of such difference.

3.1.4 Parents and Baseline Assessment

Deliberating over the usefulness of giving parents feedback about baseline assessment the PIPS Project (1996) proposed that such parental involvement might create a culture whereby children were 'prepared' for the test:

> 'Whilst it makes good sense to encourage strong links between the home and school and whilst there is good evidence to suggest that parental involvement in literacy programs can be beneficial it is not clear how baseline assessment might best involve parents. Some pupils come from very disadvantaged backgrounds – are we further to disadvantage them by such assessments?'
>
> PIPS Project (1996)

This view was clearly vetoed by government, as evidenced by the Qualifications and Curriculum Authority (QCA) endorsed statement in 1998[5]:

> 'The most important thing is that parents will be able to see what progress their children and the school as a whole are really making, because they have a base to work from.'
>
> Tim Coulson, quoted by Appleyard (1998)

Coulson appeared, however, to hold parents in low esteem:

> 'Often parents don't have a clear idea of what their children can do, how they can best help them at home, and how their children are doing compared to other children in the class.'
>
> Tim Coulson, quoted by Appleyard (1998)

Aubrey (1997) stressed the 'rich informal knowledge' that children bring into school: it is possible to infer from Aubrey's remarks that parents play a role in the gathering of such knowledge. Vindicating the view espoused by the PIPS Project (1996), Georgiou (1999), in a study of 473 11 year old children, explained how test results could negatively affect the way in which parents treat their children. Georgiou found that parental 'attribution-to-children' relating to external factors (e.g. exam pressures) could lead to children's underachievement. Georgiou described parental engagement as 'complex and multidimensional' with the children construing such involvement in a variety of ways. It appears from Georgiou (1999) that it is only when a child interprets the parental assistance as 'supportive', that there is a direct positive correlation with the child's academic performance: if the child believes that parental assistance is based upon doubts about the child's ability to cope, then the correlation becomes negative. Georgiou commented:

> 'Achievement results are offered as feedback to the parent and shapes her perception of her child's current achievement, which

sets in motion the involvement activities [...] and the dynamic cycle repeats itself.'

Georgiou (1999 p.426)

3.1.5 VALUE-ADDED

Describing value-added, the Department for Education and Skills (DfES) explain[6]:

'...the value added measure for an individual pupil is calculated as the difference between their output [end] score and the median output [end] score for all pupils nationally with the same or very similar prior [start] performance. [...] The median is the middle value - with half of pupils having an output score at or below the median and half at or above.'

DfES (2001c)

Put more simply, value-added is a measure of progress in the context of 'expectation'. Thus a child's value-added score measures the improvement of the child over a given time in relation to, say, national norms. The measure of 'as expected' performance depends upon the acceptance that the group from whom the 'norm' has been extracted, started off and were progressing at, an acceptable pace themselves. In this way, value-added is rather a strange measure, but perhaps no less so than any other measure whereby 'desirable outcomes'[7] are defined externally; hence the cynicism of Plewis and Goldstein (1997):

> 'We must assume that the White Paper[8] regards level 4[9] in 1996 as a standard that, in a properly functioning system, virtually all pupils should reach. If, therefore, level 4 is to be interpreted as having been set as a target, this raises the issue of how that was done and whether such a target can be maintained consistently over time.'
>
> Plewis and Goldstein (1997) p. 4

'Value-added' has been the 1990's 'buzz word' in education and compulsory baseline assessment rests upon the idea that such assessments will, by periodically realising data relating to children's attainments, become a tool to measure progress over time on an individual and group basis, besides informing on school performance. It has also been suggested that value-added informs school effectiveness (Saunders 1998); however, school effectiveness (i.e. the effectiveness of school) should also be evaluated by comparison with the effects of 'no school' and to date no such studies, in so far as this researcher has been able to identify, in this country, have been undertaken.

There are, it appears, severe limitations to the concept of value-added in the context of child assessment, for example, the 'major impact' of Reception class referred to by Tymms et al. (1997), may actually relate to the difference between the on-entry disorientation and subsequent 'end of Reception' confidence that affects many children, perhaps an effect of maturational

issues. Goldstein (1996) was sceptical of baseline assessments, believing that tests:

> 'Contain a large measure of unreliability since the first weeks at school are a period of rapid change for children. [...] the unreliability, however, also implies that these baseline assessments will be of limited usefulness for 'value added' school comparisons.'
>
> Goldstein (1996)

Nevertheless he did concede the value of knowing children's levels of attainment:

> 'Far and away the best predictor of how well a pupil will do at the end of Key Stage 2 is how well they were doing when they first entered the school, as measured by suitable cognitive assessments.'
>
> Plewis and Goldstein (1997)

Value-added is perhaps meaningless without an understanding of where individual children were at the start, and why. Individual target setting is decontextualised without such information since children may, for diverse reasons, be at different start levels and progress at different speeds and in a variety of directions. Speaking of target setting Plewis and Goldstein (1997) said:

> 'In reality, of course, there is no absolute criterion which determines what pupils will be able to do. At any age, in every educational system, there is a large variation among pupils and to use level [X] or any other level as a 'benchmark' involves a contestable judgement about what is desirable. To quote a figure of 6 out of 10 with disapproval is both unhelpful and strictly meaningless.'
>
> Plewis and Goldstein (1997)

3.1.6 Social Class Effects

It has often been suggested that social class affects educational outcome (Appleyard 1998). However, it has been argued (Plewis and Goldstein 1997; DfEE 1998b) that the correlation between prior learning and attainment is far greater than between socio-economic factors and attainment. Tymms et al. (1997) appeared to confirm both findings, establishing that whilst attainment was affected by class, progress was not[10]. Plewis and Goldstein (1997), referring to the relationship between poverty and attainment, accused the government of under-evaluating the consequences of poverty whilst creating an 'exaggerated impression' over the effects on attainment of differences between schools.

> [Government] downplay the well-attested and far-reaching effects of poverty, parental unemployment and poor housing on children's educational performance. The Literacy Task Force[11] states that 'whether children learn to read well is *a lottery* (our italics) in both

> advantaged and disadvantaged areas.' This is not the case. Chance plays only one part in whether and when a child learns to read: there are also systematic effects of social class, income, gender and ethnicity on children's attainments.
>
> Plewis and Goldstein (1997)

A powerful description of the effects of socio-economic class on attainment comes from Goldthorpe's (1996) discussion of social effects relating to school achievement[12], the 'cultural reproduction' theory:

> 'The educational system, as it functions within the totality of class relations, is seen not as means of utilising talent more effectively or of widening opportunities but rather as an agency of social control. Cultural reproduction, it is maintained, is necessary to social structural reproduction, and 'dominant' classes therefore use their power in order to ensure that schools operate in an essentially conservative way. This they do by imposing a pedagogy which requires of children an initial socialisation into the 'dominant' culture as a condition of educational success. Class differentials in attainment are thus created via the unequal endowments of appropriate - though in large part arbitrarily defined -'cultural capital' that children bring with them into the educational system; and they are maintained because schools do not seek to offset, but rather to exploit, such inequalities, albeit in the name of recognising merit.'
>
> Goldthorpe (1996 pp481-505)

This understanding of why social class correlates with poor attainment was further evoked by Galloway (1985 pp.128-135) in his description of the way in which one schoolgirl's 'decisions' were effectively, an illusion. The attitudes of those in authority towards her socio-economic background and boyfriend, amongst other factors, triggered their low expectations for her scholastic attainment and these expectations in turn limited the opportunities made available to her.

3.1.7 SUMMARY OF SECTION 3.1

It has been reported (Appleyard 1998) that by taking account of prior learning, baseline assessment would remove the class effect from attainment analyses. To an extent this has happened and whilst attainment still reflects class, progress does not (Tymms et al. 1997). Thus, the 'primary' effects descried by Goldthorpe (1996) are minimised where progress is the measure used. However, progress is not the sole gauge but is viewed in conjunction with on-entry level in relation to a standard 'norm'. Moreover, 'secondary' effects on children (Goldthorpe 1996), mean, as Galloway (1985) also inferred, that there is often a ceiling on the extent of poor children's attainment, a consequence of the education system itself and one that is difficult for individuals to overcome.

Whether or not baseline assessment was intended for government, parents, schools or for children, Tymms reported that between 1997 and 1998 the numbers of children amongst the PIPS samples that were able to write their names had doubled: a result, according to the British Association for Early

Education, of 'test influencing the curriculum' (Scott[13] quoted in Cassidy 1999).

Tymms et al. (1997) found evidence that the first year at school had a 'major impact' on children's numeracy and literacy. It is not clear from the research whether such an effect is true of all children starting school or whether this initial leap is connected only with the four and five-year-olds. The importance and relevance of this difference, as Tymms et al. reported, is difficult to assess since, as Aubrey et al. (2000) and Aubrey and Godfrey (1999) suggest, children who have not started school so early 'catch up' by the time they have been in school a year or so. From the evidence presented (e.g. Riley 1996) the fourth to fifth year of life, when spent in school at ages 4 to 5 years, does differ from other years, although this may be caused by the change in children's lives as they begin school (Tizard and Hughes 1984).

Coulson's remarks (Appleyard 1998) suggesting that parents faltered by not knowing the extent, in concrete terms, of their children's knowledge and his stressing of the desirability of observable progress in children's attainment, served to emphasise the point inferred by Aubrey and Godfrey (1999) that too little value is placed on the informal knowledge that children bring to school. Despite attempts to capture some of this knowledge (PIPS Project[14] 1997a, 1999) it is perhaps inherent in the nature of informal knowledge that it is difficult to assess (Thomas 1998 p. 80[15]). Moreover, judging by the content of the 'PIPS End of Reception' test (PIPS Project 1998a)[16] any value

placed on such informal learning at the baseline level has been replaced by the demands of the national curriculum.

3.2 LITERACY AND CHILDREN

3.2.1 LITERACY IN EDUCATION

Definitions of Literacy

Merriam-Webster (1999) described the terms 'literacy' and 'literate', unchanged since their Webster (1883) dictionary, respectively as:

> 'the quality or state of being literate' [literacy]
>
> 'educated, cultured: able to read and write: versed in literature or creative writing: an educated person' [literate]
>
> Merriam-Webster (1999)

Olsen (1999) cited the 1913 Webster definition of 'literate' as:

> 'Instructed in learning, science, or literature' and also as, 'one educated, but not having taken a university degree'.
>
> Olsen (1999)

Merriam-Webster (1999) also refer to 'visual literacy', a term introduced in 1971:

> 'the ability to recognise and understand ideas conveyed through visible actions or images (as pictures)'.
>
> Merriam-Webster (1999)

Despite what appear to be very broad definitions of 'literacy', stemming back many years, Brookes and Goodwyn (1998) perceive the word in terms of what they view as its common historical usage, arguing that 'literacy' is no longer just about the mechanical act of reading and writing but now involves the newer areas of literacy such as computer, visual and media literacy. Commenting upon what they described as the relatively new use of the term 'literacy' in education, Brookes and Goodwyn (1998) viewed this move to conceptualise literacy as:

> 'a life long and open ended process i.e. a move from an expectation that only a minority will be truly literate to an expectation of a society concerned with literacy for all.'
>
> Brookes and Goodwyn (1998)

Speaking specifically about secondary schools, Brookes and Goodwyn (1998) describe, however:

> 'a deep confusion [...] about what 'literacy' is'.
>
> Brookes and Goodwyn (1998)

Kress (1997) called for a radical reappraisal of 'literacy' and a shift in educational practice. He viewed children as having underlying coherence to their actions in drawing, cutting-out, writing, making collages etc. all of which form precursors to writing, thus challenging accepted norms in language and

literacy teaching by calling for a 'radical de-centering of language' in educational theory and practice.

Despite these attempts to re-define 'literacy' to fit with today's learning society, educationalists appear to be moving away from the 1883 definition towards a narrower vision of literacy determined through series of tests at every stage of children's lives. A recent case[17] was that of two home-educated children, aged seven and eleven, wanting to enter school; the headteacher was not prepared to take them, despite the eleven-year-old being remarkably literate and having read since the age of two, in case the school's SATS [18] test results were unduly affected: he proposed that they should join the school after those exams.

This narrowing of the vision of literacy was also described by Brookes and Goodwyn (1998), who commented upon the:

> 'pervasive sense in Western Societies that the media, especially television are 'replacing' reading as the key interest of young people.'
>
> Brookes and Goodwyn (1998)

They referred to the lost interest in reading as being 'exacerbated' amongst youngsters, in particular boys, by children's increasing use of computer games and the Internet. Whilst increased computer use is coupled here with a growing disinterest in reading, home-educated children increasingly use

computer games and the Internet as an aid to developing literacy skills (Ray 1998; Meighan 1998b).

Thus, the 'crisis' in literacy described in Brookes W. and Goodwyn (1998) may have much to do with our contemporary definition of the term. Indeed, Brookes and Goodwyn (1998) attributed the current 'crisis' as stemming from the previous ten years' National Curriculum test results.

> 'These results suggest that many pupils leave primary school with literacy levels that are inadequate for secondary school subject work.'
>
> Brookes and Goodwyn (1998)

Goodman (1972)[19] suggested that:

> 'Universal literacy will be achieved only when we have understood enough about the reading process and its acquisition to stop interfering with learners in the name of helping them. [...] Reading is a language process, the direct counterpart of listening.'
>
> Goodman (1972)

He believed that reading should be seen as a language process, not to be taught as a learned skill but developing naturally in much the same way as spoken language. He argued that teaching children letter and word strings

abstracts and disassociates the written from the spoken word. The learner reader, Goodman believed, needs to have exposure to context and be able to make his or her own connections in the same way that the learner speaker does. Goodman argued not for the disintegrated mastery of 'parts' but for the 'successive approximation of proficient reading', in the same way that children's speech changes from babble to competent speech. He surmised that learner readers should be:

> 'exposed to whole, natural, meaningful language [...] our goal becomes one of making literacy an extension of the learners' natural language development'
>
> Goodman (1972)

Goodman found that the focus on reading weakness however, eclipsed children's learning strengths. Motivation for reading he suggested, is as intrinsic as it is for the spoken word:

> 'Language is learned because people need to communicate'.
>
> Goodman (1972)

As children strive to extract meaning from written language, Goodman saw them as gaining strategies that would aid comprehension; graphically, grammatically, experientially and in learning to recognise where their mistakes lie:

> 'These strategies [...] are much the same as those the learners have already learned to use in listening, and are learned with no less ease.'
>
> Goodman (1972)

The DfEE (1998c) described literacy thus:

> 'Literacy unites the important skills of reading and writing. It also involves speaking and listening which, although they are not separately identified in the Framework, are an essential part of it. Good oral work enhances pupils' understanding of language in both oral and written form and of the way language can be used to communicate. It is also an important part of the process through which pupils read and compose texts.'
>
> DfEE (1998c p.3)[20]

Further elaboration came from Beard (1999), referring to the NLS:

> 'It is generally assumed in educational systems across the world that one of the central purposes of schooling is to help pupils learn how to read and write [...] Literacy is widely seen as promoting valuable ways of thinking about and understanding the world and ourselves.'
>
> Beard (1999 p.7)

Yet Hoyle (1998) challenges this view of schooling:

> 'Indeed, it may be useful to recall that an intended outcome for the introduction of compulsory education was to maintain social order in a way which obviated the need for more overt forms of coercion [...]'
>
> Hoyle (1998 p. 8)

National Literacy Project (NLP)

The National Literacy Project[21], involving just 18 LEAs and about 250 schools (Sainsbury 1998), was the forerunner to the National Literacy Strategy that operates nationally in maintained schools. The aim of the NLP was to improve standards of literacy by:

- providing short term objectives for teachers to follow in class;
- the introduction of the 'literacy hour'[22];
- the training and support for teachers.

After starting the project with below average grades, children's progress scores demonstrated considerable improvement, whereby their grades rose close to the national average, albeit still below it. Girls outperformed boys in both scores and progress over the period, the difference of 3.4 standardised points between boys and girls at the start growing to 4 points at the end (Sainsbury 1998). Table 3.3 illustrates the improvements in scores:

TABLE 3. 3: READING TEST SCORES FOR THE NATIONAL LITERACY PROJECT 1996-1998 (SAINSBURY 1998 P.6)

Year Group	Start: Average standardised score (1996)	End: Average standardised score (1998)	Increase in standardised score
Year 1/2	85.6	97.0	11.5
Year 3/4	89.2	95.6	6.4
Year 5/6	90.0	96.2	6.2

Sainsbury (1998) concluded that headteachers involved with the NLP were 'overwhelmingly positive' about the project, whilst children became confident in reading, needed less assistance with reading and experienced a huge enjoyment of reading, thus providing an excellent template for the new National Literacy Strategy.

The National Literacy Strategy (DFE 1998c) went further than the NLP, by setting a target: In 1996, just 57% of eleven-year-olds reached the standard expected for their age, that of Level 4, but by 2002 this was to rise to 80% (Beard 1999 p.5). The strategy and target setting approach were the response to the 'distinctive feature of British performance' (Beard 1999), that a long 'tail' of underachievement existed that was greater than that of other countries (Brooks, Pugh and Schagen, 1996, p. 10)

3.2.2 Home-educated Children and Literacy

Home-educated children are not required to meet national targets in literacy or any other area of the curriculum and there is no compulsion that they participate in any formal assessment procedures: Thomas (1998) has suggested that home-educated children, nevertheless, develop a love of literature. Meighan (1995) described many home-educating families as having 'no pre-determined plan of language teaching' and thus responding simply to children's cues. He spoke of the easily available resources to assist such learning:

> '285 hours each of the schools' television and radio every year [...] several million books in public libraries [...] museums in every town [...] constant flow of cheap or free information from a dozen media [...] home computers which are easily connected to phones and thus other computers'
>
> Meighan (1995)

Pat Farenga (1998)[23] described his home-educated daughter's learning:

> 'My oldest daughter, Lauren, who is now 11, spent large blocks of time over the past year learning American sign language, archaeology, and dance, none of which are part of most school curricula, though they may be extra-curricular offerings in some schools. Lauren learned math, science, history, reading, writing, social skills, and more, but she learned them in the course of her pursuit of these other subjects. These skills and tools were learned and used to achieve her larger goals, rather than merely being ends in themselves.'
>
> Farenga (1998)

Some families, whilst adopting what many viewed as a more formal approach to language training, nevertheless still appeared to take their cues from the children. Marks (1996) wrote about his son's literacy learning:

> 'We were very fortunate in that what we did for him helped our son so much. He completed the series of writing assignments we

> designed for him by the time he was 12 -- they were meant to last him until he turned 18. The summer he turned 12 we let him enter Lake Michigan College and take freshman English composition and Michigan government. [...] He was graduated with honours from both the department of English and their creative writing program. [...] When he applied for his doctoral training in creative writing at the University of Houston in Texas, he was their first choice [...]. He has had poetry accepted in five literary journals including Paris Review. His writing is so beautiful that when I read it I have tears in my eyes and I can't talk.'
>
> Marks (1996)[24]

Home-educated Children Learning to Read

Thomas (1998) studied 42 home-educating families in the UK and 58 in Australia, selecting most participants through recommendations from 'co-ordinators of non-aligned, loose networks of home-educators' and several from introductions made by those recommended families. Thomas found home-educated children to be keen readers, describing their enthusiasm as, 'a celebration of literacy'. Citing Rogoff (1990), Thomas attributed this love of literature to the children's exposure to 'dialogue' and to the way in which parents responded to their children as 'individual learners'. Many of Goodman's (1972) themes are represented in Thomas' (1998) study:

> 'The best support for the proposal that school age children can go on learning as they did in infancy comes from those parents

> who, when their children reach school age, just go on doing what they are already doing. [...] These parents are simply continuing their children's apprenticeship to the culture.'
>
> Thomas (1998 pp. 67-68)

Within and besides this apprenticeship *model* of learning, Thomas found a plethora of approaches taken by home-educators to their children's reading, all seeming to work equally well. Whilst Thomas' findings lend weight to argument of Moseley, Merrell and Tymms (1998) that, 'there is probably more than one effective method or combination of methods' they shed no further light on methodological debates such as that highlighted by Moseley et al. (1998), namely, whether children best achieve lexical knowledge through a 'wholistic' *(sic)* approach alone or through a combined 'wholistic' and analytic spelling approach. Thomas did find however, that whilst the parents employed the same teaching methods as those used in schools, they differed in *how* they used them, this being determined by each individual child's response. Thomas described home-educated children as learning to read and write through phonic, visual and mixed approaches, adding that some children acquired literacy skills:

> 'without their parents being able to explain how'.
>
> Thomas (1998 p. 102)

Thomas found that it tended to be the children themselves who determined when their literacy learning would advance, usually in response to a current interest. Similarly, Moseley et al. (1998) report that in owing to 'inherent

interest', schoolchildren commonly recognised the written form of peers' names without them having being taught:

> 'Even at the age of five children do seem to be sensitive to 'one-off' words of moderate difficulty that have highly unusual spelling features.'
>
> Moseley et al. (1998 p. 8)

Home-educated Children and their Late Reading

A salient feature of Thomas' (1998) work was his conclusion that:

> 'a significant number of [home-educated] children do not learn to read until very late, until between eight and ten years of age, apparently without detriment'. (p.6) [...] 'in general, these 'late' reading children quickly caught up with and passed the level of reading commensurate with their age and went on to thoroughly enjoy reading'. (pp. 98-99)

Thomas observed that this was:

> 'in marked contrast with late reading children in school who typically fall further behind their chronological reading age, as they progress through the primary school.' (p99)

Thomas, however, did not undertake any formal assessments with his sample and his assertions were based upon impressions and parental report rather

than any clear evidence. His findings on late readers, therefore, need to be understood in that context. Thomas had earlier posited that owing to the low child-to-adult ratio, the home-educated children would be ahead of their schooled peers in learning to read: his qualitative research however, did not bear out his theory. Specifically, Thomas determined that from 105 children aged over eight years of age who had never been in school, 19 children, or 18%, could be described as late readers:

> 'It is fair to conclude that learning to read 'late' is a feature of home education, at least for those children who have never been to school.' (p.103)

Whilst home-educated children who do not read by eight years of age are described by Thomas (1998) as 'late readers', schoolchildren similarly circumstanced are labelled as having 'limited literacy skills' (Brooks 1997; Barber 1997) or 'low levels of literacy' (Brookes and Goodwyn 1998). During 1998 the average percentage of seven-year-old schoolchildren achieving level 1 and under in literacy testing and therefore displaying 'limited literacy skills', was 21.3%: the average percentage of seven-year-old schoolchildren scoring level 2, the standard norm, and above, nationally, during 1998, was 75.6% (QCA/DfEE 1999 p.10 and p.7). Although the 21.3% referred to here relates to seven-year-olds whilst Thomas' 18% related to children aged over eight years of age, the analogy that similar numbers in both groups were late readers cannot be overlooked. One main difference between the groups was that whilst one group was described in terms of achievement, the other

was defined by their inadequacies, that is to say, home-educators tend to speak of the 'late reader' with reverence, as a rather special person whose brain synapses have been too busy developing other dimensions of 'being' to concentrate on learning to read. At school, late reading is synonymous with underachievement, failure to meet government reading targets and with being labelled 'SEN'.

Thomas (1998) did not use formal assessments with the home-educated children. Therefore, in deducing the numbers of late readers amongst his home-educated sample, he took the word of those interviewed, reporting that, 'a finding as significant as this must be taken seriously' and supporting his methodology with the argument that:

> 'Parents might well exaggerate their children's attainments but are highly unlikely to dwell on what others might see as their failings. In fact, many had to field strong criticisms from spouses, relatives and friends because their children were not reading by the 'appropriate' age.' (p. 103)

Literacy Assessments and Home-educated Children

There is a substantial body of information on the measured literacy performance of home-educated children (Ray 1998; Lyman 1998; Anon, Anon and Anon 1995; Van Galen and Pitman 1991; Rakestraw 1988; Scogin 1986). However, Anon et al. apart, these studies are North American. Other

commentaries on literacy are the result of qualitative study (Thomas 1998) and press report (Haughton 1999).

One British study by Anon et al.[25] (1995) examined the reading ages of 70 home-educated children aged between six and eleven years, using an established sentence reading test[26] regularly administered in schools. The cohort was taken from all home-educating families within one LEA's area and participation was voluntary. The researchers speculated that they would find significantly more children with reading difficulties than amongst the national average: this hypothesis was unsupported. This study observed that the children who had never attended school were, on average, 9.85 months ahead of the expected reading level for their chronological age, whilst those children who had spent a period at school demonstrated a reading age averaging 4.6 months ahead. Overall, it was found that 27% of the children had a reading age below their chronological age and 3% had matching chronological and reading ages: 70% of the home-educated children demonstrated reading ages above their chronological age. Nationally in 1995 27% of seven-year-old schoolchildren demonstrated levels of literacy below the mean, as provided by the DFEE (Marks 1997). Although Marks (1997) and Anon et al. (1995) studied different age groups, the similarity in levels of 'under-performance' between home-educated and schooled children, is notable (reflecting the case described in Section 3.2.2).

Speculation about the results of Anon et al.'s (1995) work might consist of questions such as: what was the effect of family background on the results?

Were those children with the highest reading ages simply from families who revered reading skills and did this factor coincide with those children having never been in school? Or was it that the children who had been in school had experienced a more problematic educational time than those who had been continually nurtured in the home environment, thus rendering those with continual stability better readers? Conceivably, the area from which the sample was drawn may have consisted of schoolchildren who also exhibited higher than average reading scores. In consideration of the request for anonymity, these questions remain unanswered.

The indication inherent in the Anon et al. (1995) study, that home-educated children demonstrated higher than average reading levels, warrants further investigation. The national statistics for 1998 revealed 52.5% of seven-year-old schoolchildren achieved the norm for their age group in reading (QCA/DfEE 1999 p.10); Anon et al. found that in the home-educated group of six to ten-year-olds just 3% performed at the level associated with their chronological age and 70% performed above this level. Whilst Anon et al. (1995) studied reading as an aspect of education, they did not attempt to present their findings in terms of effectiveness of home-education, viewing any such attempt as speculative.

Overseas Studies Relating to Home-educated Children's Literacy

The findings of Anon et al. (1995) are supported by the studies from North America (Rakestraw 1988; Scogin 1986). Rakestraw (1988) studied 84 children, finding that seven-year-olds outperformed their schooled

counterparts in grade 2 reading and listening tests. Scogin (1986) assessed 591 children from 300 families, finding that 73% of homeschooled children were at least one year ahead of their schooled peers in reading. A national study by Ray (1998) determined that home-educated children scored over and above the 50th percentile by 37 percentiles in reading and 30 percentiles in language. Ray further analysed 12 independent variables, finding however, that these variables could not account for the statistically significant amounts of variance in students' test scores. Other studies have also indicated that home-educated students scored as well as and higher than, their schooled counterparts (Dellahooke1986; Rakestraw 1987; Ray 1986, 1991, 1992, 1997; Tipton 1990; Wartes, 1987, 1988, 1989, 1990).

Meighan (1995) reported that Ray (1991) suggested some home-educated children to be as much as ten years ahead of the their school peer group. A cautionary note is sounded here; North American style grading levels tend to be associated with age groups; for example, an English child of five years is normally associated with level 1, but if that child has a reading level 4, normally expected from a child aged eleven, it might be suggested, ambiguously, that the four-year-old is 7 years ahead, rather than that the child simply reads as well as an eleven year-old.

Rudner (1999) has completed one of the more recent studies of home-education. This is a national study across North America, involving 20,760 children aged six to seventeen years, in 11,930 families. Dependent on the children's current grade they were administered either the Iowa Tests of

Basic Skills (ITBS)[27] (Riverside 1994) or the Tests of Achievement and Proficiency (TAP)[28] (Riverside 1994). The mean reading score for the six to eleven-year-olds was at the 85th percentile. Children in Catholic and private schools achieved a mean score at the 76th percentile. There were some particular features of Rudner's homeschooled group, namely that there were more parents with formal education than amongst the population as a whole, the families' income was generally higher than for the general population and most of the children were living in married couple families. Only 6.2% of the participants in Rudner's study described themselves as non-Christian[29].

Rudner (1999) made the point that whilst 50% of the 8th grade (13 year olds) homeschooled children achieved the equivalent of 4 grades above the public schoolchildren's median scores[30], the same can be said of about 20% of 8th grade public schoolchildren nationally. The national results for England 1998 (QCA/DfEE 1999 p.10) also suggest that at least in 'reading comprehension', some 26% of seven-year-old schoolchildren achieved scores that put them at least 2 years above their age group: in literacy overall[31] the figure was 17% and in the Year 2 complete battery[32] just over 17% were judged to be in excess of 2 years ahead of the norm[33]. Marks (1997), found in his review of the 1995 national test results for 590,000 schoolchildren aged seven in England and Wales, that an average of 28% achieved level 3 (level expected for 9 year olds) and above in literacy scores.

3.2.3 SUMMARY OF SECTION 3.2

Initially, Section 3.2 endeavoured to move the focus from the performance of reception aged children discussed in Section 3.1 to a literacy based one. Definitions of literacy were discussed and broad descriptors associated with this term were highlighted. There appeared to be, however, in terms of educational targets, increasingly narrow parameters placed around the term 'literacy'. This re-definition of literacy at the school level has important implications for home-educators who might appear to have more in common with the 1883 Webster's dictionary definition (Merriam-Webster 1999) and with the views of Goodman (1972). Section 3.2.2 described how Thomas (1998) found that whilst the home-educators used a variety of approaches to literacy, it was how the families used these resources that was interesting: families adapted their approaches to literacy to suit the requirements of each individual child within the family. The section also focused on home-educated 'late readers' and how they are treated with respect, in contrast with the 'underachiever' label that late reading schoolchildren attract. This difference in interpretation was further emphasised by evidence suggesting that there may be no greater prevalence of children experiencing delayed reading amongst the home-educated children than amongst their schooled peers. The question relating to the effect of different learner-reader methodologies, when those without formal instruction exhibit similar reading abilities as those with, was left open. Finally Section 3.2.2 provided details of studies showing that home-educated children consistently perform at least equal to their school counterparts. It was noted however, that whilst many results suggest that, academically, home-educated children out-perform

schoolchildren, many schoolchildren also display that same level of competence. It was further highlighted that where some studies have referred to home-educated children being years ahead, for example Meighan (1995), this may relate to children's grade level attainment and as such, may be a misleading measure of attainment.

3.3 CHILDREN AND MATHEMATICS EDUCATION

3.3.1 NUMERACY IN EDUCATION

Definitions of Numeracy

Brown (1999) uses the National Numeracy Project description of numeracy:

> 'Numeracy is defined as more than knowing about numbers and number operations. It includes an ability and inclination to solve numerical problems, including those involving money or measures. It also demands familiarity with the ways in which numerical information is gathered by counting and measuring, and is presented in graphs, charts and tables.
>
> Brown (1999)

In adopting this extended definition, Brown set a broader definition than that used in the 1913 Webster Dictionary (Olsen 1999), where 'numerate' was explained:

> 'to divide off and read according to the rules of numeration; as, to numerate a row of figures',
>
> (Olsen 1999)

The Merriam-Webster's Collegiate (R) Dictionary (Merriam-Webster 1999) however used a 1959 definition for 'numerate' that was more in tune with that used by the National Numeracy Project, quoted above:

> 'marked by the capacity for quantitative thought and expression'
>
> (Merriam-Webster 1999)

Rutter, Maughan, Mortimore and Ouston (1979) described the importance of schools in providing maths teaching, considering this and science difficult for parents to handle. Rutter et al. (1979) found that unlike reading, where parents often played a role, maths[34] was left to the school. Rutter et al. (1979), thereby, held that while individual children's literacy attainment could not be linked to school efficiency, mathematics attainment could, since the school was most likely providing the sole mathematics input for each child. It is highly probable however, that the language used in a school to teach mathematics differs considerably from the individual-child orientated language of the home-educating family: this alone may account for a difference in the children's perception and understanding of mathematical issues (Donaldson 1978) and the reason why Rutter et al. (1979) found school style mathematics not to be supported at home. The following excerpt, whilst referring to a book for teachers, nevertheless illustrates the point that mathematics teachers are themselves faced with obscure language.

> [...] I would refute the claim, made on the back cover, that it helps teachers of mathematics by 'showing clearly' how to 'deploy

> sociological strategies in the evaluation of maths text books'. Very little is clear, due to the author's choice of language and writing style, which are exclusive, although at the end of the book he does appear to recognise this in the statement, 'Regrettably, lucidity is of secondary importance' (p305), which makes clear his priorities.
>
> Perks (1999) reviewing Dowling (1998)

In 1998, the DfEE, in recognition of importance of mathematical language used with children, published clear guidance on the terminology that should be used, at least at primary level (DfEE 1998d), in the teaching of mathematics. Bearing in mind Rutter et al.'s remarks, relating to secondary schoolchildren, any variance in differences between the school and home-educated children's maths and English attainment will be interesting to note.

National Numeracy Strategy (NNS)

In launching the new National Numeracy Strategy, the then Secretary of State for Education and Employment, Mr Blunkett explained the government's numeracy vision:

> 'Numeracy is a life skill. Without basic numeracy skills, our children will be disadvantaged throughout life. That is why we have set a target of 75% of 11-year-olds reaching the standard of mathematics expected for their age by 2002'.
>
> The Rt Hon David Blunkett MP (DfEE 1998d, Foreword)

The NNS replaced and expanded upon the National Numeracy Project much as the National Literacy Strategy replaced the National Literacy Project, providing (DfEE 1998d):

- yearly teaching programmes with guidance on daily mathematics lessons
- planning grids to assist teachers in termly planning
- clear guidance on the strategy's key objectives

Numeracy is described thus:

> 'Numeracy is a proficiency which involves confidence and competence with numbers and measures. It requires an understanding of the number system, a repertoire of computational skills and an inclination and ability to solve number problems in a variety of contexts. Numeracy also demands practical understanding of the ways in which information is gathered by counting and measuring, and is presented in graphs, diagrams, charts and tables.'
>
> DfEE (1998d p.4)

3.3.2 NUMERACY IN THE HOME-EDUCATION CONTEXT

Home-educated children and numeracy

Thomas (1998) began his review of mathematical learning amongst home-educators by highlighting the somewhat controversial view of Hart that,

> 'misconceptions, intuitive ideas or child methods may form distinctive blocks to a child's understanding [which] must be recognised if the child is to learn what we wish to teach'
>
> Hart (1985 p.54) quoted in Thomas. (1998).

Discussing approaches to mathematical learning amongst home-educators, Thomas (1998) conveyed through his use of quotations from home-educating parents, a preoccupation with numeracy, portraying it as a more worrying area to parents than say, literacy. Thomas' own view appeared to sustain these anxieties:

> 'Of course, informal learning does not just 'happen' without outside guidance.[...]. Not much informal learning will occur if children are left to their own devices'. (p.71 and 129)

However, despite Thomas' opinion and the views expressed by parents, the evidence presented a different perspective:

> 'If there is one body of knowledge the learning of which requires structure and sequence, it is maths. Nearly all parents, including the more informal ones, followed a maths course. Even so, the amount of maths that could be learned incidentally and informally, certainly at the primary level, attracted comment.' (p.71)

This led Thomas to refer to homes as where children:

'probably experience the richest learning environment they will ever encounter'. (p.72)

And the acceptance that most children:

> 'informally pick up fundamental concepts in maths before starting school'. (p.71)

Thomas further explored families' descriptions of their children's enjoyment of mathematical issues and examined the way in which children internalise numerical concepts from very early on. He recalled observations by Carraher, Carraher and Schliemann (1985) of the competent oral mathematical skills exhibited by Brazilian street vendor children. Numes, Schliemann and Carraher (1993) later extended this work by exploring both oral and written mathematics in Brazil. They found that oral mathematics was the norm, whilst written mathematics were the domain of school, in that teachers could best judge a pupil's ability with evidence on paper.

Thomas appeared to encounter substantial differences between literacy and numeracy approaches and attainment amongst home-educators. However, as with Thomas' literacy conclusions his numeracy findings were not based on any formal assessment and it is possible that Thomas' more formal ideas on mathematical thinking had been informed by personal opinion.

Numeracy assessments and home-educated children

Brown (1999) argued that although literacy standards in the UK were on a par with those of other similar countries, numeracy attainment in the UK 'falls

well short of that in other comparable countries'. Combined with Rutter et al.'s (1979) notion that mathematical[35] competence was not generally acquired at home, and Thomas' (1998) indication that home-educated parents experienced more difficulty with numeracy than with other areas of learning, it might be expected that home-educated children would perform less well in numeracy assessments than those dealing with literacy. As the following paragraph illustrates, to say that the home-educated children perform less well in maths than English, is not to suggest that they necessarily perform poorly when contrasted with schoolchildren.

Using the Stanford Achievement Test (The Psychological Corporation 1988)[36], Wartes (1988) found his North American cohort of homeschooled children overall to be performing at the 66th percentile, concluding that maths performance, whilst not so high as that in literacy, was nevertheless substantially above average. Similarly, Ray (1997) found his homeschooled cohort (n=5,402) to be at the 87th percentile on reading tests and at the 82nd for maths and Ray (1998) (n=16,311) again supported finding this with 79th percentile for Reading and 73rd for Maths. Most recently Rudner (1999) confirmed above average maths performance from his homeschooled cohort (n=20,760) with children scoring at the 85th percentile for Reading and the 79th for Maths.

3.3.3 *Summary of Section 3.3*

This section began by providing definitions of numeracy. The definition adopted by the National Numeracy Project (Brown 1999), together with the

1959 definition (Merriam-Webster 1999) suggested a broad perception of what numeracy is. This breadth would, it appears, co-exist well with the approach taken by many home-educators, as described by Thomas (1998). The idea proposed by Rutter et al. (1979) that numeracy is not so easily acquired informally, and therefore is a measure of the effect of schooling, was deemed potentially, to provide a benchmark by which to judge the home-educated children's academic performance, although this theory is undermined by evidence of Brazilian street vendors' informally acquired mathematical skills (Numes et al. 1993) and by the findings of Aubrey and Godfrey (1999), that Dutch pre-schoolers are at the same mathematical level as English in-schoolers of the same age.

Section 3.3.2 described home-educating parents' preoccupation with numeracy, emphasised by Thomas' (1998) finding that most parents followed some kind of mathematics curriculum course and his opinion that mathematical learning required 'structure and sequence'. Despite this idea of the need for formality, Thomas found, as had Aubrey (1997) that children acquired many numeracy skills before they reached school age. Bearing in mind the findings quoted from North America, the question is whether the British home-educated children show a numerical 'lead' over 'literacy' as their education progresses and whether, as with the pattern of 'late reading' (described in Section 3.2), their developmental path begins to resemble that of British schoolchildren, thus lending weight to the idea suggested earlier, that the effect of school may be less decisive in academic terms than one might intuitively believe.

As regards the academic expectations for home-educated children in numeracy, the evidence presented indicates that home-educated children might perform at a lower standard in numeracy tests than in literacy assessments, whilst maintaining a lead over the national average.

3.4 CHILDREN'S SOCIAL AND PSYCHOLOGICAL ADJUSTMENT

This section relates to Chapter 9 of this research concerning the home-educated children's social and psychological skills. The section begins by looking at criticisms of home-educated children's psychosocial development and then, over subsections 3.4.2 and 3.4.3, at children's social skills in general. The social skills overview is included because it provides background to Michelson and Wood's (1981) CABS measure, used in this research, besides describing Shyers (1998) specific use of the CABS measure with home-educated and schooled children. Section 3.4.4 deals with behavioural problems as they relate to home-education in terms of absenteeism, part-time schooling, school refusal and children with special educational needs. This is followed by a short subsection on behavioural problems in children, questioning whether the home-educated children would be expected to demonstrate problems at a similar rate to schoolchildren. Since the present work explored behavioural problems in the home-educated sample through use of the Revised Rutter Scale (Rutter 1993), a review of research using that instrument was pertinent and therefore makes up the final subsection.

3.4.1 HOME-EDUCATED CHILDREN'S PSYCHOSOCIAL DEVELOPMENT

It has been widely asserted that children taught at home exhibit some the following characteristics: loneliness, separation anxiety, phobias, social ineptness, isolation and academic lassitude (Desforges 1999, Webb, 1999; Shearer 1999; Hastings 1998).

> 'The stereotypical home-schooled child is often portrayed as being shy, passive, and lethargic because of his/her isolation from the normal socialization found in formal schooling.'
>
> Aiex (1994)

Contemporary academics such as Ted Wragg have raised psychological concerns:

> "While I perfectly accept that for a few children education at home may be the best option, I would also like to raise the issue of 'separation anxiety.' We accept that many children are terrified at the thought of being separated from their parents, but there is also the concept that some parents are terrified of being separated from their children.
>
> They may delude themselves that their children will be somehow 'corrupted' by school, and they want to keep their children away from other people. If this is the case, I would question the motivation of these parents."
>
> Wragg cited in Appleyard, D. (1997)[37]

3.4.2 CHILDREN'S SOCIAL SKILLS

During preliminary investigations for this research, home-educating families often reported that they felt vulnerable to criticism by non home-educators on the issue of socialisation and the assumed isolation that their children 'suffer', leading to the development of behavioural problems. The question of social skills has appeared on the 'Frequently Asked Questions' pages of many home-education Internet sites (e.g. Education Otherwise, 2002) thus underlining the pertinence of this topic, not only for non home-educators but for home-educators themselves. This assumption of an assumed lack of social skills and inherent psychological problems as a result of being separated from their schooled peer group has been mentioned by O'Leary (1998), Murton (1999) and Shearer (1999) amongst many others.

Hastings (1998) reported Fred Forrester, Deputy General Secretary of the largest Scottish teaching union, Educational Institute of Scotland (EIS), as saying of home-educated children withdrawn from school as a result of having been bullied:

> 'I do not believe it is a reflection on bad teachers, rather it is something done by parents who are a little eccentric [....]. These children will lose out academically and socially. I cannot see how a parent can replace school life. Home-educated children will grow up with a lack of inter-personal skills which will affect them in later life [....]. Parents cannot possibly compete with the knowledge and expertise a teacher has for a particular subject [....]. If

> parents are unhappy with their child's school, they should meet the child's teacher and discuss the problem [....]. Taking children out is a cop-out and usually done by hippie types of parents who are a little eccentric'.
>
> Hastings (1998)

A similar attitude was still being expressed in 2002, this time by James Towers, chair of the education of children at home subcommittee in Aberdeenshire:

> 'The reasons put forward for wishing to educate one's children at home are many and varied. Often they stem from a mixture of arrogance and ignorance. Some parents seem to think that they can make a better job of it. They believe it is all a matter of the time that can be devoted to the individual child. Quite apart from the total disregard for the value of an education that will prepare a child to fit into and ultimately benefit society, these arguments ignore the child's development. While learning to master the three Rs is obviously of prime concern, so is the ability to get on with other people, to accept the rough with the smooth.
>
> Towers (2002)

Stressing the importance of social skills, Michelson[38], Sugai, Wood, and Kazdin (1983), described socially inept children as isolated, rejected and miserable, whilst socially skilled children were able to enhance their situation

and develop their full potential. Michelson et al. (1983) further defined 'social skills' as an entity quite separate from the style of socialisation usually experienced by children in school: they described the assimilation of maladaptive behaviour as an integral component of school socialisation, resulting in a negative effect on both academic performance and personal and social development.

Within the parameters of the term, 'social skills' Michelson et al. (1983), included social behaviour, assertiveness and social competence. Citing several studies to support their description, (eg. Libet and Lwinsohn, 1973 and Rinn and Markle, 1979) Michelson et al. (1983), created the following definition of social skills (p3):

- Social skills are primarily acquired through learning (e.g. observation, modelling, rehearsal, and feedback).
- Social skills comprise specific and discrete verbal and non-verbal behaviours.
- Social skills entail both effective and appropriate initiations and responses.
- Social skills maximise social reinforcement (e.g. positive responses from one's social environment).
- Social skills are interactive by nature and entail both effective and appropriate responsiveness (i.e. reciprocity and timing of specific behaviours)

- Social skill performance is influenced by the characteristics of the environment (i.e. situational specifically). That is, such factors as age, sex and status of the recipient affect one's social performance.
- Deficits and excesses in social performance can be specified and targeted for intervention.

Michelson et al. (1983 p.3)

Reviewing earlier studies, Michelson et al cited evidence (eg. Kohn and Rosman 1972 and Dorman, 1973) of the following; a relationship between young children's development and their later accomplishment, a relationship between early assertiveness and later intellectual attainment and readiness for school and a positive correlation between child performance on the Stanford-Binet Intelligence Test and their level of social skills.

According to Michelson et al. (1983) unassertive children are viewed as inadequate and indecisive. They further indicated a link between adequate social skills and high academic achievement, embedded in the assertive child's ability to appear socially attractive to their teachers. This theory is consistent with that of Rosenthal and Jacobson[39] (1968), who claimed that teacher expectation is affected by the teacher's perception of a child's abilities. In the context of the study at hand, this would indicate that socially adept children might be expected to do well academically.

Michelson et al. (1983) proposed, citing earlier research (Salter, 1949 and Kagan and Moss, 1962 respectively), that unassertive children to suffer psychosomatic illnesses and passive children might evolve into maladaptive adults. Michelson et al. (1983), described the 'Catch 22' situation whereby an unassertive child does not interact with others and so fails to learn social skills, thereby perpetuating their own passivity and isolation into adulthood. Hersov (1980) too, advocated independence, assertiveness and social skills training for those with inadequate social skills.

3.4.3 Passivity/Aggression in Children

Paterson (1975) described the impediments for an aggressive child in terms of the reactions they cause in those around them; they are often rejected by others and therefore fail to be included in gainful social interactions. Paterson found that aggressive children tended to be low academic achievers. Michelson et al. (1983) believed aggressive children to be socially undesirable, therefore affecting their opportunities for successful social development and perhaps causing aggressive reactions from peers, thus exacerbating their aggression. As with passive children, aggression in children was said to lead to poor performance in adulthood.

Shyers (1992) studied home-educated children's self-concepts in terms of their passivity and aggression. Shyers conducted his research with 70 homeschooled and 70 traditionally schooled eight to ten-year-old children in Florida. He used with each child: the Piers-Harris Children's Self Concept Scale (Piers and Harris 1984); Children's Assertive Behaviour Scale (CABS)

(Michelson & Wood, 1981); and a Direct Observation and Behaviour checklist.

Shyers found that when assessed using the Piers-Harris Scale, all the eight to ten-year-olds held similar, higher than average self-concepts, whether home or traditionally schooled. The CABS questionnaire showed all the children to have a slightly passive understanding of social situations, with the homeschooled sample displaying marginally more passivity than their traditional counterparts. Shyers cautiously attributed such passivity to children in this age range possibly being less conversant with socially appropriate behaviours. Using Observation and Checklists, Shyers found significantly fewer problem behaviours amongst the home-educated sample than the traditionally schooled children, who exhibited problem behaviours above the normal range for a national population of the same age: they also displayed more anxiety than their home-educated peers. Shyers surmised that behaviour was different between the two types of children despite their having similar self-concepts and levels of assertiveness.

Shyers' results showed that 85.7% of the homeschooled sample had spent between 3 and 5 years studying at home; 95.7% attended church weekly and whilst 30% of the children said they played with between 0 and 5 children weekly outside the home, 42.9% played with 6-10 and 27.1% played weekly with 11+ children. Shyers concluded that such children's social development depended upon adult contact more than contact with their peer group and that this had the 'knock on' effect of making parents less anxious



about the development of their children's social skills. The homeschooled children interacted with adults in much the same way that adults they had observed did, also freely interacting with other children, whilst the traditionally schooled children mixed less with grownups and were hesitant at mixing with children they did not know well. Shyers concluded that appropriate social skills can develop apart from formal peer group contact and that this finding accorded with the beliefs held by home-education proponents.

Shyers (1998) added a further dimension to his work. He commented that whilst finding the traditional and home-educated samples similar in terms of passivity, probably owing to their similar backgrounds, the difference appeared to be in what the children actually 'did' with their understanding. The home-educated children, whether thinking passive or aggressive thoughts, were more able to control their emotions and act in a socially acceptable way, whereas the schoolchildren 'had a tendency to act on their feelings, not their understandings'[40].

3.4.4 Behaviour Difficulties in Children

School attendance and absenteeism

School attendance problems (absentees and school refusers) have widely been associated with social isolation and with relationship difficulties within the family (Galloway 1983), and also with poor academic performance (Galloway, 1985; Gray, Smith and Rutter, 1980). Whilst the gulf between

home-education and absenteeism[41] seems great, the difference, for a number of absentees, may be one of little more than de-registration.

In a study of absenteeism, Galloway (1983) reported that, 72% of absentees' parents were considered 'over-protective'; 60% of absentees were considered 'over dependent on their parents'; and 75% of absentees were found to have a 'warm, mutually satisfactory relationship with a parent'. Accepting differences in the populations and objectives of this and Galloway's study, his figures, in reporting the high level of attachment within the absentee group, nevertheless, highlight the link between absenteeism and home-education where relationships within families are often said to be very strong and even considered oppressive (Wragg 1997).

The argument made here that a link exists between absenteeism and home-education, for example, was further highlighted by the 'striking feature' of Galloway's (1982[42]) research that both primary and secondary absentees had higher IQs (though not significantly so) and fewer reading difficulties than their class peers. In terms of reading difficulties in particular, Galloway found 50% of primary aged absentees to be 2 years below their chronological age as opposed to 93.8% of same aged regular attenders[43].

Galloway (1983), investigating contributory school factors in absenteeism as described by the absentees' parents, found 'bullying' to be the prime cause amongst the primary children, and 'fear of teacher' the main grounds amongst the secondary aged children (Galloway 1982). In the present

climate where bullying is said to be widespread (Ellis 1998) and causing increasing numbers of schoolchildren's parents to communicate with home-education support networks (Young 1999), it appears that a small number of ex-school, home-educated children were 'school absentees' before they become home-educated[44].

Whether some such parents of absentees would pursue an academic programme with their children is, perhaps, questionable. However, the legislation requires only that every child be 'educated', without the term being clearly defined (DfEE 1999 p. 13). Home-educated libertarian children have been described as follows:

> 'So they can eat what they like, when they like, get equal say in how the family's income is spent, do absolutely nothing for days on end, if that's what they want to do. This is about relinquishing any ideas that as parents they know what's best for their children. Educationally, this puts the group at the forefront of what is known as autonomous, or non-coercive education, essentially the idea that left to their own devices, children will learn what they want and need to know entirely of their own volition.'
>
> Haughton (1999)

Galloway has been referred to at some length here and it has been noted that the studies quoted are more than a decade old with fieldwork over 20 years old. However, this does not detract from the analogy made, and in

fact highlights the problems faced by home-educators whose children may have, or had, behavioural difficulties.

Behavioural Difficulties and academic performance

Using the Rutter Scale (Rutter 1967), Ekblad (1990) explored relationships between behaviour problems and school achievement. She found that mothers were more likely than teachers to rate their children as having problems: teachers rated 8.6% of their sample as displaying difficult behaviour whilst parent's ratings showed that 17.3% of their children exhibited problematic behaviour. The children described as difficult were not the same children for both teachers and parents; in this respect Rutter, Tizard and Whitmore, (1970) concluded that whilst teachers focused on overt behaviour problems, parents concentrated on the more withdrawn or 'remote' behaviour. Ekblad's sample indicated that difficulties in reading, writing and concentration correlated positively with the teacher's ratings of hyperactive-aggressive and antisocial behaviour. Notably, Ekblad found that boys rated by their parents as hyperactive-aggressive and, or, worrying-fearful, were also the poorest readers and writers: the correlations for boys, at 0.25 and 0.28 respectively were significant. Ekblad's data in respect of the link between behavioural difficulties and academic performance were supported by McMichael (1979) who administered the Rutter Scale (Rutter 1967) besides several other measures. Ekblad cited further research using the Rutter Scale (McGee, Williams, Bradshaw, Chapel, Robins and Silva, 1985 and McGee, Williams, Share, Anderson and Silva, 1986) that had

found a connection between behavioural difficulties and poor reading skills during the early years.

Part-time schooling

Whilst there are many who would argue that home-education is not synonymous with school attendance or behaviour problems, there are others who would argue the converse. Part-time, or flexi-. schooling, with the head's consent, is an acceptable compromise for numerous home-educators and yet by definition, it is an attendance problem - the type of dilemma faced is described by Hoyle (1998 p.10) in his description of authorised and unauthorised attendance. Part-time schooling is usually recorded as authorised absence but schools are under increasing pressure to reduce absences of both types. This not only diminishes the possibilities for part-time schooling but implies that it is a problem. One home-educating parent in discussion with this author, commented on one school's hesitation in actually granting official absence:

> 'Some friends of ours tried flexi-schooling, but their daughter's teacher found it increasingly difficult to tick the 'present' box for a child who was absent.'

To overcome governmental pressure to reduce absences, the above school had decided to mark the child present, as indicated in the example above.

School Refusal

Michelson et al. (1983) presented evidence that suggested socially dysfunctional children were unable to adjust to school. Hersov (1980), in similar vein, but focusing on the clinical syndrome of school refusal, regarded 'refusal' as usually associated with family problems and linked to inadequate social skills. Muckle (1997) however, refers to a family who saw the problem from a different perspective:

> 'My child was very unhappy at school. We tried everything, even changed him to a different school, but nothing worked. In the end he became quite ill, and was unable to face going to school at all. After he came out of school, he regained his self-confidence, made lots of new friends, and started enjoying life again. Home-education saved our lives.'
>
> Home-educating parent cited in Muckle (1997)

There are those, nevertheless, with contrasting opinions:

> 'Home-educated children are isolated. Home-education means no peer group interaction and an inability to know how to behave with other children or in society. Such children may become phobic in their homes.'
>
> Local Education Authority officer working in the North West[45]

Children with Special Educational Needs (SEN)

There may be some home-educated children who, by virtue of being out of the school system altogether, are not considered by their parents to have behaviour problems. This could apply to some home-educated children with special educational needs who have not been given an SEN statement[46] or otherwise 'referred', thus avoiding the label of being a 'difficult child'. The nature of the problem may therefore, for many, be one of definition. This point appears to have been highlighted by Galloway and Goodwin (1987 p. 18) when they wrote, speaking more specifically about teachers' perceptions of children with SENs:

> 'Their wishes may not coincide with those of the children themselves or of their parents, who may see their needs in a different light.'
>
> Galloway and Goodwin (1987 p. 18)

Behavioural Difficulties in Children

On the subject of behavioural difficulties Hunt (2002)[47] questioned definitions of behavioural problems:

> 'Are the labels "hyperactive", "school phobic" and "learning disabled" smoke screens for the school's failure to understand and conform to the actual process of learning? [...] There is no evidence that learning disabilities can be objectively identified [...] attempts at establishing objective criteria for verifying human

problems are a convenient illusion behind which we can hide our incompetence in instruction.'

Hunt (2002)

Hunt then, considered many problems to be directly associated with school education. Certainly as regards stress, Childline reported a link between exam stress and suicidal thoughts (TES 1999). Further, in 1998, the Mental Health Foundation (Ellis 1998) reported that 20% of children and young people experienced mental health problems and that 25-30% of doctor's appointments were related to children's behavioural problems. Although there was nothing to indicate that these latter groups were definitely school attendees, it is reasonable to assume, bearing in mind the very small percentage of home-educators that make up the population, that they were. The suggestion that many behavioural problems are school linked raises the questions as to whether there were behavioural problems amongst the home-educated sample, and what type of problems they were.

3.5 OVERVIEW OF THE LITERATURE REVIEW

Chapter 2 concentrated on previous research specifically looking at home-educated children. The research showed home-educators to come from a variety of backgrounds and there were indications that the UK and North American home-educators exhibited both considerable differences and similarities, implying, since most research is US based, a need for UK based research with very broad goals designed to provide as thorough an evaluation of UK home-education as possible. A synoptic review of research

describing home-educators by category suggested that that categorisation was complex and perhaps, not the most efficient way in which to describe home-educators.

Chapter 3 reviewed work that is directly relevant to this research albeit not necessarily involving home-educators. The link is the background that such research provides to the current analyses. For example, Section 3.1 addressed issues relating to this study's use of a Baseline assessment, Sections 3.2 and 3.3 explored the themes of literacy and mathematics. In today's 'standards led' education climate it was pertinent to assess the home-educated children's literacy and numeracy skills and to do so, a background review of work and ideas in these areas was necessary. Section 3.4 listed some of the criticism aimed at home-educators, mostly concerning social and psychological issues. The section also introduced various aspects of social skills and behaviour problems, relating these to previous research both with school and home-educated children. One of the most interesting findings from work with the Rutter Scale was Ekblad's (1990) conclusion that mothers were more likely to be critical of their children's behaviour than teachers. Findings from the current research regarding children's behaviour rated by mothers, should therefore be considered with this in mind, besides giving credence to the idea that parents see not only overt behaviour but also have access to their children's less visible behaviours.

3.6 QUESTIONS ARISING FROM THE LITERATURE REVIEW

The aim of the research is to establish a general picture of contemporary UK home-educators, thus providing the first comprehensive UK account of home-educated children's social and psychological development and academic attainment. The overarching questions that arise from the literature review are:

1. Who are the home-educating families and what do they do and why?
2. What effect does home-education have on the children?
3. What is the value in understanding home-education and can there be a wider application for the research?

Specific questions focus upon the following areas:

Questions relating to the early years

- What are the implications for home-educated four to five-year-olds when reception aged schoolchildren are believed to benefit substantially from their first year at school (Tymms et al. 1997)? Is there an advantage to be gained from remaining longer in the home as the studies highlighted in Section 3.1.3 might imply? How valuable is the parental input that home-educated children receive during this early stage of their education? What is the worth of measuring home-educated children's value-added (see Section 3.1.5): is their learning too broad to be measured in this way? How does social class affect the attainments of home-educated children?

Literacy and Numeracy

- How do the home-educated children compare when assessed in literacy and mathematics? Are there larger numbers of 'late readers' (Thomas 1998) amongst the home-educated children than children nationally or are such children generally ahead in reading (Anon et al. 1995)? How do these children acquire their literacy skills? How well do home-educated children manage when faced with standard assessments? How effective are parents at judging their children's ability? Is there any evidence that children learning at home face more difficulty with mathematics than with literacy, as inferred by Thomas (1998)? What conclusions can be drawn from the cohort, who effectively can be viewed as a comparison group when contrasted with national norms which have been standardised against the attainment of schoolchildren?

Social and Psychological Implications

- How do children cope socially and psychologically with their home-education? Is there any evidence indicating that home-educated children harbour the catalogue of behavioural difficulties that have been attributed to them, i.e. loneliness, separation anxiety, phobias, social ineptness, isolation and academic lassitude (Desforges 1999, Webb, 1999; Shearer 1999; Hastings 1998)? Are home-educated children more passive than the norm (Shyers 1992) and if so, what implications might this have? Do home-educated children cope more readily with a

wider range of social situations than their schooled counterparts and if so, what relevance does this have?

The Learning Process

- How does home-education take place? Are families generally well organised and following a structured programme? Do families move gradually towards a less structured approach (Meighan 1995, Thomas 1998)? What evidence exists that home-educated children motivate themselves and learn informally and independently, without always being taught or coerced into learning? How efficient an education can home-based learning be judged to be?
- What is the emotional effect of home-education on the parents and wider family? Are the children isolated from their wider peer group and if so, do they suffer because of this?

The Value of Taxonomies

Three studies have classified home-educators into groups: it is therefore useful to evaluate these categories. Blacker (1981) reviewed the idea that home-educators could be grouped as either (see Section 2.2):

'Competitors' Those competing with the system (formally qualified, well read, child-centred parents who decided to home-educate early on.

'Compensators' Parents making amends after a problem in school (agree with the philosophy of school and often intend returning their

children to school).

'Rebels' Families rebelling against the system (those adopting 'alternative' life styles and educating autonomously.)

Mayberry (1988) encountered four categories of home-educator (Section 2.1.1):

'Religious' Families motivated by their religious values.

'Academically motivated' Parents who believe they can do better than school.

'Social-relational' Families who believe children are better off at home, socially and developmentally.

'New-age' Families following an alternative lifestyle who, like the 'religious' families are committed to preserving their way of life.

Van Galen and Pitman (1991) considered that there were two types of North American home-educator (see Section 2.2). Lowden (1993) also confirmed these categories for the UK, albeit without the strong Christian element. Van Galen and Pitman classified home-educators into:

'Ideologues' Parents who emphasise the family, hold traditional views and question the school ethos. These families, usually Christians, become more radical as they network. They believe God has made them responsible for their children's education.

'Pedagogues' Well read professional parents who are questioning the learning associated with schools. These parents often decide to home-

educate from very early on and adopt child-centred approaches. They are taking control of their children's education.

These studies raise the question of whether the current sample families fall into any of these taxonomies and if so, what conclusions can be drawn?

Questions Relating to the Research Implications

- What conclusions, if any, can be drawn about children's informal learning? Does home-education have benefits that are transferable to other areas of education? Are there any implications to be drawn from this research that relate to education in a broader context?

In conclusion, the main questions to be considered by this research are:

- Why and how do families home-educate, and what are the outcomes?
- In what way can home-education research be of value?

Literature Review II Endnotes

1 The age of Baseline Assessment
2 The PIPS 'Start' and 'End' correlations were larger than those seen between GCSE and A-level results (Tymms et al. 1997).
3 These group correlations, created using diverse inter-group scores, are not necessarily good predictors for individual performance.
4 i.e. 60 [progress] - 18 [raw sore] = 42. This increase was taken as an indicator of the children's 'progress' during the school year and was greater than the difference between the oldest and youngest children's baseline raw scores (the 18 points).
5 Tim Coulson directed the Baseline assessment scheme for the QCA.
6 To enable the definition to be understood in PIPS terms, original terms are replaced with 'end'/'start'.
7 Term borrowed from the SCAA (1996).
8 The 1997 Education White Paper (cited in Plewis and Goldstein, 1997).
9 Level 4 is the 'desirable outcome' for 11-year-olds in state maintained schools.

10 There was no correlation between affluence and 'Maths' attainment, and only marginal difference in the 'Reading'/affluence correlation.
11 Literacy Task Force was set up by the Labour Party, chaired by Professor Michael Barber (1997).
12 These 'demonstrable abilities' are named 'Primary' effects. Secondary effects relate to what happens when children need to make educational choices and how these are weighed up by them in the light of 'cost' and 'benefit' to the individual (Goldthorpe 1996).
13 Wendy Scott, Chief Executive of the British Association for Early Education.
14 These references refer to the content of the PIPS Baseline assessment.
15 Thomas' explains the difficulty in recording (assessing) instances of informal learning.
16 More formal than at the 'Start of Reception'.
17 This was described to P. Rothermel by a home-educator, interviewed for this research.
18 SATS are the national tests used in all maintained schools.
19 Professor K. Goodman, Department of Language, Reading and Culture, College of Education, University of Arizona, USA.
20 'Framework' is the name given to the structure of the National Literacy Strategy.
21 The NLP was started under the Conservative Government. The Labour Government initiated the National Literacy Strategy.
22 The' literacy hour' involved 10-15 minutes shared reading or writing, 10-15 minutes whole class teaching, 25-30 minutes of group work and a 10-15 minute class plenary session.
23 Pat Farenga publishes North America's 'Growing Without Schooling' magazine.
24 David Marks is the founder of National Writing Institute, Texas, USA.
25 Anon et al. (1995) was unpublished information made available to this author under promise of anonymity. Data analysis was confirmed by the present author.
26 The reading test cannot be named here for reasons of anonymity. It is known to P. Rothermel.
27 Iowa Tests of Basic Skills (ITBS) are designed and developed to measure skills and standards important to growth across the curriculum in US public and private schools.
28 Tests of Achievement and Proficiency (TAP) was designed and developed to measure skills and standards important to growth across the high school curriculum.
29 Rudner (1999) was sponsored by the US Christian organisation, HSLDA, although the study used a national sample and was not aimed solely at Christian homeschoolers.
30 In Reading, Language, Maths, Social Studies, Science (Rudner 1999, 'Overall Achievement')
31 Reading task, reading comprehension tests, writing task and spelling
32 Reading task, reading comprehension tests, writing task, spelling and mathematics
33 These 1998 tests for 7 year-olds did not measure children achieving beyond the norm related level 2 for the 'reading task'.
34 Rutter et al.'s work is based on secondary aged children only. Their opinion of maths at primary level is not expressed.
35 Rutter et al.'s (1979) research was with secondary aged children.
36 The Stanford Achievement Test Series, used in North American state schools, is a standardised battery of tests designed to measure school achievement from Kindergarten through Grade 12.
37 A newspaper article. Appleyard is citing a conversation with Wragg..
38 Larry Michelson is Professor of Psychology at The Pennsylvania State University.
39 Clairborn, 1969; Williams, 1975; Towers, 1992 (Janes, 1996) evaluate this research.
40 Quoted from an email to Paul Rothermel from Dr Shyers, 20.3.98.
41 Absentees are used with the definition provided by Galloway (1983), as children absent from school with parental knowledge. This is as distinct from ordinary truants who are absent without parental knowledge or consent.
42 Galloway (1982 & 1983) focused on absentees from deprived areas in Sheffield. The absentee data quoted does not refer to those children referred to the LEA psychologist.
43 Galloway believed that this was because, whilst the backward children were put into a remedial class because they experienced learning difficulties, the absentees were placed in the same classes because of their attendance problems, whether or not they had learning difficulties. Galloway did not, perhaps, consider the possibility that some absentees' parents may have been assisting their learning at home.

44 The researcher knows of several such cases
45 This opinion was expressed during a telephone conversation between P. Rothermel and the LEA officer in question.
46 Statements of special needs (SEN) are issued by Local Education Authority (LEA) Educational Psychologists for SEN children. They specify the nature of the child's diagnosis, requirements and how the child is to be educated. The education of statemented SEN children is the responsibility of the LEA and parents can then only home-educate with their LEA's permission.
47 Jan Hunt is an American Psychologist, with a regular parenting column in Natural Life Magazine since 1989.

CHAPTER 4: METHODOLOGY

4.1 INTRODUCTION

This chapter describes the multimethod approach used for this thesis. Five chapters make up the results.

- Initial Questionnaire (Chapter 5)
- PIPS Baseline Assessment (Chapter 6)
- Literacy (Chapter 7)
- Mathematics (Chapter 8)
- Social and Psychological Data (Chapter 9)

The methodology is described using the following general format:

- Choice of Methodology
- Design
- Materials
- Participant Selection
- Procedure

4.2 OVERALL RESEARCH DESIGN

The research took the form of access to the home-educators, a questionnaire survey distributed to them, educational and psychological assessments of home-educated children and interviews with home-educating families. Questionnaires were analysed from 419 respondents[1] and 238 assessments were conducted. Whilst 100 families were interviewed, the results are not included in this research: analysis of

interview data is taking place as part of a post-doctoral follow-up addendum report. This decision not to include the interview chapter was taken because of the limitations in terms of the time and word length of this PhD. However, field-notes from these interviews are referred to because of the qualitative background data that they add to the assessment programme and the PhD overall.

Below is an overview of the methodology.

Survey Data:

- Questionnaire Survey
  N=419 questionnaires returned by home-educating families

Educational Data:

- PIPS Baseline Assessment
  N=35 children 4-years-old
  Assessed at the beginning of a 9 month period and again at the end
- PIPS Year 2 Assessment
  N=18 children 6 to 7-years-old
- National Literacy Project Assessments (total n=49)
  NLP Year 1 (N=17) children 5 to 6-years-old
  NLP Year 3 (N=15) children 7 to 8-years-old
  NLP Year 5 (N=17) children 9 to 10-years-old
  All year groups completed a National Literacy Project assessment

Psychological Data:

- Goodman Strengths and Difficulties Scale (SDQ)
  N=44 children aged 4 to 11-years-old (adult informant)
  N=7 children aged 11-years-old (self rated)
- Revised Rutter Scale for School Aged Children
  N=42 children aged 5 to 11-years-old (adult informant)
- Children's Assertive Behaviour Scale (CABS)
  N=43 children aged 8 to 10-years-old (self rated)

And part of the overall research design but not included in this thesis: **Interview Data:** N=100 home-educating families.

4.3 METHODOLOGY OVERVIEW

This research used a multimethod approach that facilitated the quality and quantity of data necessary in order to gain a comprehensive portrayal of home-education in the UK. It enabled conclusions to be drawn through reference to a multiplicity of sources, methods and theories (Denzin 1989). It was also anticipated that by using different methods, interpretability would be enhanced whilst threats to validity[2] were kept to a minimum (Robson 1993).

In a discussion about multiple methodologies, Burgess (1982) referred to the process of 'research triangulation'. This suggests that a field researcher must collect many sets of data, relating to the different phases of the research, the different settings and the different participants. This approach has drawn criticism from Gans (1991) for the vast amount of unmanageable data that can accrue. The quantity of data collected for this research was indeed vast and although it remained manageable, it was nevertheless, laborious to co-ordinate.

Guba and Lincoln (1985) describing elements that they considered vital to research, cited trustworthiness, transferability, dependability, confirmability, and internal[3] and external[4] validity. The trustworthiness of the research lies in the ability to compare and contrast data, and was enabled though the multimethod approach used. The research relied heavily upon tried and tested assessments, the validity of which had been established prior to this

research: these assessments were combined with the voices of the home-educators to create a portrayal that was both subjective and objective. It was reasonable, from the sample size, to believe that generalisations could be made, although it was difficult to make any assumptions in the absence of definite knowledge about home-educators that remained unknown to any survey, authority or organisation. The attributes of the group studied were particular to themselves, therefore representativeness was not guaranteed. This research, most probably, could not be replicated, since the study was a product of its time: with the perceived advent of compulsory registration[5], many home-educators are increasingly less likely to accept such an intrusion into their privacy. Home-educators have become empowered: when the research began, there was just one home-educating organisation in the UK; six years on[6], there are many; the press cuttings were few then; now there are stories about home-educators almost weekly in the press. The advent of computer email lists for home-educators has created a vocal forum whereby home-educators have become a lobbying force[7].

All participants' real names have been altered. Pseudonyms have also been inserted into quotations, replacing any real names that had originally been used. Where scanned images appear to carry names, these too, have been digitally altered to pseudonyms.

4.4 ACCESS TO HOME-EDUCATORS

As a result of reading several newspaper and magazine articles published during 1996 (Henson 1996; Midgley 1996), evidence of a British home-

education movement became increasingly apparent. Reports referred to a national network of home-educators and suggested that the incidence of home-educating families had grown over recent years. A further literature search revealed that Meighan (1995) had presented a case arguing the effectiveness of home-education, while Knox (1988) had raised awareness of school phobia and Holt (1981) reflected a growing apprehension towards the school system. Petrie (1992) and Lowden (1993) documented the tension that existed between home-educators and their Local Education Authorities (LEAs). Almost a year of preliminary investigation prior to 'official' instigation of the present study showed that despite the work of the above mentioned writers, the available research was minimal, particularly in the UK where so little was actually known about home-educators. Access to home-educators was thus made gradually over a two year period[8], through:

- Conversations with home-educating families.
- Observations (participant) of home-educators at local and national meetings, and at organised activities
- Interviews with LEAs

Initial contact was made by joining the national home-education organisation Education Otherwise ('EO'); this allowed the researcher to attend local and national meetings, besides possession of a contact list of members[9]. Home-educating families were approached through support organisations, newsletters, curriculum suppliers and LEAs; other families were approached

individually by the researcher, as and when such opportunity arose. Attendance at a national meeting of the 'EO' ruling council provided an opportunity to request that the initial survey questionnaire be inserted into the 'EO' newsletter. 'EO' membership and the questionnaire distribution initiated far wider access to home-educators. A splinter group from 'EO' formed the organisation Home Education Advisory Service (HEAS) and subscription to their newsletter also brought opportunities to gain access to home-educators. Observations at local and national meetings of home-educators enhanced the researcher's understanding of home-educators at grass roots level and gave broad access to many types of home-educator. Over the period of this research, such groups, initially set up from 'EO' contacts, have tended to take on their own identities, accepting home-educators with and without affiliations to any organisations and distributing their own newsletters. There are now many such groups throughout the UK. In a similar way Schoolhouse Education Association (SHEA) was started as a result of home-educators in Scotland realising that they needed their own national organisation in a country where the law on home-education differed slightly from that in England. Membership of SHEA[10] and attendance at their Dundee conference permitted the researcher to network in Scotland. Contacts made through religious organisations further widened researcher awareness.

Once it became clear that many home-educators did not affiliate themselves to support organisations, LEAs were contacted and interviewed, by telephone, about their known home-education populations. The LEA

experience and their knowledge of home-educators was often radically different from that gleaned through the support organisations; thus, contact with LEAs enabled a very different section of the home-education 'community' to be approached.

Networking in this way, home-educators became increasingly accessible. Access was nevertheless, a very long process that engendered many hours of research and time spent in establishing trust.

4.4.1 ETHICS

A detailed discussion of ethical issues appears at Appendix 4.1. Many ethical issues however, are discussed in the text as they arise.

4.5 METHODOLOGY ADOPTED FOR THE INITIAL QUESTIONNAIRE

4.5.1 CHOICE OF METHODOLOGY (Chapter 5)

Decision to use a questionnaire

The overall research methodology was designed as a graduated sequence, moving from the collation of general background material towards family interviews and specific assessment based data. A questionnaire survey format met the research requirement: it permitted the solicitation of a broad spectrum of information from home-educating respondents, about whom little was known. For this reason too, open questions were considered to be more user friendly than a Likert scale. Furthermore, before the assessment and interview programme could proceed, it was necessary to have a pool of

potential participants. The assessments needed to be conducted according to a strict timetable and so speed of delivery and response were also issues considered in the decision to adopt a questionnaire format for this initial stage of the research.

Bryman (1989, cited by Robson 1993)) believed that surveys provided a 'snapshot' of solicited views and practices whilst facilitating a focused content: both objectives met through the current research questionnaire survey. Moreover, the style adopted was one recommended by Mayberry, Knowles, Ray and Marlow (1995), who argued that a questionnaire survey should be designed to enable analysis, both quantitatively and qualitatively, whereby generalisations, trends and opinions could be established.

A questionnaire format would also provide the researcher with a tool for the gathering of superficial information on families who were subsequently to be interviewed, thus facilitating the interview time to be usefully employed in exploring pertinent issues.

Argument against using a questionnaire

A number of home-educators encountered informally expressed their view that they were too individual to be asked the same questions, an opinion apparently supported by Webb (1990). Endorsement of this was expressed in Robson (1993 p. 191), namely that representation of respondent's idiosyncrasies and individuality might not be served or emphasised particularly well by use of a questionnaire. Meighan (1995) used individual

differences between home-educators as an argument against using quantitative data, preferring to present examples case by case as social studies. However, this research attempted only to portray a general picture of home-education. It is because of the diverse nature of home-educating families that case study research, whilst illuminative, is only ever the story of those families and there was no intention here to highlight each individual family's practice. The questionnaire survey data, qualitative in nature, yet quantifiable, could for example, assist in identifying universal features, beyond the scope of an ethnographic instrument. Meighan (1995) had suggested that at any time 'EO' draws at least a third of its membership from teachers[11] and based upon her study of twenty families, Webb (1990) stated that 'almost all' home-educators have been influenced by John Holt. Clearly, quantifiable data was necessary in order to substantiate these claims.

Lowden (1993) stated that his decision not to send out questionnaires to home-educators was based on the predicted poor rate of returns, an 'EO' questionnaire in 1988 having received a 30% return rate and Grant having experienced a 20% rate of return in 1983. Mayberry et al. (1995) defended their own questionnaire response rate of 25% as 'excellent', arguing that where a population is apprehensive of official intervention (as they might interpret it), a very low return is to be expected. However, they stressed that since so little was known about home-educators, there was every chance that the returns received could make a valuable contribution towards understanding at least some of the people whose pursuits would otherwise, remain non-quantifiable phenomena. Lowden used interviews to explore

home-education but appeared to have made little use of the data from these meetings and there was scant description of the details involved in them. He therefore relied heavily on the LEA returns and on his own review of the law[12] as it related to home-education.

Lowden (1994) criticised questionnaire surveys of home-educators because of the poor return rate that resulted in non-representation. However, in home-education studies, returns of 20 - 30% have been considered valid, particularly when the information from a collection of studies is assembled together (Van Galen and Pitman, 1991).

In response to anticipated criticism that questionnaire respondents might exhibit 'social responsibility response bias' (Robson 1993), that is, they may say they do one thing and in practice do another, it was conceded that while such a possibility existed, precautions were taken to limit it; anonymity was invited and the questionnaire was designed not to include any leading questions. Without knowing who the sample would be, it was not easy to anticipate in advance just what effect 'social responsibility response bias' could have on the study. It appeared reasonable to consider this issue retrospectively, upon analysis of the questionnaires. At that stage hints of 'political correctness' and 'social responsibility response bias' might show themselves more obviously. This might be detected through, for example, repetition of certain phrases from a variety of respondents, indicative perhaps, of social bias and influence.

4.5.2 DESIGN OF THE QUESTIONNAIRE (chapter 5)

Construction of the early versions

The initial questionnaire contained 80 questions that related to many aspects of the family such as income, political belief, religion. The original questionnaire was later amended to contain 50 questions and finally shortened to 35 items (attached at Appendix 4.2). With the assistance of Ms Mills[13] and the 'EO' newsletter's Co-ordinator, many of the questions were rephrased so as not to alienate potential respondents. The Co-ordinator explained that many home-educators did not 'send' their children anywhere and neither did they 'teach' them: children from these families tended to 'go' to wherever and to 'learn' rather than be 'taught': therefore questions such as,

'Might you send your children to school in the future?'

needed to read:

'Might your children go to school in the future?'.

The significance of words used in questionnaires has been discussed in Robson (1993). The initial stages of modification involved a general softening of the overall tone of the instrument to include phrases relating to feelings: the earlier version had invited objective answers using straightforward direct phraseology but this, the researcher was advised, was inappropriate for many home-educators. The change in tone was justified on the basis that only the more formal home-educators would respond to the initial version, whilst both they and their informal peers would be attracted to the more subjective approach.

Following earlier amendments Dr Petrie[14] and Professor Aubrey[15] assisted with final modifications. It was anticipated that the questions used in the administered version would resonate positively with respondents, whose profile[16] was taken into consideration. The questionnaire included questions covering family background data, their motivation to home-educate, the significance that home-education had for the family, the structure adopted for the children's education, the materials used and the parent's attitude towards socialisation. There was also a question relating to the family's relationship with their LEA.

The questionnaire was piloted[17] with three home-educating families and three non home-educating families, and input was also received from various professionals. A larger scale pilot was considered unwise at the time owing to the complexities in accessing home-educators. Robson (1993) explained that where interviews were concerned there can be justification for not running a pilot, owing to the effort necessary in building up a relationship of trust and acceptance with interviewee participants. This same rationalisation applied to the study at hand. Time was taken to gain access to possible respondents and acceptance within 'EO' to permit the questionnaire to be distributed amongst their members. In consideration of the inaccessible nature of home-educators in the UK, the involvement of potential questionnaire respondents with a widespread pilot version might have limited even more the small numbers who were thought likely to respond to the questionnaire. It was important that the maximum number of respondents

were 'naïve', unlike those referred to in Webb (1990), where the sample of twenty participant families had included five families who had already written books about their experiences. Additionally, its distribution as a centrefold to the newsletter and its association with 'EO' might have jeopardised the study by creating a situation whereby members of 'EO' could have discussed and questioned the merits of the questionnaire. Contact with both 'EO' and non 'EO' home-educators strongly indicated that the families involved were sensitive to any move that might be deemed 'official'[18]. Minor alterations were made to the original questionnaire distributed through 'EO' in 1997, as highlighted in the following section.

Subsequent amendments

After the initial distribution of 2,500 questionnaires through the 'EO' newsletter, a sample of 50 questionnaires was analysed and a small study produced, thus creating a pilot analysis (as opposed to a pilot distribution). Having been led to believe that home-educators were sometimes wary of any enquiry into their decision to home-educate, many personal questions such as occupation and religion had been excluded[19]. It soon became evident through the sample analysis, that home-educators would respond to questions on occupation and religion and therefore related questions were adopted into a modified version of the questionnaire. The wording on some questions was also altered: there had been one question on the meaning of home-education and another on the family's motivation: these were merged as it became clear that the responses could be separated at the point of

analysis, whilst the space left on the questionnaire allowed for extra questions relating to occupation, religion and parenting styles.

The 34 question version had included leading examples (highlighted here in bold font) such as:

> What was/is your family's motivation to home educate? **e.g., ideology, bullying, special needs, question of faith, morality in society, school phobia, always intended to do so.....**

These were removed and as with the merging of the 'motivation' and 'meaning' questions, simplified to read, for example:

> 'What does home education mean for your family and what motivated the decision to home educate?'

Other modifications included:

> 'How do you feel about the idea that children educated at home miss out on the opportunity children at school have, to socialise with their peers?'

This was reduced to:

> 'What is your view on child socialisation?'

The questionnaires analysed initially were absorbed into the main sample, together with all the questionnaire responses that had been returned by that time. The difference in questionnaire formats between the earlier and later version was small but effective. Since the research exercise was to explore home-education where little previous UK research existed, the decision to adapt the questionnaire seemed an appropriate reaction to an increased understanding of the situation.

The modified questionnaire contained 35 open questions. Below each question was a space of between 3 and 6 typewriter carriage returns in anticipation that respondents would write their answers in that area. The questionnaire was designed on 4 sides of A4 paper and reduced to fit entirely on both sides of one A4 sheet of paper. Modifications continued to be made to subsequent editions but these were generally the result of space limitations for the different distribution formats used.

In an attempt to eliminate the exclusion of families who objected to or found difficulty with, questionnaire formats, potential participants were invited to use plain paper and describe why they home-educated and what it meant to their family. Families were asked to provide their names and addresses if they were willing to participate further or be contacted for any reason; thus families wishing to remain anonymous were not deterred from replying.

4.5.3 SAMPLE SELECTION (Chapter 5)

Targets for the questionnaires were home-educating families. A participant for the purposes of this study, was defined as either a family or a respondent.

Initially the questionnaire was sent out through the 'EO' newsletters and it was assumed that most respondents would be members of EO: thus a defining characteristic of that group would be that they were probably associated with a membership organisation. During the latter part of this study's first year and the whole of its second year, the questionnaire

distribution broadened to take in a further batch of 'EO' members and families contacted through other organisations[20], word of mouth and LEAs[21]. In some cases it was possible to speculate about the type of potential respondent, such as in the case where a number of questionnaires were distributed though a home-educating mother's Christian distribution business and it was thus reasonable to assume that the participants would themselves be Christians. Where LEAs assisted with distribution, there was diversity amongst families although the more 'wary' families tended to be less common in this group, having decided to avoid becoming known to the LEA.

Reference to previous studies, (e.g. Webb, 1990; Meighan, 1995; Mayberry et al., 1995) and attendance at home-education meetings indicated that subjects would be well educated and literate, possibly environmentally attuned and possibly religious. No further assumptions could be made.

The sample was considered representative of many home-educators throughout the UK. Discussions between this writer, home-educating non-'EO' members and the 'EO' database secretary, indicated that home-educating families often joined 'EO' for support when they began home-educating their children, but chose not to renew membership once they had used that connection to make contact with other families and local groups. This use of 'EO' was evidenced by membership turnover[22], where families were often believed to continue home-educating after lapsing their membership of 'EO'. Therefore, it could be postulated that many home-educators, other than those who were allied with specific 'closed' religious

groups, were or had once been, represented by the 'EO' membership. There were no parameters set for respondents in relation to education, age, ethnicity, nationality, or location.

Figure 4.1 shows the methods of distribution and the numbers of analysed returns. The first year brought 279 returns (all analysed) and second year many more than anticipated (140 of which were analysed[23]). Precision over numbers 'in' per year was not possible, bearing in mind there was no clear cut line between years one and two distribution and returns, or between the second and subsequent years. Questionnaires 'dribbled' in almost continually and were still arriving in March 2002 by post and electronically, despite not having been distributed since 1998! The high number of returns in the second year (over 500) appeared to be the result of both the expansion in distribution methods and because home-educators who had seen but not completed the questionnaire in year 1, did so in year 2. The decision to analyse the rather odd number of 419 came about because the intention to analyse all the questionnaires was thwarted after 419 analysed questionnaire data analysis sheets (sample at Appendix 4.3) were sent off to the data entry team at University of Newcastle with an intention to send on the remainder once they were analysed. The invitation to have the hand-written coded data entered onto computer at Newcastle came from Professor Tymms, Director of the PIPS Project. However, this researcher, realising that time was 'running out', and setting a limit of 500 questionnaires to be analysed in total, decided to enter the remaining data herself (81 questionnaires) - a task that itself became over complex owing to personal

stresses at that time. Thus the decision was taken to keep with the 419 questionnaires whose data had been entered professionally. At the time this appeared to be the most responsible and appropriate way forward.

During the period of distribution just 3 families responded twice to the questionnaire whilst a further family responded with a letter during year 1 and a questionnaire in year two. Where the second response complemented the initial reply, the data were combined.

FIGURE 4. 1: METHODS OF DISTRIBUTION 1997-98 AND NUMBER OF RETURNS

Contact	Type of Organisation	Distribution	Number Out	Anal-ysed	Expected Characteristics
'EO' (year 1) 1997	Paid Membership	Inserted in newsletter	2,500	168	'EO' members - Diverse UK Sample
'EO' (year 2) 1998	Paid Membership	Inserted in newsletter	2,500	131	'EO' members - Diverse UK Sample
LEAs (year 1)	Local Government	Distributed by post or hand	Approx. 85+	31	Diverse Sample that may exclude families wary of intervention
SHEA	Membership with or without a donation	Distributed by hand and post	25	6	Scottish Families
CompuServe bulletin board (year 1)	Computer Server	Requested through the Internet(on the Web Site)	1	4	Access to the Internet. CompuServe subscribers World wide
'EO' Website	World Access Internet site	Invitation on-line to Internet site visitors	1	28	Access to the Internet
HEAS	Subscription to quarterly Bulletin	Requested by letter in Bulletin	12	5	UK. More likely families who have removed children from school[24]
Christian organisations	Subscription and membership	Requested/distributed by hand and email	Unknown	7	UK Christians
Local organisations and groups	Informal groups	Requested & distributed, by hand and post	100+	17	UK Member of or contributors to those organisations or groups
HERALD[25]	Paid Membership	Requested	6	3	UK Members of Herald
Computer requests	Casual contacts made through email	Email from researcher inviting them to respond	50	13	Access to a Computer. UK and Overseas
Personal Contact	None		Approx. 40	6	UK
Total	-	-	-	**419**	-

Initially, owing to the difficulty in contacting home-educators, it was anticipated that the survey would be distributed once only, through the 'EO' newsletter and all the returns collated and analysed. However, once contacts were established within the home-educating community and related LEA personnel, it became clear that a far wider sample of home-educators could be reached. Hence, further questionnaires were dispersed to a broad range of home-educators as distribution snowballed with organisations and individuals passing copies on. This was beneficial in creating a clearer picture of the status quo amongst contemporary home-educators but signified an ever expanding volume of data.

Although only 419 of the questionnaires were analysed in full, all questionnaires returned were read by the researcher. From the reading it was possible for the researcher to gain an overall picture of the respondents and thus, conclude that those analysed were representative of all those participating in the research. Further, the researcher's intention was that the research would extend beyond the current study and therefore incoming questionnaires beyond the cut-off point were encouraged.

It was not possible to define a 'rate of return' since no attempt was made to distribute a pre-determined number of questionnaires. The distribution aim was to send out as many questionnaires as possible in order to obtain information about home-education. Without knowing how many home-educators there were, calculations of rates of return were further complicated. For example, the request in the HEAS newsletter brought 12

responses and yet overall, the number of families who named their affiliation with HEAS totaled 113. This was further complicated by HEAS who, over the 3-year period, were unable to provide any indication of their subscriber numbers. Also, membership numbers of 'EO' did not indicate whether families were practising home-educators[26]. Families may have had grown children, pre-school aged children or children moving in and out of school; they may also have been people with an interest only.

4.5.4 INITIAL QUESTIONNAIRE PROCEDURE (Chapter 5)

Procedure Outline

Initial contacts were made concurrently with 'EO' and LEAs. The LEAs were approached either by telephone, email or letter. Encountering the officer in charge of home-education was often an arduous task, many switchboards not understanding the term 'home-education'; this resulted, very often, in being passed from office to office only to find that the person responsible was on leave, out or in one case, no one knew who the person was. Another LEA stated that there were no home-educators in their area at a time when there were at least five known to this researcher.

On the 22nd January 1997, the first Metropolitan LEA officer to assist with the distribution of questionnaires confirmed that it would be possible to distribute the home-education questionnaires during visits to the home-educating families in the region. Visits were due to begin the following week and an initial supply of ten questionnaires was requested. These were distributed to the families visited, together with ten letters for the families concerned and

ten stamped addressed envelopes. An example of the prototype letter that accompanied all LEA distributed questionnaires appears at Appendix 4.4.

On the 25th January 1997, the AGM of the organisation 'E.O.' authorised distribution of questionnaires through the February edition of their bi-monthly newsletter to members. The questionnaire was printed by the 'E.O.' printers[27] and enclosed by them[28], as a centrefold, into newsletters: 3,000 copies were made, 2,500 of which were going to active members. In 1998 approximately 2,500 more questionnaires were distributed in this way. During 1997 (no 1998 data available), 'EO' had 1191 new members and had lost 791[29], therefore, it can be surmised that approximately 1100 new families received a copy of the questionnaire. The issue of the 'EO' newsletter that followed each of the mass distributions carried a short article urging more families to respond and thanking those who had. A copy appears at Appendix 4.5.

On the 30th January 1997, a second Metropolitan LEA requested 9 questionnaires that they had agreed to distribute, together with a covering letter that they, the LEA, had prepared. The LEA required both the stamps for the letters being sent out and stamps for the questionnaire returns.

The general pattern in LEA distributed questionnaires, as described above, continued over a period of approximately eighteen months from 22nd January 1997 to mid 1998. Eight local authorities assisted from about thirty who were approached initially. Only one LEA refused to assist, on the basis that

they had too many home-educators and addressing the envelopes would take up too much time. Others did not assist for a number of routine reasons such as, agreement in principle but then the appropriate officer took sick leave; or the time scale offered was longer than that requested; during school holidays the home-education inspectors were re-deployed or given leave; letters that had been invited during telephone conversations were not answered; and there were changes in staff.

The ways in which LEA officers assisted varied greatly. Some required a set number of questionnaires, others made photocopies from one copy supplied, there were those who knew the quantity they would be sending out and those who were unable to provide figures. Several officers delivered questionnaires whilst on visits, others posted them. There were those officers who required postage and those who did not. Some officers asked for letters to their Directors, others made their own decisions. Since the purpose was to distribute as many questionnaires as possible, the actual numbers delivered was not as important[30] as the agreement from an LEA that they would support this research.

Besides distribution through 'EO' and LEAs, questionnaires were distributed by a number of means, as described above in Figure 4.1. An example of the letter published in the HEAS Bulletin, for example, is contained at Appendix 4.6. Whilst distribution continued for eighteen months, returns arrived over the two-year period identified, and beyond.

On receipt, each questionnaire was numbered and where questionnaires were returned anonymously, a note was made of the place of posting[31].

Analysis of the Questionnaires

A pilot analysis of 50 questionnaires was undertaken using a Microsoft Excel database to code respondents' answers, numerically, directly onto the computer. Answers to each question were coded and allocated a number according to the type of response[32]. Upon return of the completed questionnaires, the responses to each question and subsequent analysis were subject to interpretation. Owing to the possible distortion of data that *could* occur, every precaution was taken by the researcher to prevent this. One method of prevention was to keep as closely as possible, if not exactly, to the phrases and words of respondents, and to read each answer in the context of that respondent's responses to other questions. To test for reliability[33] at this stage, selected questionnaires were re-examined by a second analyst (every fifth questionnaire). Initially, reliability was between 40 and 50% but the process allowed remedial procedures to be established at this early stage: these are described below.

Following the pilot analysis it was decided to adopt a different method of data recording for the main sample[34]. There were two reasons for this: the direct entry method was open to typing errors and researcher 'database blindness', also, in view of the increasing numbers of questionnaires being

returned, it became clear that a more efficient and sophisticated database was needed.

Changes were as follows:

- Data entry sheets were printed. An example is provided at Appendix 4.3. These contained 90 fields where codes could be written. This meant that questionnaires could be coded away from the computer at any convenient moment and that backtracking and rechecking was made simpler.
- Coding sheets were used, where phrases were provided with number classifications. An example of a coding page appears at Appendix 4.7. The question responses were read and answers categorised according to the response offered. Category sizes were defined according to how many different answers were given: they were however kept to a minimum. Every effort was made to represent the feeling implied by the respondent. An example of classification and interpretation would be for instance, that under the question inquiring about the advantages of school, many respondents replied with the wording 'free childminding service' whilst others used the wording, 'free time for parents'. These replies were seen as reflecting similar ideas about the benefits of school and were accordingly made into one category.
- An assistant, Dr Massey[35], was enlisted to assist with the code allocation task. Initially, assistant and researcher worked together through a batch of 15 questionnaires. The discrepancy between analysts was minimal and worked through until a level of total agreement was reached[36]. Many

of the questions required factual information and differences in interpretation were thus kept to a minimum and chiefly concerned answers to such questions as, 'What was your motivation to home-educate (e.g. did the 'religious' family mean that they home-educated because they believed they could 'best provide for the children', or was the decision based upon religious motives)?' For this reason, as far as was possible, the categories used under each data-field number adopted the wording of the respondents, with some classifications eventually containing a subset of several phrases that appeared to represent the same overall sentiment.

- The statistical database package SPSS was used. This meant that the data could be analysed statistically with ease.
- Data was transferred from the hand written data sheets to an SPSS database by assistants at the University of Newcastle[37].

Although it was reasonable to expect some errors in data entry, none have been found. A small number of discrepancies[38] were encountered but these related to errors in data entry by the researcher and were rectified. The three-tier system of questionnaires, hand completed data entry sheets and computerised database, created an efficient system, whereby backtracking could allow for clarification as necessary.

Feedback and Analysis of Non Respondents

Two participants wrote that they had found the questionnaire to be very long and difficult, one of these choosing instead to reply with six pages of typed notes. Another such submission came from a lady who commented that the questionnaire had forced her to think through and write down her ideas for the first time; she too, had found that the questions were limiting, choosing instead the freestyle approach. A few other respondents, chiefly those who preferred to use separate paper, spoke of their enjoyment at using the questionnaire as a basis for thinking through and writing about their 'philosophy'. One non-respondent commented that she found the questionnaire to be very complex, awkward and far too long.

It appeared that many of the initial non-respondents contacted though the 'EO' newsletter became respondents at a later date, either because of the second distribution through the newsletter or because they had been re-approached through their LEA, friends or another organisation that had co-operated with this research. Many non-respondents were probably parents with families who simply 'never got around' to completing the questionnaire: such an occurrence was clear from the number of questionnaires returned with comments like:

> 'it's taken me 7 months to do, but here it is, hope it helps'.

Where postage was included, such as with a number of questionnaires distributed though LEAs, SHEA and HEAS, questionnaires were more likely

to be returned, even when not completed, as in the case of a number of families who had sent their children to school or otherwise changed their circumstances. Similarly, where participants emailed their responses, the ease of the medium meant that completion and return were made simple, thus encouraging responses.

There were families who did not reply because of their philosophical belief that questionnaires were invasive and there were others who were suspicious of any interest in their situation.

There were indications that few home-educators were completely isolated. Most home-educators it appeared were known, if not to their LEA, then to other home-educators, associated membership organisations and or to their religious organisations. Some religious organisations were difficult to approach and whilst several anonymously returned questionnaires appeared to come from affiliates of such organisations, it was recognised that many more such families would not have had access to the questionnaire or if they had, had chosen not to return it.

Two parents said they had not replied because they did not know what answers to give. This reaction may have affected a number of the non-returnees. There was little remedy for such a reaction. The questionnaire's introductory paragraph made it clear that all home-educators had something to contribute. This type of response may have been an indication that some non-respondents were unsure of themselves; to minimise this problem the

'EO' newsletter follow-up letter urged families to respond (see Appendix 4.5). Where questionnaires had been distributed by other means, such an approach was not always possible.

4.6 METHODOLOGY USED FOR THE BASELINE ASSESSMENT

4.6.1 CHOICE OF METHODOLOGY (Chapter 6)

Selection of the PIPS Baseline Assessment (Start and End of Reception)

An assessment was sought for this research that would evaluate in some way the attainment of home-educated children. Early in the research planning in 1996, during discussion with Professor Peter Tymms (Director of the PIPS Project), at the University of Durham, it emerged that the Performance Indicators in Primary Schools (PIPS) Start and End of Reception Baseline assessment would be an appropriate measure to use.

Aspects of PIPS 'Reception' that made it suitable were that it was designed to capture pre-school style learning, as opposed to being formulated with the National Curriculum in mind. Although the 'End of Reception' measure was very much school based, its place at the start of the school 'ladder' meant that National Curriculum related items were kept to a minimum. The significance of the PIPS 'End of Reception' instrument was that it permitted this research to explore the value-added aspect of the home-educated children's learning. This was vital, since it meant that the programme was not just conducting a 'spot check' on the home-educated children, but was

able to evaluate their learning over a 'year' thus introducing a longitudinal element to the research. The growing popularity of the PIPS 'Reception' assessment amongst schools and LEAs also made it an attractive choice. For example, in 1999, 3208 schools and 89,571 children participated (PIPS Project 1999).

Assessment Programme Design

Initially the questionnaires[39] completed by the 35 families participating in the PIPS 'Reception' assessments were analysed to extract background information relating specifically to these families.

The assessment was devised in two parts, to be given at the start and end of what would be the 'Reception Year'. PIPS 'Start of Reception' (PIPS Project 1997a) was administered in September, soon after school entry, followed by PIPS 'End of Reception' (PIPS Project 1998a) ten months later. The 'End of Reception' provided an extension to the 'Start of Reception' test and involved re-administering those parts of the 'Start of Reception' assessment that a child had not been able to complete, together with the follow-on 'End of Reception' measure. The PIPS Baseline was designed to monitor children's progress as they enter and pass through their initial year in full-time school. The 'Start of Reception' instrument tested for 'rhymes', 'early reading' and 'early maths', whilst the 'End of Reception' assessment evaluated performance in these areas, together with 'attitude' and 'self esteem'. Appendix 4.8 provides a list of the specific test areas. Whilst the 'Start of Reception' assessment aimed to study children who had not started formal

schooling, the PIPS 'End of Reception' was directed at children who had spent a year in school and the instrument was designed to test the type of knowledge commonly expected to be acquired during that year. The 'Start of Reception' and 'End of Reception' tasks were designed to provide a value-added measure of progress and performance[40].

In order to provide a rich backdrop to the quantitative data collected, semi-structured interviews were conducted with each family, in their own home, at the start and end of the assessment programme. Each interview lasted approximately 1.5 hours and involved speaking with all members of the family present, in a variety of locations within the family home and garden.

Materials used for the PIPS Baseline Assessment

For the assessments the following materials were used:

- PIPS 'Start of Reception' Assessment Booklet (PIPS Project 1997a)
- PIPS 'Start of Reception' Parent's Instructions (PIPS Project 1997a)[41]
- PIPS 'End of Reception' Assessment Booklet (PIPS Project 1998a)
- PIPS 'Start of Reception' Parent's Instructions (PIPS Project 1998a)

To assist with analyses of the data the following publications were used:

- Performance Indicators in Primary Schools: Technical Report 1999 (PIPS Project 1999)
- PIPS Baseline Report 1997/98 (PIPS Project 1997b)
- Using the PIPS Scheme 1997/98 (PIPS Project 1997c)

- End of Reception Assessment: How to calculate initial feedback. PIPS Project (1998c)

4.6.2 SAMPLE SELECTION (Chapter 6)

Selection was determined according to whether a home-educating family included at least one child aged approximately four years[42]. Amongst the 212 questionnaires returned four months after distribution, 45 families met this criterion and were approached with a request that they participate in a further stage of the study. Families were members of the home-education organisation 'EO'[43] (although by the time of 'End of Reception' administration, 8 of the 35 original families were no longer members of the organisation, 'E.O.') and had each returned a research questionnaire that had been distributed some months earlier through that organisation's bi-monthly newsletter. Prior to selection further characteristics could not be known, although it could be conjectured that such families would probably have at least one child who had never attended school. During the selection of families to be approached in connection with the Baseline assessment, questionnaire data relating to those families was available to the researcher, but it had not at that time been analysed, beyond identifying prospective subjects and noting that these were spread around the United Kingdom.

Whilst it is not possible to know the number of four-year-olds in 'E.O.' during 1997, in 1998 119 children were known to fall within the age range sought the previous year: this suggested that the response rate from families with

four-year-olds (45 completed questionnaires) may have represented close to 40% of those 'E.O.' members who had at least one four-year-old in 1997.

All 45 families were approached by letter and from these, 35 participated in the initial baseline assessments. Of the ten families who did not participate, four were necessarily abandoned because of their location, one family declined to assist further[44], three could not be contacted, one was moving house and the other family were on holiday at the time of the visit. One family agreed to participate but on the day arranged for the assessment, the child participant was absent, having been removed without warning, by an estranged parent[45].

By the time of the second interview, of the initial 35 families, one had placed their children in school and a second family had moved, leaving 33 families to be assessed during the second phase of the PIPS 'Reception' assessment.

4.6.3 Procedure for Administering the PIPS Baseline Assessment

During February/March 1997, approximately 2000 questionnaires were distributed through the bi-monthly newsletter of 'E.O.'. By June 1997, 212 questionnaires had been completed and returned and 45 home-educating families were identified from this batch, as described in Section 4.6.2 above. These families were approached by letter and subsequently, where possible, by telephone: 35 families agreed to assist with the PIPS Baseline assessment.

The assessment materials were supplied to the researcher by the PIPS Project co-ordinator and the home-education research programme was issued with an identification number, used for reference purposes by the PIPS Project team. The cohort was named, 'Hill Top School' and provided with an identification number, thereby eliminating any possibility that members of the PIPS Project team, beyond several key people, would be aware of the actual nature of the cohort.

The participating families were visited in their own homes during the month of September. The researcher spent between 1.5 and 2 hours with each family, during which time a semi-structured, but generally informal, interview took place. At an appropriate time, the family's four-year-old child was assessed. The assessment was either conducted by the researcher, or by a parent[46], under researcher supervision, dependent on the child's preference. Initially, most parents (20), following written instructions, read out aloud to the child, what needed to be done, whilst the researcher sat beside the child providing the correct materials at the appropriate time: it was far easier for the researcher to take notes when not also administering the assessment. During the remaining interviews, where the assessment was administered solely by the researcher, some parents watched the procedure, some went about their 'chores' and others chose to leave the child and researcher alone: likewise with siblings. In this way, most visits took the form of entry, a cup of tea offered to the researcher and in some cases breakfast, with the informal 'chat' gradually becoming a notebook interview. The assessment was generally administered after the preliminary interview, followed by a

post-test discussion and the broader interview. The assessment formed an excellent basis for further discussion, opening the way to parental analysis of their child's abilities that might not otherwise emerged.

Interviews were, owing to time constraints on the PIPS assessment[47], mostly conducted in batches of 3-6 per day, dependent on the distances to be travelled throughout the UK, by the researcher. Families were interviewed within a circle that stretched, roughly, from Dundee to Exeter and from Aberystwyth to Norwich. Some assessments took place as early as 7am and some as late as 8pm. The visiting times arranged were worked around children's 'liveliest' hours of the day, parental convenience and within the realms of what the researcher could manage. During the PIPS related interviews, the opportunity was taken to interview many other families who lived 'en route' and who had responded to an initial questionnaire (data from these interviews appears in the separate Interview report). Whereabouts, within households, the interviews and assessments took place, depended very much on what was happening in the house, the time of day and the weather. Some assessments were undertaken at tables, some on the floor, several in the garden and a couple over the breakfast table.

Following the elapse of a ten month period, the equivalent of the school 'year', 33 families were re-visited and PIPS 'End of Reception' assessments were conducted.

Once the assessments and interviews were completed, the marks for each participant, as scored per section undertaken, were entered, using pseudonyms, on to a score sheet, as directed by the PIPS Project. These were then forwarded to Christine Merrell, the PIPS project's co-ordinator at the CEM Centre, University of Durham for initial analysis (comparison with PIPS national data). The formal scores, raw and standardised, were then returned to the researcher, together with relevant graphs and tables, normally distributed to participating schools. The interviews had been recorded using pen and paper and from these notes, typed transcripts were produced and analysed using the computer programme QSR NUD.IST[48]. Sections of the interviews relating directly to the PIPS 'Reception' programme are included in the PIPS Baseline Chapter.

4.7 INSTRUMENTS: LITERACY & MATHEMATICS ASSESSMENTS

4.7.1 CHOICE OF INSTRUMENTS (Chapter 7 & Chapter 8)

Decision to use the PIPS Year 2 Assessment and National Literacy Project Assessments for Years 1, 3 and 5

Following the initial discussion with Professor Tymms (Section 4.6.1) that had led to use of the PIPS 'Reception' assessment, subsequent discussion led to the suggestion that the PIPS Year 2 would be a useful instrument to include, with its focus on slightly older children. The PIPS Year 2 (PIPS Project 1998b) measure was particularly attractive owing to its seemingly non-curricular design in terms of its Maths, Reading, Picture Vocabulary and Non Verbal Ability components. Furthermore, having been created by the PIPS Project team, who had developed the PIPS 'Reception' instrument

(PIPS Project 1997a, 1998a), the suggestion of design continuity was appealing.

Discussion with PIPS Research Associate, Christine Merrell, about the possibility of adopting a further measure that could be used to both assess other home-educated 'Year' groups and also to provide comparative data for enhanced evaluation, led to her introducing the idea of using the National Literacy Project assessments. PIPS staff (CEM Centre[49]) had designed these tests in collaboration with the National Literacy Project, the Education Department at Newcastle University and the School Curriculum and Assessment Authority[50] (SCAA).

> 'The Patterns in Language assessments are intended for use in schools taking part in the National Literacy Project. They have been designed to relate to the project's 'Framework for Teaching' and are intended to support that programme. They are meant to provide information about pupils and schools within the project and to evaluate the impact of the project as a whole.'
>
> CEM Centre (1998a)

Following Professor Tymms' approval, permission for use of the NLP assessments was also sought from Mr David Hawker, then of the SCAA, who agreed to use of the test in the current research, provided that he was kept informed of the project.

Design of PIPS Year 2 Assessments and National Literacy Project Assessments for Years 1, 3 and 5

The PIPS Year 2 measure was designed by the PIPS Project team, 'for professional use in order to improve education' (PIPS Project 1998b) and included assessments in 'Maths', 'Reading', 'Non-Verbal Ability', 'Picture Vocabulary' and 'Cultural Capital'[51]. Chapter 7[52] provides a number of scanned images from the assessment that provide an idea of the assessment layout. Appendix 4.9 provides a summary and explanation of each assessment component.

Each of the three NLP assessments consisted of a number of exercises that tested a variety of literacy skills. Appendix 4.10 details the NLP assessment sections for each 'Year' group.

4.7.2 MATERIALS USED (Chapter 7 & Chapter 8)

For the assessments and analyses the following materials were used:

- National Literacy Project: Patterns in Language Year 1: Pupil Booklet. (CEM Centre 1998b)
- National Literacy Project: Patterns in Language Year 3: Pupil Booklet. (CEM Centre 1998c)
- National Literacy Project: Patterns in Language Year 5: Pupil Booklet. (CEM Centre 1998d)
- National Literacy Project: Patterns in Language Year 1: Teacher Administration Instructions. (CEM Centre 1998e)

- National Literacy Project: Patterns in Language Year 3: Teacher Administration Instructions. (CEM Centre 1998f)
- National Literacy Project: Patterns in Language Year 5: Teacher Administration Instructions. (CEM Centre 1998g)
- National Literacy Project: Patterns in Language: interpreting and using the test results. (CEM Centre 1998a)
- Assessment 2: Performance Indicators in Primary Schools (student booklet) (PIPS Project 1998b)
- Assessment 2: Performance Indicators in Primary Schools (Administration instructions) (PIPS Project 1998d)
- Assessment Report: Year 2 to Year 8. (PIPS Project 1998e).

4.7.3 SAMPLE SELECTION (Chapter 7 & Chapter 8)

Several months before the time period prescribed by the PIPS Project team for administration of the assessments, those families represented amongst the sample of completed home-education questionnaires returned at that date, who had appropriately aged children, were selected and separated into assessment groups. There were, 89 year 1 children, 74 year 3, 61 year 5 (potential NLP candidates) and 62 year 2 children (potential PIPS Year 2 participants). Each questionnaire was numbered and a computer randomising program used to generate numbers from each group: 20 families were selected for each of the NLP tests and 25 for the PIPS Year 2 assessment. Professor Tymms had recommended groups of at least 20-30 participants: in total there were to be 60 NLP participants (3 groups each with 20 children in each year) and 60 PIPS participants (1 PIPS Baseline

group of 35 and a PIPS Year 2 with 25). Where possible, families were then contacted by telephone to request their consent to assist with this further stage of the research. The initial questionnaire had asked participants to provide their contact details if they were prepared to assist further with the research; therefore it seemed appropriate to make this secondary contact by telephone. Three of the families had been interviewed previously, as part of the 'PIPS Start and End of Reception' assessment project. Where no telephone number was given participants were contacted by letter. All those asked to assist with the NLP assessments agreed (although one child did not complete his assessment it was therefore not included in the analysis - see Section 7.4.5). Two families who initially consented to participate with the PIPS Year 2 assessment, later sent back the assessments not completed, with letters providing their reasons for doing so: one boy had 'not felt like doing it' after all and another parent felt that it was too demanding for their child. Four PIPS Year 2 participants returned their booklets completed, but too late for inclusion in the assessment process at Durham University's CEM Centre: the qualitative data, however, was made use of. One family, when reminded, had simply forgotten to return the completed booklet.

TABLE 4. 1: NUMBER OF PARTICIPANTS IN EACH OF THE ACADEMIC ASSESSMENTS

Assessment	No. of Participants	Age
NLP 1	17	6 years
PIPS Year 2	18[53]	7 years
NLP 3	15	8 years
NLP 5	17	10 years
Total	**67**	**6-10 years**

Table 4.1 provides data concerning the number of participants involved in the literacy and mathematics assessments. Owing to the different age

orientated assessments, no participant represented in the results data took part in more than one assessment.

4.7.4 Procedure for the Literacy & Mathematics Assessments

Following initial contact to obtain consent, letters containing the assessments were distributed to the participants by post, together with stamped addressed envelopes for their return. An example of a letter relating to the NLP assessment is provided at Appendix 4.11.

Parents, according to the instructions supplied to them, administered all assessments. These instructions were those provided by the CEM Centre/PIPS Project to the researcher, but modified to reflect the home, as opposed to classroom, environment.

Once completed, assessments were returned to the researcher. From the NLP cohort, 5 children[54] were re-assessed by the researcher, prior to any marking, to ascertain inter-rater reliability. The time-lapse between initial and subsequent administration varied between 3 and 5 weeks. The results of this second assessment can be seen at Appendices 7.1, 7.2 and 7.3. The differences revealed remarkable consistency between parent administered and researcher administered tests, as illustrated by Table 4.2.

TABLE 4. 2: SCORE DIFFERENCE BETWEEN PARENT & RESEARCHER ADMINISTERED ASSESSMENTS

Parent administered assessment result (standardised scores)	Researcher administered assessment result (standardised scores)
>130	129
126	>130
107	107
71	71
95	95

Owing to the text-length of the PIPS Year 2 tests and the comments received regarding the stress that the assessment had placed on several of the children, it was decided on ethical grounds not to re-administer this instrument. Some of the families involved with PIPS Year 2 had also participated with the interviews (7 of 18) and were, therefore, known to the researcher. Personal awareness of some participants assisted in assessing validity both with PIPS Year 2 and with the NLP assessments. The commentaries that accompanied returned assessments were also very useful in this respect. Whilst the system was not foolproof, every possible precaution was taken to ensure validity, bearing in mind that the nature of the cohort set restrictions on what, appropriately, could be asked of them.

Returned PIPS Year 2 assessments were copied out by hand and participants given pseudonyms to protect their anonymity. Booklets were delivered to the CEM Centre at the University of Durham for marking. Identifying information and annotated commentaries from parents and children were not passed on. Written comments on the assessments did however, provide rich qualitative data that assisted with drawing conclusions about the participants. Once marked, the CEM Centre returned the results for analysis by this researcher.

Completed NLP booklets were scored by the researcher. Instructions for marking were supplied by the CEM Centre: additional telephone assistance was also provided as and when questions arose. Once the CEM Centre had marked all school scripts, they forwarded a summary of the national data to assist with the researcher analysis of the home-educated cohort's scores.

4.8 INSTRUMENTS FOR COLLATING THE SOCIAL AND PSYCHOLOGICAL DATA (Chapter 9)

4.8.1 SELECTION AND DESIGN OF INSTRUMENTS (Chapter 9)

Once the decision to study home-educated children's social and psychological skills had been taken, a judgement had to be made as to the type of measure to be used. With an inherent link between the acquirement of social skills and one's ability to operate in wider society, questions arose about the psychological state and behaviour of children considered to be 'missing out' (Shearer 1999; Walker 1998) through home, as opposed to school, education. Owing to the 'normal' nature of the home-educated sample, it was necessary to adopt measures that were not specifically tied to any one diagnostic category, but that provided instead, a general indication of the existence of psychological difficulties.

A number of measures were investigated. The Revised Conners Parent and Teacher Rating Scales[55] are currently used for the detection of Attention Deficit Disorder, hyperactivity and aggression and thus seemed inappropriate for a 'normal' population. Achenbach and Edelbrock's Child Behaviour Checklist referred to by Sclare (1997), measuring both

competencies and behaviour, appeared to be more complex than was considered necessary for this research. The Eyberg Child Behaviour inventory (Buros 1961), used particularly to detect conduct problems was also considered, but attempts to contact the author in North America proved unsuccessful. The Piers-Harris Self Concept Scale (Shyers 1992), with its focus on physical appearance and attributes, anxiety, intellectual and school status, behaviour, happiness and satisfaction and popularity was, owing to its use by Shyers (1992), a suitable instrument, but ordering delays, length, complexity and cost excluded it. Discussion of these instruments is elaborated upon in Appendix 4.12.

Rating scales that could be administered by post, for completion by parents and or children, were the most suitable measures: however, problems highlighted by Sclare (1997) that might be associated with rating scales included:

- Those making the judgements can only report behaviour that they are aware of.
- Children's behaviour is often context-dependent
- Decisions on children's behaviour are often based upon comparison with other children.
- The effect of the rater's mental state on how they interpret and answer the questions.
- Ratings may be influenced by the 'halo' effect whereby the child is judged according to the overall impression that the rater has.

- Potential problems mean that it is preferable to gather data from more than one rater and in more than one location.

The current research took these points into account, considering that:

- The parent raters in this case would be home-educators and for the most part, continually within physical reach of their children: these were the people most exposed to their children's total behaviour repertoire.
- In the absence of the ability to make comparisons with other children, in that most other children would be school-children with their own culture of acceptable and non acceptable behaviour, it was reasoned that the parents would judge their children in accordance with adult standards of behaviour[56], as indicated by Shyers (1992).
- It was recognised that, as in any population, some parents would be experiencing symptoms that could be regarded by doctors as evidence of minor psychiatric disorder. However, there was no reason, from reference to other research (e.g. Rutter, Tizard and Whitmore, 1970), to believe that this would invalidate the responses. Finally, the multimethod approach of this research enabled cross-checks (Denzin 1989) to be made on the children involved. At the lowest level, rating scale data could be checked with the introductory questionnaire survey data; at the highest level, rater attitudes could be cross-checked with interview, questionnaire and assessment information. This allowed the researcher to investigate any items of particular interest[57].

Following deliberations as to the type of measures to be included, three emerged as optimum choices. They were:

Children's Assertive Behaviour Scale	(CABS) (Michelson[58] & Wood, 1981)
Revised Rutter Scale	(RRS) (Rutter[59], 1993)
Strengths & Difficulties Questionnaire	(SDQ) (Goodman, 1994)

Samples of the instruments are attached at Appendices, 4.13, 4.14 and 4.15 respectively. The CABS Appendix 4.13 includes the scoring sheet.

Selection of the Children's Assertive Behaviour Scale (CABS)

CABS measures children's social skills by questioning their assertiveness in face to face situations. Shyers (1992), in his North American comparative study of home and public schooled children, used CABS to assess social skills of both sets of children relative to each other. His research has been evaluated in the UK by Meighan (1995) and in North America by Mayberry et al. (1995).

CABS (Michelson and Wood 1981) was designed to consider the social skills of children on a sliding scale from passivity through assertiveness to aggression. The scale was first designed to be used as part of a clinical assessment procedure to screen and diagnose children in need of assertiveness and social skills training.

Michelson, Sugai, Wood and Kazdin, (1983) suggested that a child with good social skills would experience better interpersonal relations than a child who lacked such skills. They therefore justified the need for children's social skills training and use of the CABS questionnaire as a screening instrument to identify children's strengths and weaknesses.

Selection of the Revised Rutter Scale (RRS)

The RRS is a screening instrument, designed to distinguish between children with and without behavioural difficulties. In view of common conceptions about home-educated children's dispositions, this was an appropriate instrument to adopt; it has been suggested by Hersov and Berg (1980) and Rutter and Hersov (1985) that children not attending school could suffer separation anxiety, overprotection by their parents, school phobia or be similarly pre-disposed to another psychologically recognised condition: all conditions often linked to home-educated children, e.g. Wragg (1999) Shearer (1999) Hastings (1998). Galloway (1982) also used the Rutter Scale in his research involving absentees; an analogy was drawn earlier between absentees, as children with behavioural problems and home-educated children, thus reinforcing the use of the Rutter Scale with the current research.

Selection of the Strengths and Difficulties Questionnaire (SDQ)

The SDQ was considered suitable for the research at hand since it was designed as a screening questionnaire for use by researchers, clinicians and educationalists; it was short and appeared to complement the RRS by

providing a second point of reference in terms of the Rutter Scale's evaluation of the 'Total Difficulties', 'Emotional Difficulties', 'Conduct Difficulties' 'Hyperactivity/Inattention' and 'Prosocial' dimensions. The SDQ also contained a 'Peer Problems Score' and a self-rated questionnaire for eleven to sixteen-year-olds[60] that allowed them to make judgements about their own behaviour. Chosen for its similarly to the RRS, the SDQ added a further dimension to the study by providing a triangulation point (Robson 1993, p. 290; Lowden 1993; Taylor 1993) of reference for the psychological and social data. A final rationale for the use of both RRS and SDQ measures was that they might serve to detect common psychological denominators amongst home-educated children. Both the SDQ and the RRS were considered to offer a broader perspective on home-educated children than would have been gained through use of CABS alone.

The SDQ has been validated in several studies. Goodman (1994) first evaluated the SDQ with 320, five to seventeen-year-old hemiplegic[61] schoolchildren, finding that it compared well with 'independent psychiatric evaluations'. Goodman (1997) further refined and evaluated the SDQ in research involving four to sixteen-year-olds, administering it together with the Rutter Scale to both parents and teachers of 403 children. About half the sample were children visiting a dental practice and the other half were registered at a psychiatric clinic. Goodman, wanting to evaluate the SDQ against the Rutter Scale, found that the scores from both questionnaires were highly correlated. The SDQ was found to differentiate between difficult

and non-difficult cases as effectively as the Rutter Scale, besides providing data on inattention, peer problems and prosocial attributes.

Goodman, Meltzer and Bailey (1998) used the SDQ in a pilot study on the validity of the self-report version. They administered the self-report version to 83 unspecified youngsters and 116 mental health clinic attendees, all aged eleven to sixteen years. The researchers found that the questionnaire distinguished between the two samples to the extent that for the 'Total Difficulties' score the unspecified youngsters' mean was 1.4 standard deviations below that of the clinical sample. Goodman et al. (1998) also reported that correlations between parent and self-reports were 'favourable'.

In the final evaluation of the SDQ to date, Goodman and Scott (1999) compared the SDQ with the Achenbach's Child Behavior Checklist by using mother reports with samples drawn from both psychiatric and dental clinics. They found that the two measures correlated well and discriminated equally between the samples, with the SDQ better able to diagnose inattention and hyperactivity. They further reported that the SDQ was the more popular instrument among mothers of 'ordinary' children.

Design of the Children's Assertiveness Behaviour Scale (CABS)

The CABS questionnaire distinguished between 'very passive', 'mildly passive', 'assertive', 'mildly aggressive' and 'very aggressive' social behaviour. Michelson et al. (1983) suggested that passive individuals lack self-expression and control over their lives, whilst aggressive individuals

undermine those around them. Assertiveness is seen as the optimum and involves having autonomy over one's decisions, expressing oneself without causing offence and demonstrating respect for others. These skills, Michelson et al. (1983) argued, ensure ease of passage with friends, family, acquaintances and strangers.

The CABS scoring system uses a bipolar scale with a midway mark of zero for assertiveness. A high score (+ or -) in either direction is indicative of unassertiveness, with a high positive value (+) score implying aggression and high negative score (-) suggesting passivity. Scores are formulated by the addition of points awarded for each of 27 questions, scoring on a 5-point scale, -2 to +2. The questions subdivide into five categories. Briefly, these are:

'Positive': relates to how a respondent manages in situations that involve opportunities for positive expression; eg. Someone says to you they think that something you did was terrific. You would usually:

'Negative': relates to how a respondent manages in situations that involve opportunities for negative expression; eg. Someone often interrupts you when you're speaking. You would usually:

'Request': measures the ability to formulate and react to, a request; eg. Someone has something that you want to use. You would usually:

'Conversation': examines the facility to make and/or be involved in, conversation; eg. Someone you have not met before stops and says "hello" to you. You would usually:

'Feeling': Explores the capacity to express one's own and understand another's feelings. eg. You bump your head on a shelf and it hurts. Someone says, "Are you all right?" You would usually:

These 5 categories, outlined in depth at Appendix 4.16, relate to specific questions on the CABS questionnaire that are designed to measure expressive and receptive responses in the same five social skill areas; a key to these is given in Appendix 4.17.

Design of the Revised Rutter Scale (RRS)

Elander and Rutter (1996) described the development of the teacher and parent behaviour measures known as the Rutter A and B scales, relating to both school and pre-school aged children and covering an age range of 3-16 years. Sclare (1997) subsequently referred to the scales as the Revised Rutter Scales. The Rutter A and B scales were designed as screening instruments for emotional and behavioural, or conduct, disturbances in middle childhood children and were based upon an earlier version of the Rutter Scale (Rutter 1967) but incorporating some modifications such as a prosocial element. Earlier versions of the Rutter Scales were used, in the Isle of Wight by Rutter and Graham (1966); Rutter et al. (1970); Rutter, Tizard, Yule, Graham and Whitmore (1976); and Graham and Rutter (1973):

in inner London by Rutter (1973) and Rutter, Cox, Tupling, Berger and Yule (1975): in Aberdeen[62] by Rutter (1967); and in Sheffield by Galloway (1982).

The Rutter scales have been most commonly used in longitudinal and epidemiological[63] survey research such as the Isle of Wight Study (Elander and Rutter (1996). Use with normal populations has further included those described by Zimmermann-Tansella, Minchetti, Tacconi and Tansella (1978), Venables, Fletcher, Dalais, Mitchell, Schulsinger and Mednick, (1983) and Ekblad (1990): these authors have all used the scales to screen for children who may have behavioural difficulties. Elander and Rutter (1996) suggested that the scales might further be used to study the relationship between behaviour problems and reading and cognitive development, and also to assess the effects of social and familial factors on child behaviour. Elander and Rutter's (1996) indication that the scale should be used as a screening instrument and not as an individual assessment tool, made the scale a particularly suitable measure to use with the present study.

The Revised Rutter Scales are included as part of a comprehensive professional assessment package (NFER-Nelson 1997). Thus, the popularity, durability and validity of the Rutter Scales made the Revised Rutter Scale[64] (Rutter 1993) offered by NFER-Nelson (1997) a particularly appropriate choice for the current study.

The RRS requires a parent to complete a questionnaire containing 50 statements that might refer to their child's behaviour during the past three

months. The questionnaire takes about ten minutes to complete and the parent can choose between three categories of answer, 'Does not apply', 'Applies somewhat', or 'Certainly Applies'; weighted '0', '1' or '2' respectively. Scores from selected statements are added together to produce a 'Total Difficulties' score with a range from 0-52. Specified statements are also allocated into four domains; 'Emotional Difficulties' (5 items), 'Conduct Difficulties' (5 items), 'Hyperactivity-Inattention' (3 items) and 'Prosocial' (10 items), respective example statements of which are, 'Often worried, worries about many things'[65], 'Frequently fights or is extremely quarrelsome with other children'[66], 'Cannot settle to anything for more than a few moments'[67] and 'considerate of other people's feelings'[68]. Scores for each of these domains are summed and analysed in the light of each participant's 'Total Difficulties' score. Where a child scores at or above the author suggested cut-off point of 11, the child can be said to display behavioural problems. The type of difficulty is established by reference to the 'Emotional Difficulties' and 'Conduct Difficulties' scores, whereby the higher of these two scores relates to the area of difficulty: same scores in these two domains indicates an 'undifferentiated' disorder. The 'hyperactivity' sub-scale has a cut-off point of 3.

According to Elander and Rutter (l996) the two domains of 'Conduct Difficulties' and 'Emotional Difficulties' are generally agreed to be distinct groups. They pointed out however, that the 'Hyperactivity/Inattention' domain was not so clearly defined as an independent dimension. In a

discussion of validity, Elander and Rutter referred to Minde who in 1977 compared a sample of ordinary and reform schoolchildren. Minde found that 95.8% of the delinquent boys at reform school scored 9 or more on the Rutter Scale, whilst only 18% of the ordinary children were determined by the scale to have behavioural problems. Elander and Rutter (l996) further made a detailed comparison of the RRS with other instruments, discussing reliability in some depth: comment by Elander and Rutter (1996) provides further information in this respect.

Some modifications have been made to the RRS by the scale's author to accommodate distinct populations and translations have resulted in such phrases as, 'moving the limbs pretty fast in a funny way like the Konga monkey' to describe the item number 4, 'squirmy child'. The study at hand did not require the questionnaire to be altered but it was clear that different groups of people might interpret the items in very different ways and caution was therefore taken with placing too much weight on the outcomes for the home-educated sample beyond noting overall behavioural trends. Whilst a solitary child (item 15) or one who stares blankly into space (item 39) may be deemed by wider society to be showing signs of behavioural difficulties, the home-educating child might be seen by their parents as displaying desirable behaviour. Conversely, such interpretation of the questionnaire by participating parents may have contributed to their candid reporting of such behaviour. Elander and Rutter suggested that the 'Prosocial' element of the scale would make parents more likely to divulge their children's negative behaviours, thus reducing the risk of a 'halo' effect. The results detailed in

Chapter 9, whereby some children were judged to display behavioural problems, suggested that the parent-supplied data was valid. A critique of Elander and Rutter's (1996) inherent definitions of appropriate and inappropriate behaviour is not provided here since the home-educated sample were, for this aspect of the research, being judged according to behavioural norms.

Elander and Rutter concluded that the scales were generally reliable, but more so for 'Conduct Difficulties' than 'Emotional Difficulties' and for teachers' rather than parents' ratings: the reliability of the 'Hyperactivity/Inattention' section in determining such behavioural difficulties was less certain. Discrepancies between parents' and teachers' responses were attributed, in part, to 'situation-specific behavioural disturbances' (Elander and Rutter 1996): the teachers' scales were those most in accord with clinical diagnosis and this, Elander and Rutter reported, may be because the teachers were able to observe a wider range of behaviours than the parents and because these diverse behaviours were taking place in a more standardised setting than in the many distinct home environments. Elander and Rutter further raised the point that mothers with psychological pathology were more likely to rate their children as displaying behavioural difficulties: mothers were also more likely to identify their children if the family was small as opposed to large. Overall, Elander and Rutter determined that the scales were more effective in identifying links between 'broad classes of variable' as opposed to pointing to precise mechanisms. Rutter (1967), describing his 1960's version of the scale as a 'simple and crude measure',

voiced his view that the scale should be supplemented by other information. Finally, Fowler and Park (1979) warned that the structure of the scales might not be stable across populations differing in socio-economic or ethnic composition.

The RRS is used to identify problems in children's behaviour and Sclare (1997) quoted earlier research that defined a problem in this context as:

> 'a disturbance of function in one area of relationships, mood, behaviour or development of sufficient severity to require professional intervention.'
>
> Wallace, Crown, Cox and Bewreger (1967) quoted in Sclare (1997)

Sclare (1997), citing Thompson, Stevenson, Sonuga-Barke, Nott, Bhatti, Price and Hudswell (1996) reported that 22.3% of pre-schoolers demonstrated behaviour problems. Whilst Rutter et al. (1970) found that in the Isle of Wight, 10% of ten to eleven-year-olds showed signs of behavioural problems, Rutter et al. (1975) concluded that amongst inner city London children the prevalence was 25%. Ellis (1998) further reported that 20% of children suffered mental health problems. Sclare (1997) suggested that such behavioural problems often endured, at least over the childhood years and that these problems were generally associated with an interaction of social, psychological and physical difficulties. Contrary to Sclare's viewpoint, however, Galloway (1987 p.60) cited research suggesting that only in a minority of cases did problems persist beyond childhood, stressing

that much was dependent upon the nature of the problem; conduct disorders carrying a worse prognosis than other disorders. Although the time scale is not given, Sclare (1997) further cited evidence (Rutter and Smith 1995) that there had been an increase in the incidence of children's psychosocial problems.

Design of the Goodman Strengths and Difficulties Questionnaire (SDQ)

Goodman (l994) adapted the Rutter Scale[69] to develop the SDQ. This added 19 items to the parent's scale, 10 of which referred to prosocial behaviour, 4 to positive conduct and 5 to inappropriate behaviours.

Whilst the original Rutter Scales did not include a prosocial element, Goodman (1997) suggested that the inclusion of a 'Prosocial Scale' would make parents more likely to complete the questionnaire than if they were faced only with negative questions. Elander and Rutter (1996) had concluded that prosocial behaviour was a dimension in its own right rather than merely the opposite of antisocial behaviour and thus was a suitable addition to the RRS.

The current Goodman (1997) SDQ consists of 25 statements divided between 5 scales of 5 questions each: 'Prosocial Scale' 'Hyperactivity Scale' 'Emotional Symptoms Scale', 'Conduct Problems Scale' and 'Peer Problems Scale'. Disregarding the 'Prosocial Scale', the remaining scores (0-2 for each statement), were summed according to the score key, to create a 'Total

Difficulties Score'. An example of one statement in each of the five categories is as shown in Table 4.3.

TABLE 4. 3: EXAMPLES OF STATEMENTS ASSOCIATED WITH EACH SCALE

Scale	Example Phrase
'Prosocial Scale'	'Kind to younger children'
'Hyperactivity Scale'	'Restless, overactive, cannot stay still for long'
'Emotional Symptoms Scale'	'Often unhappy, downhearted or tearful'
'Conduct Problems Scale'	'Generally obedient, usually does what adults request'
'Peer Problems Scale'	'Gets on better with adults than with other children'

Two versions of the SDQ[70] were used: an informant-rated one and a self-rated version aimed at eleven to sixteen-year-olds but competed in this research by 7 eleven-year-olds whose parents had completed an informant-rated questionnaire.

Comparison between Goodman SDQ and RRS items

A number of items between the SDQ and the RRS were very similar. These are detailed in Appendix 4.18. The phraseology of these, so called, 'similar' items may have held significance for the home-educated participants, as is discussed later in Chapter 9.

4.8.2 SAMPLE SELECTION (Chapter 9)

Families were selected for this aspect of the research by three methods.

- By letter to those families who were assisting with other aspects of this research. See Appendix 4.19 for an example of the letter sent.
- Verbal request to the family whilst visiting their home to interview them

- Through the Internet: families who completed questionnaires, electronic or otherwise were asked by email, to participate with this further aspect of the research.

The Social and Psychological data were collected during the second year of this research and the sample was selected from families whose children fell into the appropriate age categories and who were taking part in other aspects of the research. The advantage of using families already assisting with the project was that their data could be cross-referenced to assess reliability and any interesting factors that may have emerged could be further investigated. Where a child in these families was aged eleven years, he or she was asked to complete a self-report questionnaire.

Beyond this initial sample, some participants were sought from amongst those who simply returned a questionnaire during year two and whose children were of an appropriate age for the instruments.

All families asked to complete these psychological and social questionnaires did so; thus, the response rate was 100%. Agreement to complete the instruments was sought from the families prior to distribution. The families had already self-selected themselves by completing the original questionnaire survey[71].

Table 4.4 shows that 103 participants assisted with this aspect of the research. A total of 136 tests were administered, 43 CABS, 51 Goodman

SDQ and 42 RRS. A number of participants took part in more than one assessment and their data was used for same-subject comparisons.

TABLE 4. 4: NUMBER OF PARTICIPANTS IN EACH OF THE SOCIAL AND PSYCHOLOGICAL ASSESSMENTS

Assessment Combinations	No. of Participants	Age of Informant	Type of Assessment
CABS	22	Child aged 8-10 years	CABS questionnaires for completion by the children.
SDQ	21	Adult	SDQ questionnaires relating to children's behaviour: the children were aged between 4 & 11 years.
RRS	21	Adult	RRS questionnaires relating to children's behaviour: the children were aged between 5 & 11 years.
CABS/SDQ	8	Adult	
CABS/RRS	9	Adult	
CABS/SDQ/RRS	4	Adult	
SDQ/RRS	8	Adult	
SDQ dad	3	Adult	
SDQ self	7	11 year olds	SDQ self-report questionnaires relating to the children's own behaviour
Totals	**103**	**8-adult**	**All**

4.8.3 PROCEDURE FOR COLLATING THE SOCIAL AND PSYCHOLOGICAL DATA

The three measures, CABS, RRS and SDQ questionnaires, were distributed over a 12 month period, beginning in November 1997. Initially the questionnaires were sent by post, together with a stamped, addressed envelope (SAE), to those families who had already agreed to participate in other areas of this research; later, families were recruited during interviews and the questionnaires were supplied at that time together with an SAE. During this second year of the research, a number of families who had returned questionnaires by email and whose children were of suitable age, were approached electronically: these families returned their questionnaires by email. The families came from a wide range of backgrounds and so far

as it was possible to assess, no one group was represented over another by this selection method. The aim was to collect the maximum number of responses from as wide a range of home-educators as possible, during the time available: this objective was achieved. A small number of families whose children met the criteria for all three measures, completed the three.

Four CABS scales were completed in this researcher's presence.

Returned scales were scored according to each author's instructions. Reference to the individual scoring systems has been made above under Section 4.8.1. Precise direction for details of the RRS can be found in Sclare (1997); for the CABS instructions in Shyers (1992) and Michelson et al. (1993); and for the Goodman SDQ, in Goodman (1997). All the scales were analysed in 1999.

4.9 OVERVIEW OF THE METHODOLOGY

This chapter has provided the details behind the research methodology together with the rationales involved in terms of selection and process. With such an unknown quantity (the home-educators) it was impossible to know what kind of outcomes to expect. It was clear that there could be no standardised conditions and no clear cut questions and answers. Thus, this report should be taken for what it is, an exploratory window on home-education.

Methodology Endnotes

[1] 1000+ were returned but time constraints meant not all could be fully analysed, therefore, it was decided to use only questionnaires with data entry undertaken by University of Newcastle staff.

[2] Validity is the extent to which a test measures what it is intended to measure.

[3] Internal validity - The degree to which the design of a study allows one to accurately attribute an observation to a specific cause rather than alternative causes.

[4] External validity concerns making generalisations about the results. That is, how well do the study's conclusions apply to other people in other places at other times.

[5] It is commonly believed that compulsory registration for home educators will be introduced.

[6] Study lasted from 1996 - 2001 (including a year of initial research).

[7] An example has been the mention, in discussion of the Crime and Disorder Bill [Lords] (June 1998), of home-educators as legally out of school. This followed heavy lobbying by campaigners and is one instance of the home educators increasing ability to affect legislation.

[8] The year preceding the start of the main study was spent in building up contacts, as was the first year itself.

[9] This was itself.never used as a research tool, but it was used on a personal basis to contact families about local events etc.

[10] There is no membership fee and contributions are voluntary.

[11] Meighan appeared to have taken the information from the 'EO' database in 1984. Since that time, to date, 'EO' have not had such information available and no other research in the UK has explored this issue.

[12] Lowden was Law Lecturer working for the Police.

[13] Home-educator and Lecturer in Alternative Education at the University of York.

[14] Author of Petrie (1992).

[15] Of the University of Durham, now a Professor at the University of Warwick.

[16] As understood through conversations with long-standing 'EO' staff and members.

[17] Pilot runs usually assist in assessing the instrument robustness, enabling final adjustments to be made so that the survey, once distributed amongst the target population, achieves maximum returns. An explanation of pilot studies was given in Robson (1993 p. 301).

[18] This caution was vindicated: in 1999 on the UK Home Ed list (a computer email list with about 200 members) an undergraduate posted a request for assistance with her questionnaire. This was followed by an attack from one list member and supported by another, accusing the student of, perhaps, being an impostor. The member advised others not to respond to the questionnaire.

[19] 'EO' had, allegedly, previously been misled into providing confidential information. LEA's have occasionally, particularly in the past (before de-registration, see Chapter 1), threatened parents with legal action and some home educators have been involved in court cases (Petrie 1992).

[20] Both membership and non-membership

[21] Using a list of all LEAs, contact was made according to whether a telephone number was provided and whether the telephone call or email was answered.

[22] Eg. yearly turnover in 'E.O.' membership was almost 800 in 1997.

[23] 'EO' Year 2 (131)+ SHEA (6)+ email (3) = 140 year 2 questionnaires.

[24] The November Bulletin stated (without evidence) that families who home-educated from birth were 'very much in the minority' - implying, perhaps, that this was the HEAS experience.

[25] HERALD is a home education organisation that assists with curriculum management and offers support through a newsletter.

[26] Membership of 'E.O.' on the 1st February 1997 consisted of 2,209 families with compulsory school aged children of which 1,305 families were home educating 1,917 school aged children. The total number of children under 11 years of age was 2289 of which 452 were under 5 years old. The number of school aged children, home educated, in 'E.O.', aged between 5 and 11 years was 1027. The number of children 'home educated' in 'E.O.', aged under 5 was 33 (the total number of under 5s represented by 'E.O.' membership was in fact 452): new babies do not become known to 'E.O.' unless their parents inform them.

[27] At a cost of £40 paid by the researcher.

[28] Thus, the identities of the families who received copies of the questionnaire were unknown to the researcher: respondents were invited to remain anonymous unless, upon replying, they chose to supply their name and address.

[29] In 1996 there were 800 new members and 726 lost; in 1995 736 new members joined and 918 left. Information provided by 'E.O.'s database secretary.

[30] Clearly it would have been useful to have this information, but LEA officers were generally very difficult to contact since their jobs involved out of the office work. The researcher considered that their agreement to assist distribution had been sufficient contribution without further questioning.

[31] This is stamped by the Post Office on the outside of the envelope.

[32] Eg. asked for the 'advantages of school', responses 'free time for parents' and 'free baby-sitting service' would receive one code whilst 'a good education', would receive another.

[33] The reliability of a test is its consistency

[34] The 50 questionnaires were also re-analysed using SPSS a statistical program.

[35] University of Manchester.

[36] 5 response terms from a total of 15 questionnaires (90 items per questionnaire). Much of the information requested was factual, with few questions open to interpretation.

[37] Using their Data Entry Service arranged by Professor Tymms, PIPS Project.

[38] About 10

[39] A full description of the questionnaire data is described in Chapter 5.

[40] Value-added is the learning achieved over the period between the two assessments, in relation to national predictions for the 'End of Reception' scores, ascertained from the overall 'Start of Reception' data and allowing for the effects of maturation. Children not progressing 'as expected', may be given a negative value-added score, despite having progressed in terms of maturation.

[41] These appear in the assessment booklet, but for the test purposes had been extracted and adapted to remove mention of school, and reprinted by the researcher on a separate sheet.

[42] The intention was to contact all families with at least one child who would be four on the first of September. On the questionnaire, families tended to supply their child's age rather than their month and year of birth, and therefore contact was made with some families whose children fell slightly outside this criterion. Having established contact with such families by letter followed up, where possible, with a telephone call, it was considered sensible to include such children, particularly since national PIPS 'R' data also included some children who fell either side of the desired age spectrum.

[43] 'E.O.' was, at the time, the largest home-education support organisation in the UK, known to this researcher.

[44] The family who declined to assist with the PIPS 'R' stage of the research did, at a later date, initiate contact and indicate that they were willing to be interviewed. An interview was undertaken as part of the larger scale research and the family further assisted with psychological testing using the Rutter (1993) and Goodman (1997) scales.

[45] In view of the distance traveled by the researcher that day, the family was interviewed and other children in the family later went on to participate in other assessments connected with the research program.

[46] Children were given a choice of researcher or parent administrator. This was to prevent children being disadvantaged by the researcher's dialect or through shyness with a stranger.

[47] The PIPS Baseline assessment needed to be administered within a few weeks of the start of the September school term.

[48] QSR NUD.IST 4 is a computer package designed to aid users in handling non-numerical and unstructured data in qualitative analysis. NUD.IST does this by supporting processes of indexing, searching and theorizing.

[49] Curriculum Evaluation and Management Centre at Durham University.

[50] Later re-named the Qualifications and Curriculum Authority (QCA)

[51] 'Cultural Capital is a measure of the amount of educational support in the home' (PIPS Project 1998e).

[52] Section 'Commentaries on the PIPS Year 2 assessments - author's and participant's'

[53] One more home-educated child completed the PIPS Year 2 'Maths' section (n=18) than the 'Reading' section (N=17).

[54] 2 x Year 2, 1 x Year 3 and 2 x Year 5

[55] Revised by Goyette, Conners and Ulrich in 1978.

[56] This concept of adult expectation had already been noted, in parental definitions of whether or not their children could read. Parents often seemed to feel that a child of, say, seven years, who could not read an adult text fluently, was a 'non-reader'. This point is discussed in Section 3.2.2.

[57] One example in Chapter 9 is where the 'history' of children registering on the Rutter Scale as displaying behavioural problems could be explored by reference to their family questionnaire and interview data.

[58] Professor Larry K. Michelson, Professor of Psychology and Co-Director of the Stress and Anxiety Disorders Institute, Pennsylvania State University.

[59] Professor Sir Michael Rutter is currently the Honorary Director of the Medical Research Council.

[60] Used in the current research with 11 year olds only

[61] paralysis on one side of the body

[62] Scotland

[63] Defined as the study of the distribution and determinants of disease

[64] The Revised Rutter Parent Scale for School Aged Children known as the Revised Rutter Scale.

[65] Item no. 12 'Emotional Difficulties': also described 'anxious-fearful', 'neurotic' (Elander & Rutter 1996)

[66] Item no. 8 'Conduct Difficulties': also described 'antisocial', 'hostile-aggressive' (Elander & Rutter 1996)

[67] Item no.34 'Hyperactivity/Inattention'

[68] Item no 3 'Prosocial'

[69] It appears that Goodman (1994) used the Rutter Scale developed prior to Rutter's (1993) Revised Rutter Scale, published in 1997 by NFER Nelson with some modifications.

[70] There are various elements of the SDQ. The questionnaire is designed for use by both teachers and parents: there are school aged and pre-school aged versions besides informant and self-reported versions. Only the informant and self-reported scales were used with this research.

[71] It is worth recalling that whilst the original sample was self-selected, return of the questionnaire was simplified for many participants, particularly those approached by their LEAs, who were provided with a stamped addressed envelope. Those families who

replied through the Internet also had the task of returning the form made easier by simply having to email their response. Thus, the sample was drawn from diverse sections of the home-education community.

CHAPTER 5: QUESTIONNAIRE SURVEY DATA

ABSTRACT

This chapter reports data from 419 questionnaires. Over 5,000 questionnaires were distributed and over 1000 were returned. A cut-off at 419 was adopted for this analysis. It was not possible to assess how many questionnaires reached practising home-educators: the aim was simply to generate as many completed questionnaires as possible to provide a general 'snapshot' of home-education in the UK. Analysis of the questionnaires revealed huge disparity between home-educators with no clear 'types' emerging. The message emerging from the analysis was that isolation from the wider community was involuntary and unwelcome; however, it seemed to be the price families often paid for choosing to educate children at home.

5 QUESTIONNAIRE SURVEY RESULTS OVERVIEW

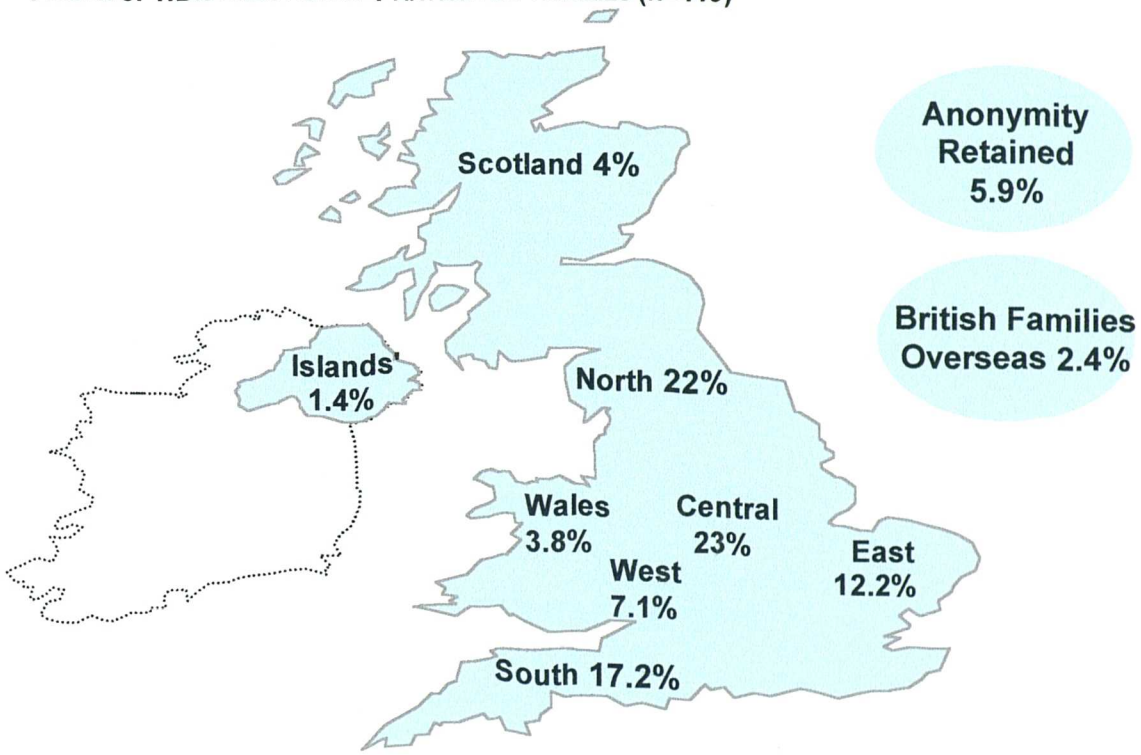
This section contains the data gathered from the returned questionnaires. The commentary occasionally contrasts the findings with widely accepted home-education stereotypes. These stereotypes are based, in part, upon anecdotal information from home educators, their critics etc. and so references are not provided. The ideas conveyed by such stereotypes play a crucial role in perceptions about home-education and for that reason, are included in this section.

Percentages given are derived from the total number of respondents answering any one question and the number of respondents overall is given in each case as (n=...). In order to facilitate reading flow throughout this chapter, a number of tables, graphs etc. have been placed in the appendices.

5.1 General Biographic Details

Having been returned from throughout the United Kingdom (the sampling is described in Section 4.5.3), 419 questionnaires were analysed. Figure 5.1, below, illustrates the participants' demographic details. The largest group of questionnaires (7.6%) came from London.

Figure 5. 1:Distribution of Participant families (n=419) [1]



The questionnaire invited participants to withhold their contact details if they wished to remain anonymous. Figure 5.1 shows 5.9% retained anonymity.

Tables 5.1, 5.2 and 5.3 provide data about the families in the study, that is, 419 families representing 1099 children. Appendix 5.1 contains further details relating to the children with special needs[2]. Grouping the children was complex: some families had children in various age groups, including pre-school and post-school aged children in the same family, and children in and out of school, with special needs and without, and children both at home and with an estranged partner, either or both, in or out of school; some parents also described children frequently moving in and out of school. Numbers of children in families ranged from 1 to 9 and the mean number of children per family was 2.44.

TABLE 5. 1:NUMERICAL DATA RELATING TO THE FAMILIES INVOLVED (TOTAL FAMILIES = 419)

Description of Families (not mutually exclusive groups)	% of sample	n
With children aged 16+ previously home-educated, at least in part.	9.64	394
With children in school	19.81	419
With pre-schoolers	39.86	419
Had used, or were using, nurseries	3.34	419
With one or more children at school part time.	0.74	405
Without school aged children	11.85	405
With a child who had been at school but was now at home	47.49	419
With children with special needs (Appendix 5.1)	22.54	417

TABLE 5. 2: DATA RELATING TO THE CHILDREN'S AGES (N=1099)

Age in years	Number of children	% of sample
0-4	226	20.56
5-11	475	43.22
12-16	193	17.56
5-16 (no precise age data)	23	2.09
16+	182	16.56

TABLE 5. 3: CURRENT STATUS OF THE CHILDREN (N=1099)

Description	Number of children	%
School age at home (home-educated)	581	52.87
School age at school	110	10.01
Pre-school age (< 5 years)	226	20.56
Post-compulsory education age (16+)	182	16.56
Never in school but of school age	303	27.57
Was at school now home ed	278	25.30

The number of school aged children at home was n=581, of which 52% had never been to school. Of the pre-school aged children represented in a question about parents' plans for them (n=147), 84% said they planned to home-educate whilst 3% would be opting for a school education. It was interesting to note that almost 20% of families had children in school at the time of the study.

5.2 PARENTS' DETAILS

Over three-quarters (89.73%) of the questionnaires referred to an opposite sex partner whilst 2.2% mentioned having a partner of the same gender: single parents accounted for 7.82% of the sample (n=409). In terms of occupation[3], parents (n=394) came from all walks of life: the largest groups were school teachers and lecturers (13.45%) and those working in the arts (11.68%). Health featured prominently with 4.07% working as nurses and doctors etc. It appeared that 10.16% of parents were working in manual jobs, such as machinist, factory worker, labourer and lorry driver. Curiously, there was one (0.25%) Priestess[4] (woman), matched by 2.03% pastors and preachers (men and women). A full index is given at Appendix 5.2.

Chart 5.1 suggests that at least one third of parents had been dissatisfied with their schooling and that over a third had attended comprehensive schools (Chart 5.2).

CHART 5. 1:PARENTS' PERCEPTIONS OF THEIR OWN SCHOOLING (N=838)

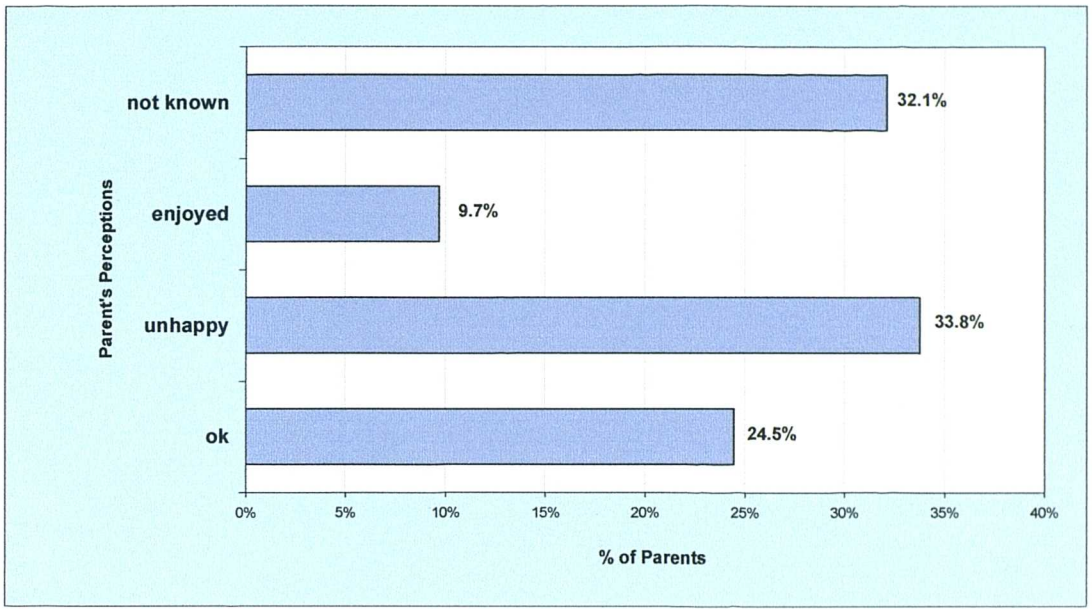
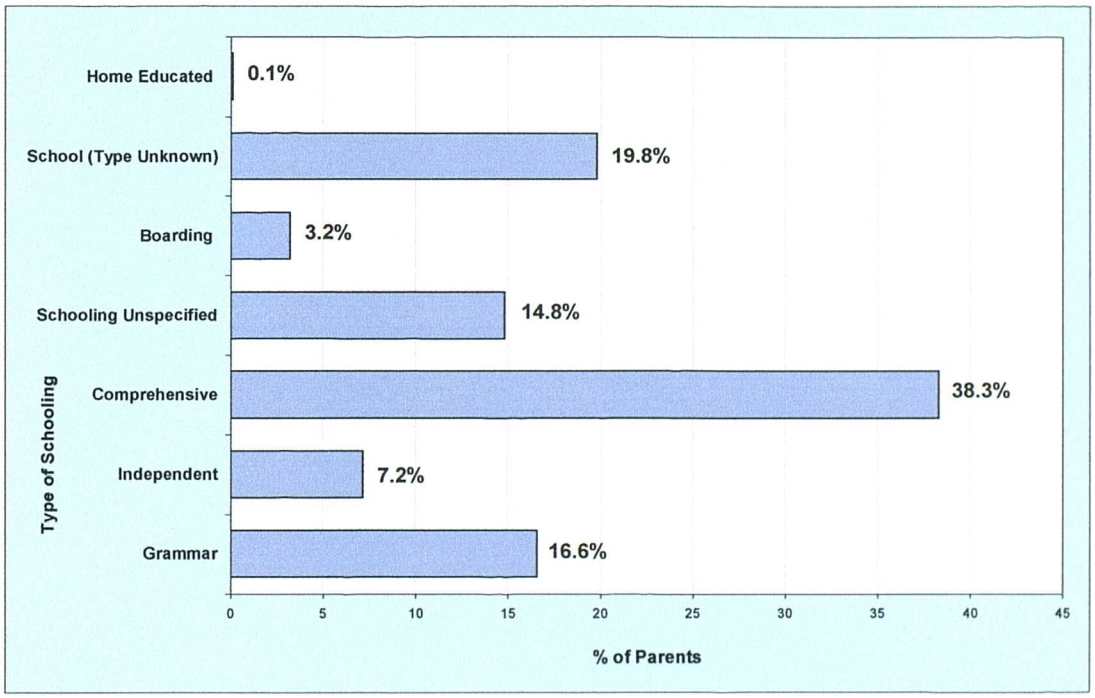


CHART 5. 2: BREAKDOWN OF PARENTS' OWN SCHOOLING (N=838)



Whilst information on the extent of parents' education was sparse, it was possible to determine, as Chart 5.3 shows, that whilst 15% of mothers had received no formal education beyond school, almost a half of all parents had attended university.

CHART 5. 3: PARENTS' EDUCATION BEYOND SCHOOL (N=838)

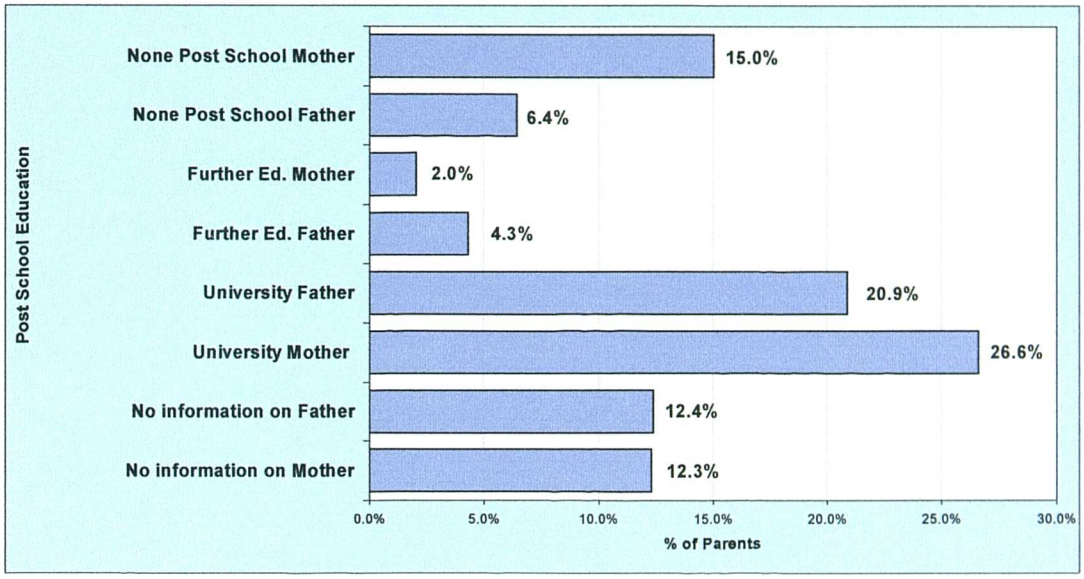
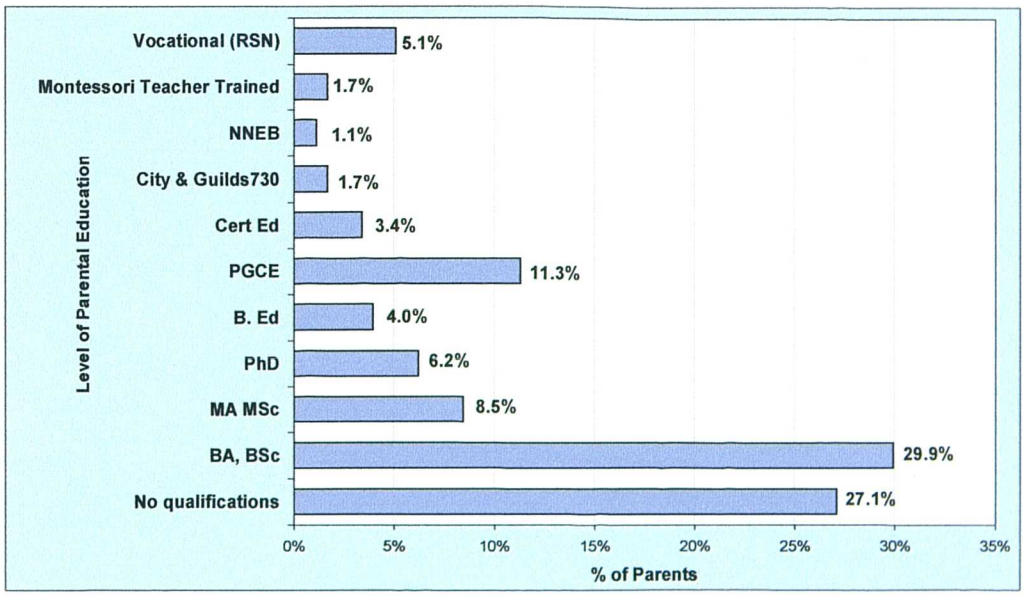


Chart 5.4 illustrates parents' qualifications defined by the highest level described.

CHART 5. 4: LEVEL OF PARENTS' EDUCATION (N=177)



Overall, at least 40.81% of families contained one trained teacher (these families only specified one but there may have been two) and 16.95% two trained teachers, whilst in 50.84% of families neither parent was trained to teach (n=419). Table 5.4 provides gender data on the teacher parents.

TABLE 5. 4: TEACHER TRAINED PARENTS BY GENDER

Father (n=326)		Mother (n=331)	
Teacher Trained	Not Trained	Teacher Trained	Not Trained
17.79%	82.21%	28.40%	71.60%

Asked whether their teacher training had influenced their approach towards home-education (n=83), 67.46% of parents replied 'Yes' and 28.91% responded, 'No'; a further 3.61% were not sure.

5.3 THE PLACE OF RELIGION AMONGST THE FAMILIES

Asked if they were religious (n=215) 56.28% said 'yes', 38.14% said 'no' and 5.58% described themselves as 'non-committal'.

Of the families (n=114) who specified their religion, 24.56% described themselves as 'Christians', with a further 21.93% specifying 'Church of England' and 4.39% described as 'non-church-going Christians': 19.30% reported that they were 'Jehovah's Witnesses' and 7.89% 'Catholic'. Other religious organizations with which participants aligned themselves were Quaker (4.39%), Pagan (3.51%), Buddhist and Evangelical Christians (2.63%) and Mormon (1.75%). With under 1% representation were Methodist, Jewish, Brethren, Wicca, Islam, Free Church of Scotland, Christadelphian, and Baptist.

5.4 What Home-educating Meant To Families and What Had Motivated Them To Home-educate

Answering the questions, 'What does home-education mean to you?' (n=390) and, 'What motivated you to home-educate?' (n=412) many parents responded with several phrases, as Appendices 5.3 and 5.4 demonstrate.

'Freedom', 'Flexibility' and 'We do what we want when we want' were the most often cited 'meanings' (35.9%). The second most popular notion, proposed by 29.74% of families, was 'Child can learn in his or her own style and can develop naturally' and 25.13% said that they valued the 'Close relationship' and 'Time together'. Generally, the responses to 'meaning' were positive, although at the lower end of the spectrum, several parents cited more negative issues such as, 'Hard work for parent and child' (4.36%), 'Isolating' (1.79%), 'Pressure' (0.77%) and 'Keep child away from IT equipment' (0.26%)[5].

Almost one third of parents (30.77%) reported that 'Disappointment with education' and 'schools' had motivated them to home-educate, whilst almost as many (29.17%) said they had 'always intended to'. Bullying accounted for 25.32% of the families' motivation, with 24.04% referring to their child's depression and stress caused by having been in school. Perhaps surprisingly, 1.60% of the sample cited, 'Headlice at school' and

'Spread of illness in school' as, at least in part, their motivation to home-educate.

Overall, the motivations could be divided into two groups, those citations relating to experiences with school and those concerned with family ideology[6]. Whatever type of motivation was reported, the words and phrases most frequently used to describe home-education were, 'Freedom', 'Ideology', 'Individual', 'Taking responsibility', 'Way of life', and 'Less stress/pressure'.

5.5 PARENTING STYLES DESCRIBED BY PARENTS

A note was made of the types of parenting skills referred to by parents and the results are listed in Table 5.5. From the data provided here, child-centred relaxed parenting outnumbered more traditional parenting approaches.

TABLE 5. 5: PARENTING STYLES AS DESCRIBED BY THE PARENTS (N=171).

Parenting Style	%
Relaxed	26.32%
Fair - strict but kind, Considerate	20.47%
Child-Centred, Nurturing	16.38%
Loving	15.20%
Respectful	9.94%
Traditional	7.60%
Responsible	5.26%
We have high ideals but flounder on the discipline	4.68%
Scriptural/Christian	4.90%
Encouraging	2.92%
Functional, Variable	2.92%
Responsive	0.58%

5.6 Parental Views and the Practicalities of Home Learning

Asked if home-education had been as they expected (n=382), 48.69% of families answered 'no', 36.39% said 'yes' and 9.16% reported that they had not harboured preconceptions: 5.76% felt it was too early to say.

Appendix 5.5 illustrates some of the reasons given as to why home-education was or was not as anticipated (n=262). The largest group, 34.74%, had not imagined it would be so fulfilling and so much fun, whilst the second group (26.72%), many of whom may well have found the experience rewarding, stated that home-education was far more demanding and more difficult than they had imagined. There were 3.82% who had been surprised to find out that their home-educated children had not turned out as they had expected!

On the whole, it appeared that the learning pattern was negotiated by parents and children together (56.82%) although parents led the way in 11.17% of families and children in 32.01% (n=403).

From the total (n= 403), almost half the families said they 'never' followed a routine instead taking 'each day as it comes' (44.67%). Partial routines for learning were followed by 26.05% of families and set routines by 15.38%, although a further 11.91% said that whilst they attempted to maintain a structure it was often interrupted: 1.49% described a structure organised around the seasons. Others who planned their weeks offered

their children a choice on a daily basis (0.50%) so long as the week's work was covered.

Opinions on routine varied, but many (37.94%) emphasised the need for flexibility: only 5.93% of families maintained school hours, a formal curriculum or a timetable (n=253).

Learning was most often encouraged by facilitating resources, interests and visits and by following and sharing interests. Parents also believed they encouraged learning by listening to their children, giving them their time and by answering their questions: the importance of 'talk' was also highlighted. Table 5.6 details the means of encouragement parents cited.

TABLE 5. 6: HOW PARENTS ENCOURAGED THEIR CHILDREN'S LEARNING (NO. CITATIONS =397)

Means of encouragement	**%**
By facilitating resources, interests, visits	53.90
By following sharing interests	26.95
By listening/giving them time/answer questions	21.16
Talking	16.88
By suggesting activities	10.58
By our interests/by example	8.06
Don't need to, child self motivated	6.55
Praise, encouragement	5.54
By making everything seem like fun/by not encouraging 'learning'	5.54
Reward system	1.01
Fostering imagination	1.01
Use Bible guidelines	.76
Relate things to music	.50
Nag at them, make them study	.25

For most parents with more than one child, mixed aged learning was a reality. Almost two thirds 65.86%, believed this to be generally beneficial to children and adults, even 'essential' and 'excellent'. Many other

parents, as Appendix 5.6 shows, identified certain benefits, such as 'better for younger than older children' (1.08%) or, 'good with adult support' (3.49%). Interestingly, 8.33% described it as 'challenging'. Just 1.08% of the sample said it was not a good idea and did not work (n=372).

The questionnaire provided space for a fairly full answer to the request that a day of home-education be described. The phrases illustrated in Table 5.7, sum up parents' accounts. Those families adopting the more 'autonomous'[7] method, appeared to account for 37.37%, although some of these families may have had very young children.

TABLE 5. 7: SUMMARY OF HOW HOME-EDUCATORS SPEND THEIR DAYS(N=388)

	%
AM: Academic work, PM: creative activities and outings	28.35
Playing & doing, living	20.62
Every day is different	16.75
Varies daily but we cover several areas each day	14.69
9am to 3pm non-academic/academic mix	13.66
Between 8 and 9.30am through to between 5 and 6.30pm	2.58
Academic work in the morning with homework	2.06
An academic day keeping school hours, 9am to 3 pm.	.52
Part-time schooling, eg. AM: home and PM: school	.26
Tutor led days	.26
4pm-6am non-academic/academic mix[8]	.26

Thomas (1998) has suggested that home-educators move from formality towards informality, the inference being that families relax over time. However, this study found that where a change in approach was mentioned, 11.72% of families appeared to have moved towards structure as opposed to only 9.66% who had become increasingly informal. However, a further 24.83% said that they had always

maintained structure whilst over half 53.79% said they had always been informal (n=145).

Parents were asked if they hoped their children would take exams, to which 39.75% replied that they did: 28.25% said it was up to the child to decide and 25.75% were unsure. Those parents who did not want their children to take examinations totalled just 4.75% (n=400).

Opinions of exams (n=357) varied with the largest proportion (23.53%) of parents seeing them as 'useful' and 'necessary'. Others said it depended on the child's vocation (22.69%) and that exams were a 'necessary evil' (18.21%) - a phrase used by very many of the families who were also religiously affiliated. There were concerns that examinations created low esteem and were not a sign of intelligence (11.76%) and that they did not do much good (3.92%). Some families, under 2% in each case, said they should be avoided, were 'useful to prove the sceptics wrong' or were not helpful to children with special needs. A moderate proportion (17.09%) were indifferent to the issue.

5.7 Resources Used in Home-education

There was no question relating to television. However from the questionnaires mentioning television (n=253), 14.23% specifically stated that they did not have a television in contrast to the 85.77% who said they did.

Families used a very wide range of resources, from the more obvious books and television, to household items, outings, everyday life, discourse, music and the garden (n=389). Just 9.51% used published curriculums and 0.77% (3 families) employed full-time 'tutors'. Notably, Teacher's Resource Centres were used by only 0.51%, possibly a reflection on the limited access that home-educators have to such centres, as entry requires LEA permission. Overall families tended to make use of whatever was available to them.

Asked about the use of occasional tutors and classes (n=401), 56.11% used such tutors whilst 36.41% said they did not. An additional 5.24% said they would use them at a later stage. Other responses suggested that grandparents and siblings helped out (2%). In view of the wide church membership described earlier, it was surprising that only 0.25% of families mentioned the church, although it was possible that such parents completing the questionnaire did not think of church groups in this way. Outings apparently accounted for much of the children's time, rendering the term 'home-education' somewhat inappropriate (n=360): 50.56% of families believed that 'any outing' was a learning experience and 35.00% felt that any outing where the children enjoyed themselves or gained stimulation, was, therefore, educational[9]. Only 7.77% defined an educational outing as one planned to support a specific area of study.

Families were asked how they supported Maths and Science, since these areas are often said to be difficult for home-educators to cover. Amongst all the responses, no specific problems were mentioned. Appendix 5.7 lists the resources highlighted. In Science (n=357) and Maths (n=370) approximately one third in each case said that they related problems to concrete life applications and that they used a variety of workbooks and manipulatives[10]. There was more dependence on television, computer and purchased kits for science than for maths although in both areas parents tended to make use of what was readily available to them.

Overall (n=253), at least 76.68% of families said they used a computer, contrasting with 23.32% who did not. Given the number of families who did not use a computer (n=147) it is interesting that only 3.40% said they would make full use of a computer if they could afford one (Appendix 5.8).

The National Curriculum was not popular with home-educators. Over half (56.09%) of families said that they did not use it at all, in contrast with just 10.41% who did. Some families (1.78%) said their children were too young to use it and 31.73% said they occasionally referred to it (n=394).

As Table 5.8 shows, there was a wide range of thought concerning the National Curriculum.

TABLE 5. 8: OPINIONS OF THE ENGLISH (MAINTAINED SECTOR) NATIONAL CURRICULUM (N=269)

Description	% of sample
Restrictive, narrow	26.39
Bad, unnecessary	17.84
Prescriptive, rigid, pressured	17.10
OK, looks sensible, fine for reference	13.38
I am neutral about it	12.64
Good, well thought out, helpful	9.67
Bad for home-education, good for school. Not for individualised learning	8.18
Tells us what is expected of others	7.43
We follow it because they may return to, or enter, the school system	4.46
Too broad	1.49
We do not like it; each child's needs are individual	1.12
It is constantly being altered	1.12
OK when I'm feeling insecure	.74
It lowers standards	.37

5.8 HOME-EDUCATED CHILDREN AND READING

Literature (eg. Thomas 1998) and anecdotal evidence from home-educators often gives the impression that home-educated children tend to read later than school children; the inference is that home-educated children are not under the pressures of government reading targets and therefore, learn to read in their own time. Parents were asked in the questionnaire to state the age at which their child learned to read and to explain which methods they had used. The ages were given by 204 families, relating to 309 children and these are summarised at Table 5.9.

Responding to the question asking how the children had learned to read (n=217), 164 families made reference to approaches that could be divided into informal such as 'we read to them often' or 'self taught'

(50.70%) and formal, for example, 'reading scheme' or 'look and say' (49.29%).

TABLE 5. 9: AGES AT WHICH THE HOME-EDUCATED CHILDREN HAD LEARNED TO READ (N=309).

Reading Stage	Definition of Each Reading Stage	%
Early	Less than 4.11	41.10
Average	Between 5 and 6.11years	39.48
Late	More than 7 years of age	11.33
Very Late	More than 9 years of age	8.09

5.9 THE PLACE OF ASSESSMENT IN HOME-EDUCATION

Informal discussions with home-educators suggest that they prefer not to use assessments to gauge their children's educational progress and indeed, this was supported by the 47.84% of parents who said that they did not assess their children (n=370). Those referring to informal methods such as discussion, observation and continuous review numbered 28.64% whilst 34.85% suggested they were rather more formal. Phrases such as 'Annual review for Education Officer's visit' indicated, however, that some parents felt an obligation to show progress. Overall, asked whether they actively encouraged assessment (n=310) only 22.90% said they did.

5.10 COMMUNICATION WITH THE LOCAL EDUCATION AUTHORITY

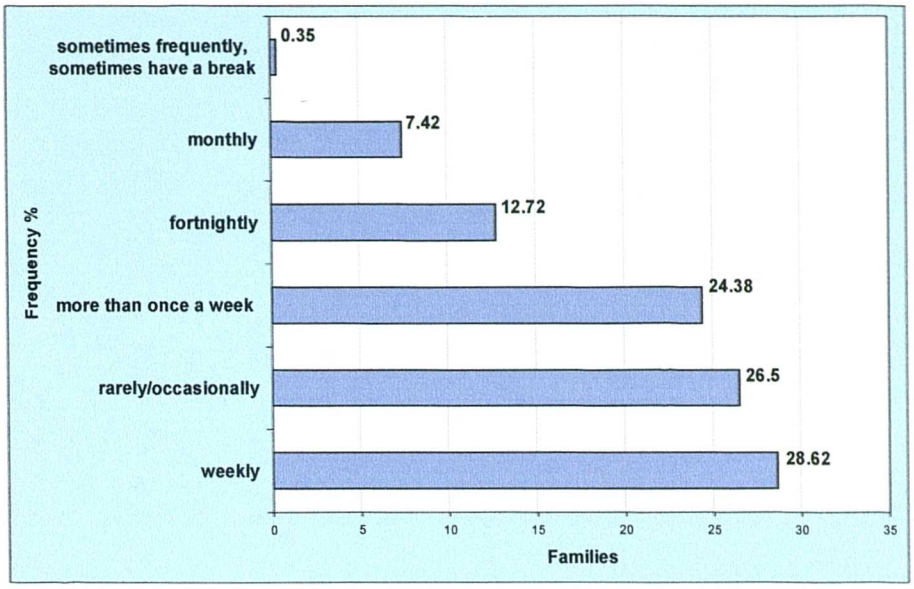
Only 206 families with school aged children made it clear whether or not they were known to their local authority and of these, 30.64% said they were not whilst 69.36% responded that they were.

Participants were asked if the LEA had offered any assistance or made stipulations about their home-education (n=389). Here, 53.73% of families responded with a mixture of, 'no', 'not visited', 'uninterested', or 'not known to the LEA'. LEAs were often described as 'OK' but 'not a help' (21.59%) and rather less often as, 'helpful' (12.08%), although a further 3.34% said the LEA had 'occasionally assisted'. LEA initiated problems were the experience of 6.68% with another 2.57% of families complaining that the LEA had, 'insisted on seeing our qualifications[11]' or 'tried to ensure we follow a curriculum'.

5.11 Socialisation and Meeting up with Other Home-educators

Whilst the majority of parents (73.09%) said that they met up with other home-educators, 26.91% replied that they never got together with home-educating families (n=405)[12]. As Chart 5.5 shows, of those who did meet up with others and responded to the question on frequency, over half said they met at least weekly (n=283).

CHART 5. 5: FREQUENCY WITH WHICH HOME-EDUCATING FAMILIES MEET UP (N=283)



With regard to socialisation, the most widely expressed view was that school style socialisation was often negative (39.93%). Many felt that home-educated children did not miss out (21.65%) although there was the feeling that children could suffer socially if their parents did not make an effort (18.98%). Some parents believed that their children would like more friends (4.87%) although parents with such views were not advocating that school was necessarily the place for this: for example, the view was expressed that:

> 'Children like being part of a group and must feel some benefit from such, although it is better if this out of school'

Appendix 5.9 details parents' rationalisations of socialisation issues (n=411).

5.12 HOME-EDUCATORS AND SCHOOL

Of the sample (n=375), 33.07% of parents said there were no plans for their children to attend school in the future, as opposed to 13.60% who said they would. A further 53.33% were open minded, many indicating that it would be the children's decision.

Where children might later be in school, respondents (n=227) said this was either because it would be what the children wanted (63.44%), or for easier access to exams, university and extra resources (17.62%); some parents explained that it might be 'best at the time' (14.98%) or because home education became 'too much of a struggle' (2.64%), parents might both need to work full-time (0.88%) or because it was 'God's will' (0.44%). Asked, where relevant, to explain why their children remained or had been through, school (n=84)[13], over half said the children were or had been happy and learning (54.76%), or because it was the child's choice (30.95%) and some believed it worthwhile for the school social life (7.14%). A small number had not previously known that home-education was possible (5.95%) whilst some children lived elsewhere and were in school according to the resident parent's wishes (4.76%). Other reasons were (less than 3% in each case) that home-education had been too complicated, the family wanted the school's SEN facilities, money issues, school discipline was deemed necessary, exam access, court order and partner pressure.

Verbal reports amongst home-educators tend to suggest that removal from school is often followed by a transitional period. This was referred to by the respondents (n=155), 36.88% of whom said that it 'took a while to adapt'. A further 19.38% explained that as a result of school their child was 'traumatised' and 'hostile to education' whilst 17.50% described their child as needing to 'rebuild damaged confidence' and 6.25% as taking time to 'understand that it was not necessary to constantly seek permission'. School was viewed 'positively' by 11.88% of parents who believed it had helped their children to accept a routine (11.88%) or made them appreciate home-education (.63%). A few parents said that the child was not in school long enough for it to have an effect (6.25%) or that there was no such transitional period (1.25%).

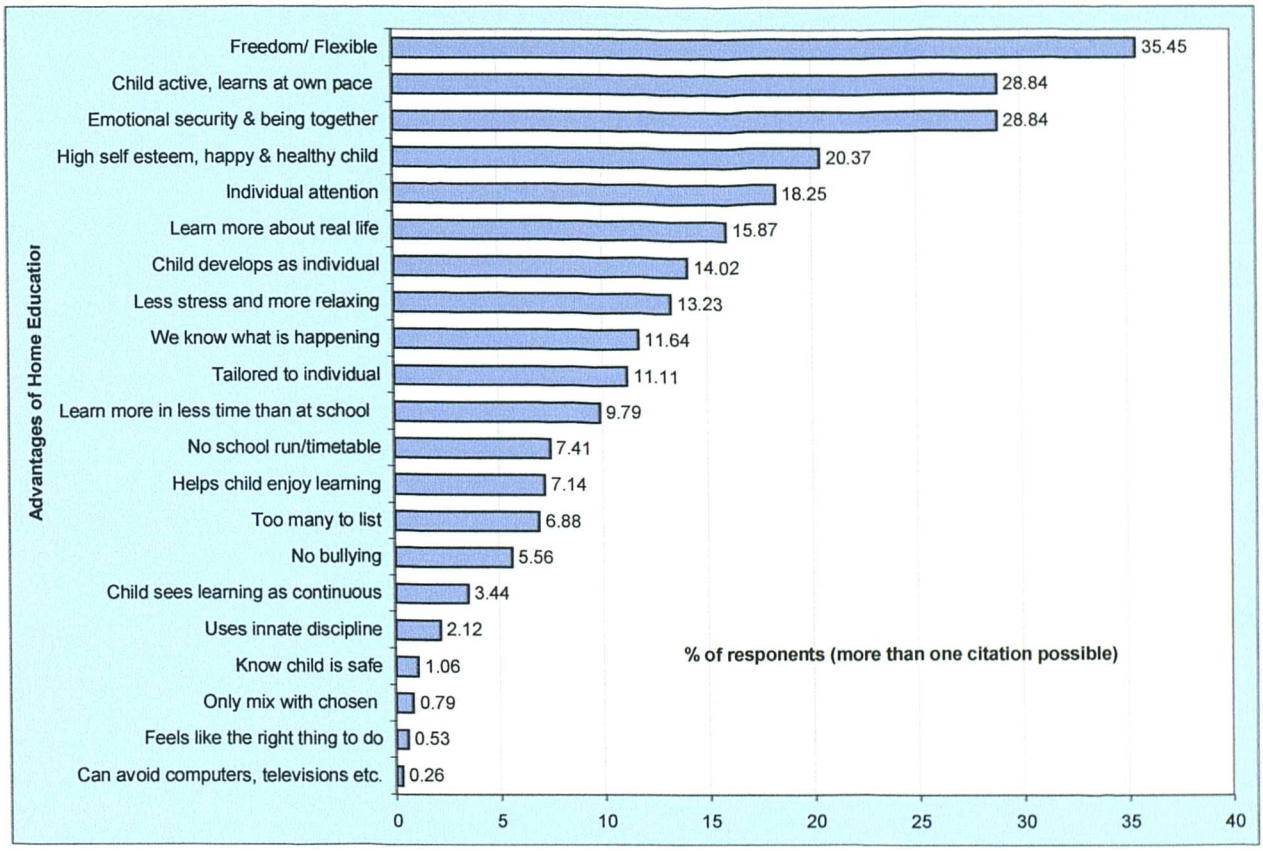
5.13 Advantages and Disadvantages of Home-education and School

The questionnaire asked families what they considered to be learned at home that was not covered at school. Full details are given at Appendix 5.10. The most cited areas were broad categories such as (n=381); 'interpersonal', 'communication', 'social' and 'discussion' skills (29.92%), day to day living, learning and life skills (25.72%), skills in 'caring for people', 'moral and social awareness', 'responsibility' (25.46%), and self esteem, motivation and Independence (14.70%). The outside world featured strongly, for example, nature and conservation (14.44%), environmental issues (11.29%), practical skills 14.17%, physical

education (6.82%), astronomy 3.94% and travel (2.62%). The arts were mentioned by 17.59%, and languages by 12.86%. Interestingly, few of the areas mentioned were as specific as those covered by the school curriculum.

The main advantages of home-education and disadvantages of home-education, as cited, are shown below in Charts 5.6 and 5.7.

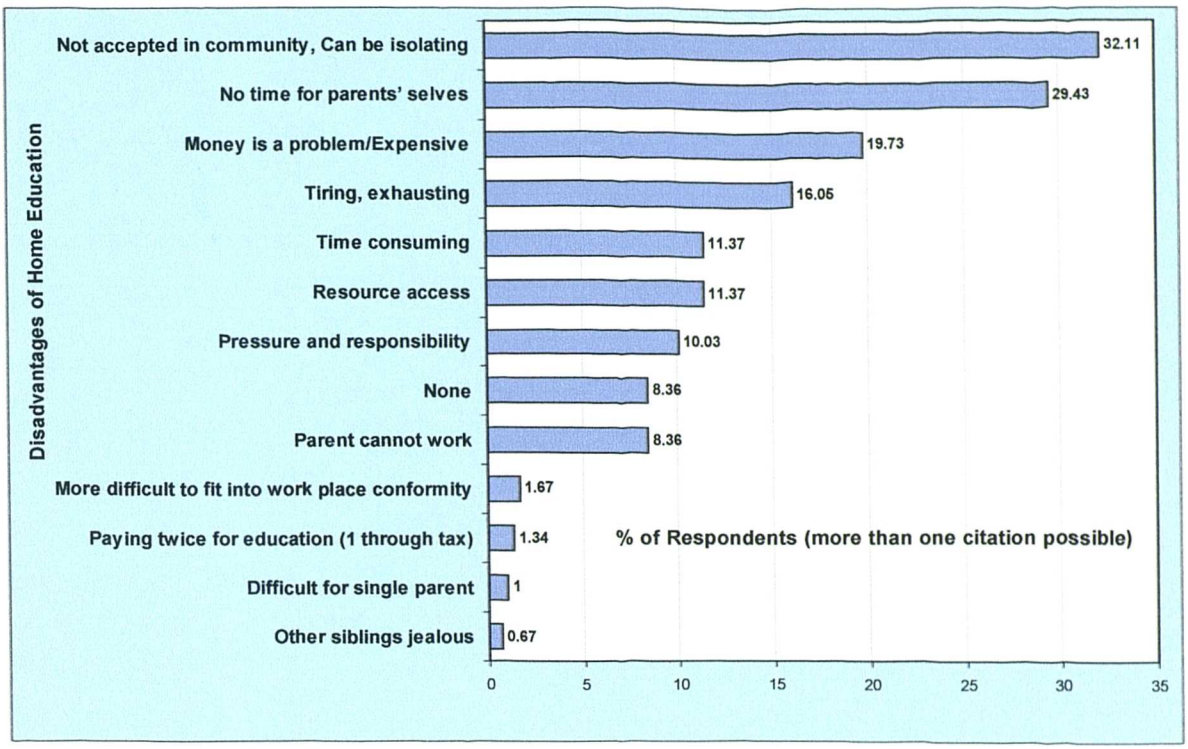
CHART 5. 6 ADVANTAGES OF HOME-EDUCATION (N=378)



From Chart 5.6 it appears that home-educators are interested in what might be termed the 'whole child' approach, seeing education as a way of life inseparable from daily living. As can be seen from Chart 5.7, the

main problems were with isolation, having fewer friends and being shunned by the wider community; thus, most of the comments were concerned with support issues.

CHART 5. 7 DISADVANTAGES OF HOME-EDUCATION (N=299)



Respondents were also asked to list the advantages and disadvantages of school and their answers appear at Appendix 5.11. Although 19.11% of the sample (n=314) believed school to have no advantages whatsoever, 31.85% thought it had the advantage of providing parents with time for themselves and with less responsibility: however, despite this latter concept being listed as an advantage, there was negativity in the way parents often expressed themselves using such phrases as, 'free baby-sitting service'. Resources (24.84%), social life (19.43%) and good teachers (13.38%) were amongst the more positive benefits described.

Some disadvantages of school inherently echoed the advantages of home-education. 'Conformity' was considered the main drawback (51.66%), along with 'bullying' (27.31), 'peer pressure' (20.66%) and the 'child/teacher ratio' (16.61%). Generally, home-educating families saw school as a vehicle for separating parents and their children and creating 'boredom' in an 'anachronistic' atmosphere aimed at conditioning pupils.

In view of the lack of community support that the families believed they suffered, the families' descriptions of how other people treated them were interesting (n=403). 'All very differently' was how 29.28% of home-educators believed they were viewed, 28.54% experienced curiosity and interest and 18.61% felt that they were treated with negativity by non home-educators. Families were also treated 'positively' (17.37%) and 'indifferently' (6.20%), with 0.50% saying that they were reluctant to tell people they were home-educators. The above percentages relate to the prime response given in each questionnaire: however, families also listed reactions such as those in Box 5.1.

BOX 5. 1: HOME-EDUCATORS' DESCRIPTIONS OF HOW OTHER PEOPLE TREATED THEM

- 'Didn't know it was possible'
- 'Is it legal?'
- 'Polite but distant'
- 'Supportive and understanding'
- 'Respect'
- 'Hostile'
- 'Concern'
- 'Surprise'
- 'They feel threatened'
- 'They think we are depriving them'
- 'Narrow minded ignorance'
- 'Concern for social integration'
- 'Non-committal'
- 'Impressed by our child's behaviour'
- 'Feel schools are failing'
- 'Wouldn't be able to do it themselves'

5.14 OVERVIEW OF RESULTS SECTION

The results show home-educators to be a diverse community with complex family circumstances that make the compilation of 'facts' virtually impossible. The results suggested, in very broad terms and with unlimited variations between families, that the UK home-educating family's profile was as set out in boxes 5.2, 5.3 and 5.4.

BOX 5. 2: PROFILE OF A HOME-EDUCATED CHILDREN IN THE UK

CHILDREN

- Had experienced school at some time
- Followed a child/parent negotiated education
- Could go to school if they wanted to
- Had their progress assessed by their parents, however informally
- Did not follow a firm routine but tended to keep the mornings for any academic pursuits and the afternoons for activities and outings
- Did not follow the National Curriculum
- Read before 7 years of age, learning by exposure to books
- Used a computer
- Experienced a great deal of parental input

BOX 5. 3; PROFILE OF HOME-EDUCATOR PARENT IN THE UK

PARENTS

- In a relationship
- Attended comprehensive school
- Had not enjoyed school
- Probably had a degree
- Were quite likely to have some training in education
- Had either been disappointed with schools or had always planned to home-educate.
- Had a fairly relaxed parenting style
- Hoped their children would take exams
- Were affiliated to a religion either formally or informally

BOX 5. 4: PROFILE OF HOME-EDUCATING FAMILY IN THE UK

FAMILIES:

- 2.45 children
- Urban dwellers
- Enjoyed the freedom and flexibility that comes with home-education
- Met up with other home-educators
- Were more likely to be in contact with the LEA
- Felt that the community did not offer enough support
- Most valued the interpersonal relational skills that were learned at home

Questionnaire Results Endnotes

[1] 'Islands' (1.4%) includes Northern Ireland, Isle of Wight, Isle of Man and the Channel Isles.

[2] This group includes gifted children as defined by their parents or professional diagnosis.

[3] Many parents gave their present/most recent occupation and so the number of teachers given here was not the total number who had been trained to teach.

[4] It was not absolutely clear what this job entailed but it appeared to be connected with Paganism.

[5] For example: Some Brethren communities do not use electricity.

[6] This is a very general division of the motivations described in Appendix 5.4 but it provides an idea that views were balanced between school and ideology

[7] Autonomous education is totally child-led: the child may or may not choose academic pursuits.

[8] No further explanation was provided by the respondent.

[9] The difference here appears to be the latter group believed shopping trips were beneficial only if the children had enjoyed themselves whilst the former viewed such trips as educational per se.
[10] Such as counters, rods, objects that sink/float etc.
[11] There is no requirement in law that home-educators have qualifications.
[12] Families not mixing with other home-educators may have mixed with non home-educators.
[13] Respondents could give more than one answer.

CHAPTER 6: PERFORMANCE INDICATORS IN PRIMARY SCHOOLS BASELINE ASSESSMENT (PIPS 'RECEPTION')

ABSTRACT

This element of the research details the results from the PIPS Baseline assessment for home-educated children: 35 families, each with at least one child aged four years were selected to participate. Families were interviewed, each in their own home, at the start and end of a ten month period. The four-year-olds were assessed on each occasion using the PIPS Baseline measure. The PIPS Baseline assessment data indicated that 64% of the children scored over 75% on the assessment where nationally, just 5.1% of children score over 75%. 'End of Reception Year' data suggested that the children's progress over the period was less than that associated with school children during their reception year. This observation, however, was offset by the home-educated children's high baseline scores. The families interviewed came from diverse socio-economic levels. Generally, the home-educated children demonstrated high levels of attainment and good social skills. Common to all the families interviewed was their flexible approach to education and the high level of parental attention received by the children.

6 PIPS BASELINE ASSESSMENT RESULTS: OVERVIEW

From the 35 families in the study, 33 took part in the full 'Start' and 'End of Reception' research and 2 families assisted with the PIPS 'Start of Reception' only. Section 4.6.2 describes the process by which, of 45 families approached, 35 went on to take part in this assessment. All the

PIPS Baseline assessments were administered by the researcher in person.

6.1 RESULTS IN BRIEF

The PIPS Baseline assessment data indicated that 64% of the home-educated children scored over 91.5 raw score points (75%) at the 'Start of Reception', whilst nationally, the percentage of children attaining in excess of this score was 5.1%[1]. In standardised score terms, this indicated that 63% of children fell into a score bracket usually occupied by just 2-3% of children nationally (PIPS Project 1997b).

At the end of reception, 2-3% of children were expected to score above the standardised score of 70 (PIPS Project 1997b). In the home-educated cohort however, 21% of children scored above 70. Table 6.1, below, provides the raw score results for the home-educated group (in bold), contrasted with the results given in Tymms et al 1997. Current national data from the PIPS Project is similar to that given in Tymms et al. (1997)[2].

TABLE 6. 1: DETAILS OF CONTINUOUS VARIABLES (EXTRACTED FROM TYMMS ET AL. 1997)

T = Tymms et al. (1997) R = Rothermel (this study)	Mean		SD		Minimum		Maximum	
	T	R	T	R	T	R	T	R
Start Maths	20.7	**27.71**	11	**5.96**	1	**13.00**	46	**34.00**
Start Reading	14.5	**68.80**	10	**14.27**	1	**38.00**	47	**85.00**
Start Total	35.4	**96.51**	19	**18.42**	2	**56.00**	92	**119.00**
End Maths	39.3	**44.36**	14	**10.37**	1	**30.00**	86	**64.00**
End Reading	49.5	**109.39**	23	**45.02**	1	**58.00**	86	**187.00**
End Total	88.8	**155.57**	34	**52.75**	3	**95.00**	170	**251.00**

Tymms et al. n = 1700 Rothermel n = 35 (start) & 32 (End)

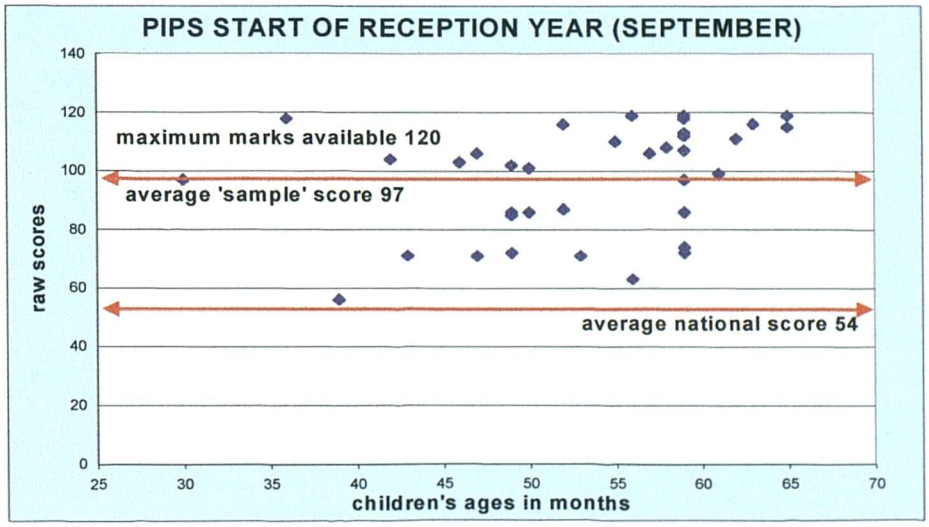
Despite the high percentages of home-educated children achieving above average scores, their performance in terms of valued added progress was rather poor, in particular, in 'Reading', as Table 6.3 shows.

Appendix 6.1 provides a detailed analysis of national (PIPS Project 1999) and home-educated data relating to the percentages of children correctly scoring each assessment section.

6.2 RAW SCORES

Chart 6.1 plots the overall raw scores for the home-educated children: a thick red horizontal line represents the children's mean score of 97 marks, as indicated, and the national mean score of 54 is illustrated by a further red line. The maximum score available in the PIPS Baseline assessment was 120 and it is possible to see from Chart 6.1 that many participants scores were in the upper part of the chart, indicating their high standard of performance.

CHART 6. 1:SCATTERGRAM ILLUSTRATING START OF RECEPTION (HOME-EDUCATED) RAW SCORES



A number of the home-educated children demonstrated a level of achievement beyond the scope of the 'Start of Reception' instrument. Therefore, as Chart 6.1 illustrates by the 120 mark ceiling, it was not possible to record their actual level of ability beyond establishing that the 'Start of Reception' test was well within their capabilities. Since children were not normally expected to complete all of the 'Start of Reception' assessment at the first sitting[3], the CEM Centre, which publishes the PIPS Baseline measure did not make the 'End of Reception' section available until towards the end of reception year.

CHART 6. 2: PIPS RECEPTION (HOME-EDUCATED) SCORES ACCORDING TO AGE

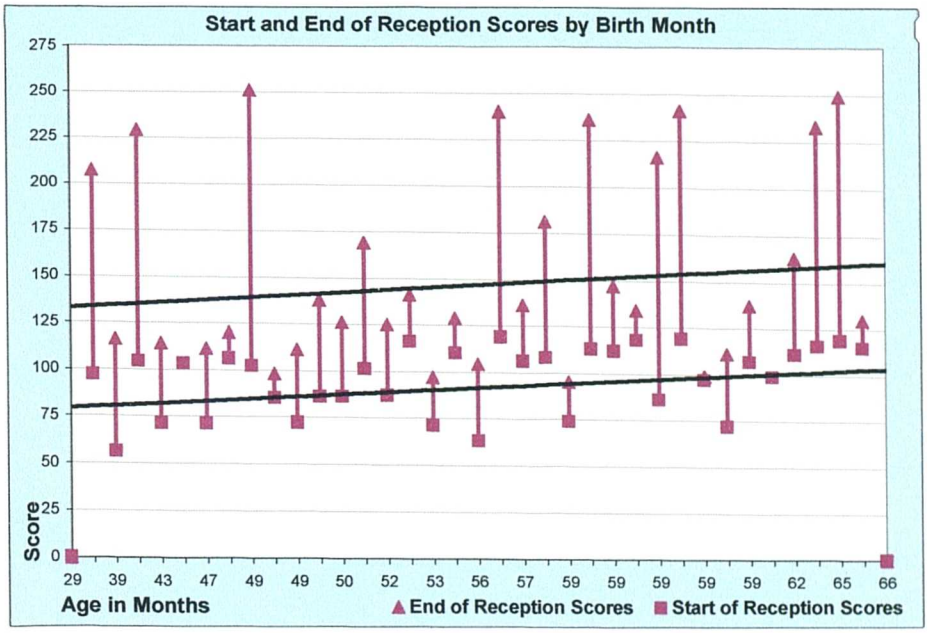


Chart 6.2 illustrates the difference in performance between the children's 'Start' and 'End' of reception scores, contrasted with their month of birth. The pink 'squares' represent each child's 'Start of Reception' score; pink lines extend upwards[4] terminating with an arrowhead, each representing the children's 'End of Reception' score. Two black trend lines have been

added, one relating to the 'Start' scores and the other to the 'End' scores: these indicate that there was an increment in attainment, across the cohort, the older the assessed children were.

The mean age of the children in this sample was 53.6 months, with an SD of 7.78, where nationally, the mean is 51.3 with an SD of 8.87. Although PIPS 'Reception' is designed for children aged between 46 and 63 months (PIPS 1999), the national data revealed that children assessed were, in practice, aged within a range of 30 to 76 months[5]. The children in the home-educated cohort were aged between 30 and 65 months[6]. Chart 6.2 illustrates the idiosyncratic variations for some children between their 'Start' and 'End of Reception' scores.

Tymms et al. (1997) found that the difference in performance between the youngest and oldest children (11 months difference) in their cohort was far less than the difference between children's 'Start' and 'End of Reception' scores. Tymms et al. suggested that the 42 point increase they found, as highlighted below in Table 6.2, was associated with schooling. The present study, albeit with a very small cohort, also using an 11 month age range (48-59 months, n=22), encountered almost the same phenomenon, but with a difference of 45.32 points.

TABLE 6. 2:DATA EXTRACTED FROM TYMMS ET AL. 1997, CONTRASTED WITH THIS STUDY'S DATA

	Tymms et al. (1997)	Rothermel (2002)	Tymms et al. (1997)	Rothermel (2002)
n	**283****	**12***	**1700**	**22**
	'Start of Reception' point difference between the oldest and youngest children's scores	'Start of Reception' point difference between the oldest and youngest children's scores	Progress in points for whole group between their 'Start' and 'End' of Reception scores	Progress in points for whole group between their 'Start' and 'End' of Reception scores
Points	18	10.22	60	55.54
Increase in scores between 'Start' and 'End of Reception' and 'End of Reception'			(60-18=) 42	(55.54-10.22=) 45.32

*The two groups of children at each extreme of the 'Start of Reception' year group consisted of, oldest (n=8) and youngest (n=4), thus totaling 12.
**Oldest (n=117) and youngest (n=166), thus totaling 283.

The following two Charts, 6.3 and 6.4, illustrate the home-educated children's raw score performance in reading and mathematics over the ten month period. An upward trend in their learning is clearly visible. The 'End of Reception' scores, however, suggest that the mean-line for home-educated children was converging with the national mean. There is evidence, however, in terms of reading ability as judged using a National Literacy Project assessment, that the disparity continues at least as far as Year Five (Rothermel 1998).

Charts 6.3 and 6.4 show that the home-educated children, as a group, began the year ahead of their school counterparts and ended it still ahead. The individual mathematics scores, as shown in Chart 6.6, below, tended to follow the 20° incline of the mean over the ten month period, with scores falling fairly evenly either side of the mean. The reading trend was quite different and the mean line for reading actually concealed a considerable variation between individual performance.

CHART 6. 3: RECEPTION YEAR MATHS

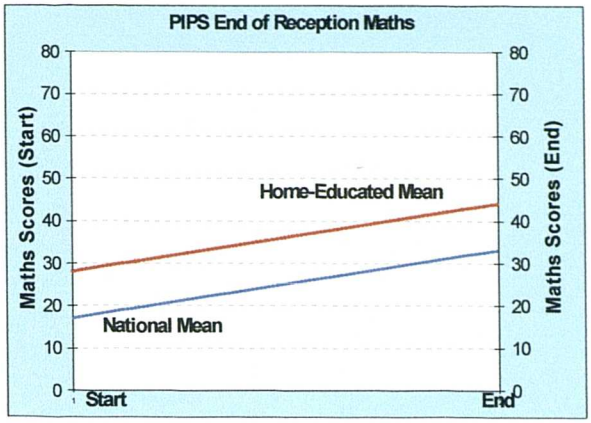
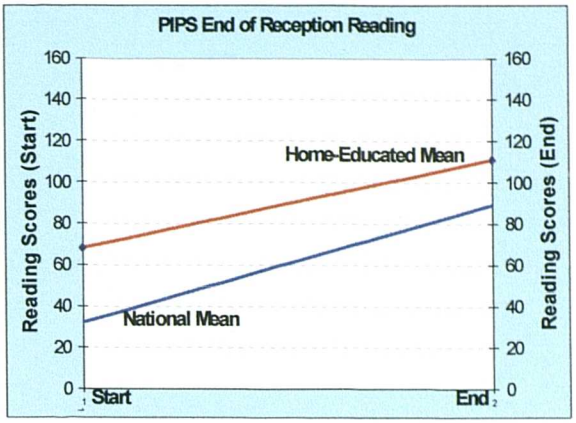
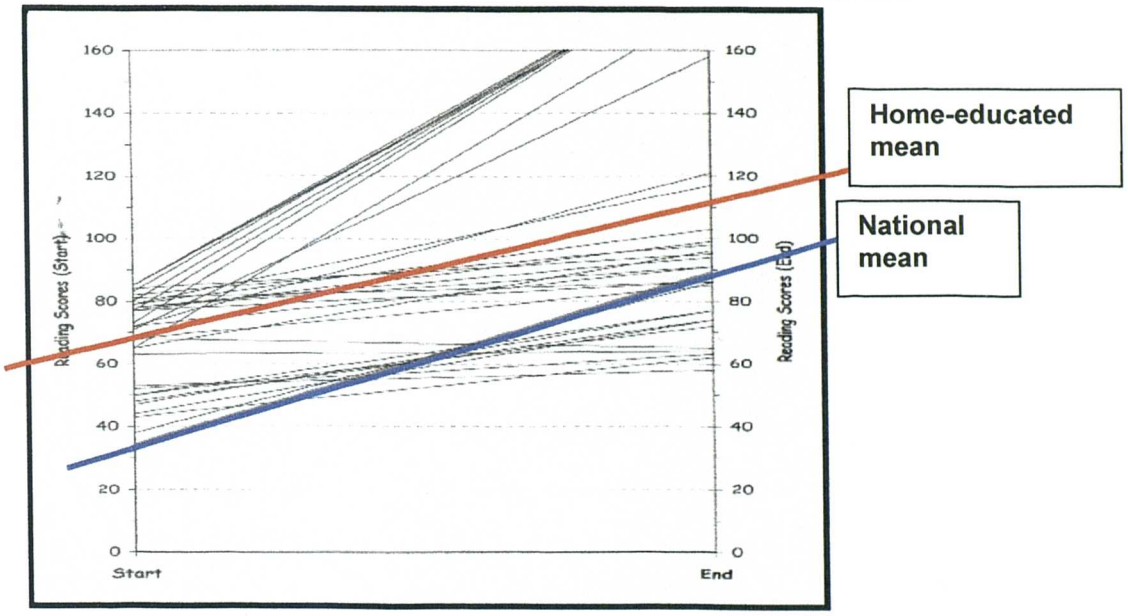


CHART 6. 4: RECEPTION YEAR READING



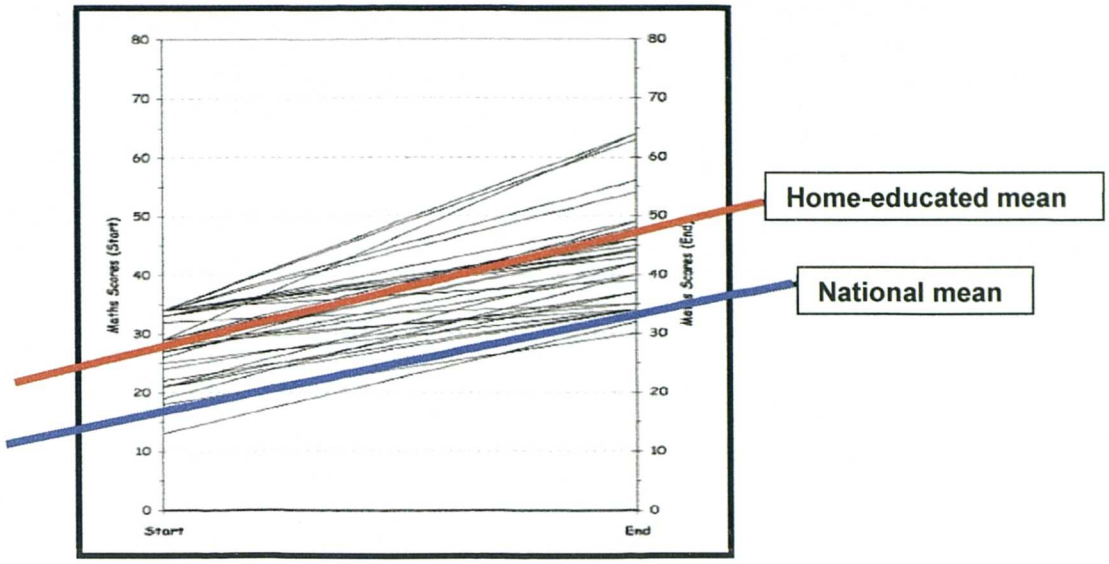
Charts 6.5 and 6.6 illustrate the individual home-educated children's raw score performance in reading and mathematics.

CHART 6. 5: HOME-EDUCATED CHILDREN'S INDIVIDUAL READING PERFORMANCE



The thick lines represent the national mean and the home educated mean, as indicated. The thinner lines each depict the performance of one child over the ten month period. In 'Reading' there is considerable variation in performance, whilst the 'Maths' scores represent a tighter margin of 'progress'.

CHART 6. 6: HOME-EDUCATED CHILDREN'S INDIVIDUAL MATHEMATICS PERFORMANCE



6.3 VALUE-ADDED

The home-educated children's value-added performance in maths and reading is portrayed in Table 6.3, below. The value-added has been calculated using the children's standardised scores to measure their progress over the year relative to calculated expectations of progression nationally. Since value-added allows for maturational effects, it should be noted that even those children with double negatives may have made progress[7].

The second column of figures in Table 6.3 indicates the percentage of children nationally who would be expected to fall within each of the categories listed in the first column. The third and fourth columns present the percentages of home-educated children falling within each of these categories.

As Table 6.3 indicates, the home-educated children's value-added performance did not follow the pattern predicted by national norms. In

particular, Table 6.3 shows that, in 'Reading', 54.5% of home-educated children demonstrated an increment in learning equal to the lowest measured reading band, normally containing 10% of children nationally. The anticipated improvement in reading ability, seen in 50% of the school reception class population, was evident in just 12.1% of the home-educated children.

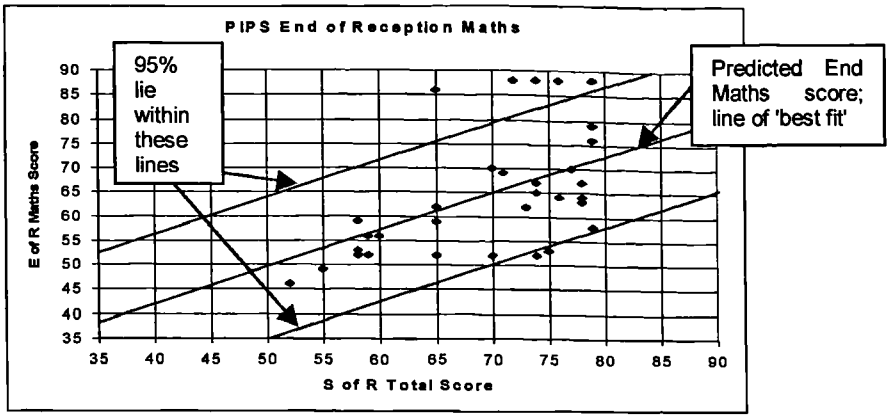
TABLE 6. 3: VALUE-ADDED RESULTS OVER A TEN MONTH PERIOD FOR MATHEMATICS AND READING

Value-added	National % of children in each value-added category	Sample % Maths	Sample % Reading
++	10%	15.10%	9.1%
+	15%	9.10%	9.1%
0	50%	51.50%	12.1%
-	15%	12.10%	15.1%
- -	10%	12.10%	54.5%

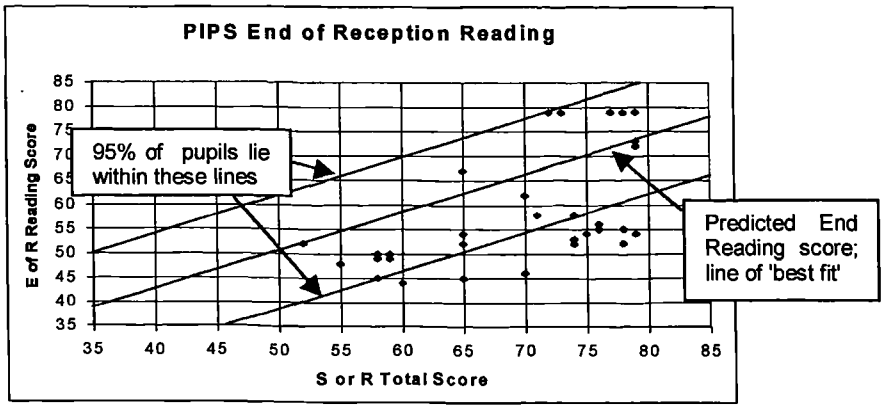
The sample's mathematics and reading performance over the 'Reception Year' is further illustrated in Scattergrams 6.1 and 6.2.

Each scattergram presents the children's total standardised 'Start of Reception' scores plotted against their 'End of Reception' standardised scores. The central diagonal line sloping up, left to right, indicates the 'predicted end score' for all the children, calculated using national statistics. Those children above the line fared better than expected, whilst those below the line did not do as well as anticipated. The outer two diagonal lines indicate the perimeters within which 95% of children are expected to fall. As Scattergrams 6.1 and 6.2 show, most of the home-educated children lay within the 95% mark for mathematics whilst their reading scores fell short of expectation.

SCATTERGRAM 6.1: PARTICIPANTS' MATHEMATICS PERFORMANCE IN TERMS OF EXPECTATION



SCATTERGRAM 6. 2: PARTICIPANTS' READING PERFORMANCE IN TERMS OF EXPECTATION



As has been illustrated above, the home-educated children did not achieve the value-added expectations calculated according to national standards. The children did, however, begin the year with a substantial head start over national norms and maintained their lead through to the 'End of Reception'. As has been suggested by Rothermel (1998), this lead, in terms of reading ability,[8] has been seen to endure at least until 'Year Five', aged 10-11.

The following section seeks to explore the PIPS 'Reception' data in terms of how children from particular sections of the group performed as judged against the remainder of the participant cohort.

6.4 CORRELATIONS

Using standardised scores a Pearson Correlation table was produced (see Appendix 6.2). There were some differences from the findings of Tymms et al. (1997), namely, amongst the home-educated cohort there was a lower correlation between 'Start [of Reception] Maths', 'Start Reading' and 'Start Total', and the 'End Total' scores. Tymms et al. had found these correlations to be at least 0.68 whilst the highest amongst the home-education sample was 0.27. The home-educated sample data did, however, show significant correlations between the 'Start Total' score and the 'End Maths' and 'End Reading' (both .56), as had Tymms et al. (0.67 and 0.72 respectively). Therefore, whilst the home-educated group start scores were poor predictors of total end achievement, their start total did correlate well with the end results for maths and reading.

6.4.1 Difference in Performance: Children from Religious and Non Religious Families

The PIPS Baseline data showed that at the 'Start of Reception' the children from religiously affiliated families performed on a par with the secular families. At the 'start of reception' the mean standardised score for the children from religious families was 69, and for secular families 69.75. By the 'end of reception' religious families' children averaged 65.4 and the children from secular families 56.71. The mean for the standardised scores was set at 50 and about 66% of children were expected to score between 40 and 60: the 'End of Reception' mean score for children from secular families, therefore, had moved below this score band.

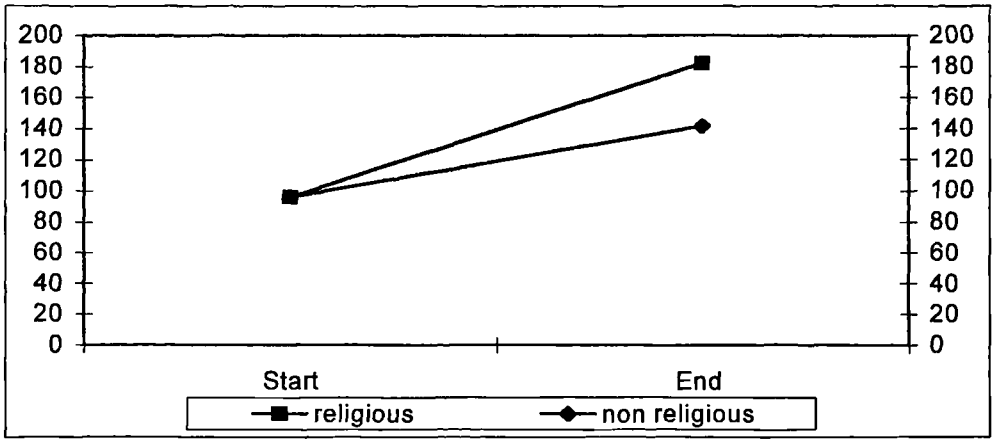
These scores suggested that the home-educated children started the 'year' with above average scores, yet failed to maintain the same lead at the 'End of Reception', noticeably experiencing more difficulty with the second part of the assessment than the first. Relative to the standardised mean of 50, it was found that whilst scores relating to children from religious families fell 3.6 points over the ten month period, the scores of their secular peers decreased by 13.04 points as illustrated by Table 6.4, below.

TABLE 6. 4: STANDARDISED SCORES FOR CHILDREN FROM RELIGIOUS AND NON RELIGIOUS FAMILIES

	Start of Reception mean score	'Start of Reception' points above norm 50	'End of Reception' points above norm 50	End of Reception mean score
Religious (start n=11) (end n=9)	69	19	15.4	65.4
Secular (n=24)	69.75	19.75	6.71	56.71

There was no significant difference between the 'Start of Reception' raw scores for the religious and non religiously affiliated children, but there was a significant difference in raw scores between the two groups' 'End of Reception' scores[9]. Chart 6.7 shows how the children from secular backgrounds demonstrated slower progression over the ten month period than their religiously affiliated peers.

CHART 6. 7: 'YEARS' PROGRESS OF CHILDREN FROM RELIGIOUS (START N=11 & END N=9) AND NON RELIGIOUS FAMILIES (N=24)



6.4.2 *Difference in Performance: Children from Professional and Non Professional Families*

The following Table 6.5 provides the mean scores of the children at the 'Start' and 'End' of their 'Reception Year', when classified according to their parent's social class category (Rose and O'Reilly 1998). The parent falling into the highest social category was used to determine the social level of the parents together: thus the unskilled categories are not represented in the scores analysis because all parents in those categories were partnered with those who fell within higher categories.

TABLE 6. 5: PIPS 'RECEPTION' MEAN RESULTS CLASSIFIED BY PARENTAL SOCIAL CLASS (N=35)

Category	N children Start/End	Start of Reception Mean Total	End of Reception Mean Total
Class 1 High managerial & professional occupations	13/13	67.0	55.2
Class 2 Lower managerial & professional occupations	11/10	68.0	56.5
Class 3 Intermediate occupations	3/3	75.3	65.0
Class 4 Small employers & own account workers	4/3	75.5	62.6
Class 6 Semi-routine occupations	4/4	70.5	71.0

Table 6.6 shows the division of scores according to social class. Children whose parents' occupation[10] put them into classes 1 and 2, were grouped together, whilst those in classes 3, 4, 6 and 8 were placed into a second group. Children from the lower end of the socio-economic class scale significantly outscored those from the upper spectrum of the scale.

TABLE 6. 6: PIPS 'RECEPTION' MEAN RESULTS CLASSIFIED BY SOCIAL CATEGORIES

PIPS	Social Classes	Mean score (standarised)	N	Significance of start/end differences[11]
'Start of Reception' mean	1 & 2	67.6	24	
	3,4,6 & 8	73.6	11	p<.037
'End of Reception' mean	1 & 2	55.7	23	
	3,4,6 & 8	66.7	10	p<.015

TABLE 6. 7: PROPORTION OF PARENTS IN EACH SOCIAL CLASS (ROSE AND O'REILLY 1998)

Category	% of parents in category.	No. of parents in category (n=70)
Class 1: High managerial and professional occupations	25.71%	18
Class 2: Lower managerial and professional occupations	34.29%	24
Class 3: Intermediate occupations	5.71%	5
Class 4: Small employers and own account workers	8.57%	4
Class 5: Lower supervisory, crate an related occupations	0	0
Class 6: Semi-routine occupations	7.14%	8
Class 8: Never worked and Long term unemployed	14.29%	10
Parental Occupation Unknown	4.29%	3

Table 6.7 provides a breakdown of each parent by social class. As can be seen, 60% of parents were categorised into Social Classes 1 and 2.

6.4.3 Difference in Performance: With Television, Without Television

Table 6.8 provides the mean scores of two groups of children, those with and those without televisions in their homes. There appeared to be little difference between the means.

TABLE 6. 8: CHILDREN'S MEAN SCORES, FROM HOMES WITH/WITHOUT TELEVISIONS

PIPS	Television in the home?	n	Mean	Significance of difference
Start	no	13	69.07	p<.808
	yes	22	69.77	
End	no	12	59.66	p<.841
	yes	21	58.76	

6.4.4 Difference in Performance: Boys and Girls

There was a significant difference between gender performance at the 'Start of Reception', but by the 'End of Reception' any difference had almost vanished. At both assessments, however, the girls outperformed the boys, as can be seen from Table 6.9, below.

TABLE 6. 9: DIFFERENCE IN PERFORMANCE BETWEEN BOYS AND GIRLS

PIPS	Gender	n	Mean	St. Dev	Significance of difference
Start	female	18	67.0	7.8	p<.012
	male	17	60.7	6.2	
End	female	17	66.0	13.3	p<.473
	male	16	62.9	11.73	

6.5 ASSESSMENT COMMENTARIES

6.5.1 *Qualitative Data Emerging from the Assessments*

Administering the 35 PIPS Baseline assessments to home-educated children in their own homes twice over the assessment period, provided an opportunity for the researcher to conduct interviews with both them and their families. This section explores the comments that emerged during the Baseline assessments. The remarks and researcher observations combine to provide a remarkable commentary upon the children's assessment experiences besides providing an insight into their learning environment that might not have emerged without the assessment as a catalyst. The illustrations serve to show the different skills and abilities that home-educated children develop and

the way in which they expect their learning to be relevant, broad-based and open to, or encouraging, questions.

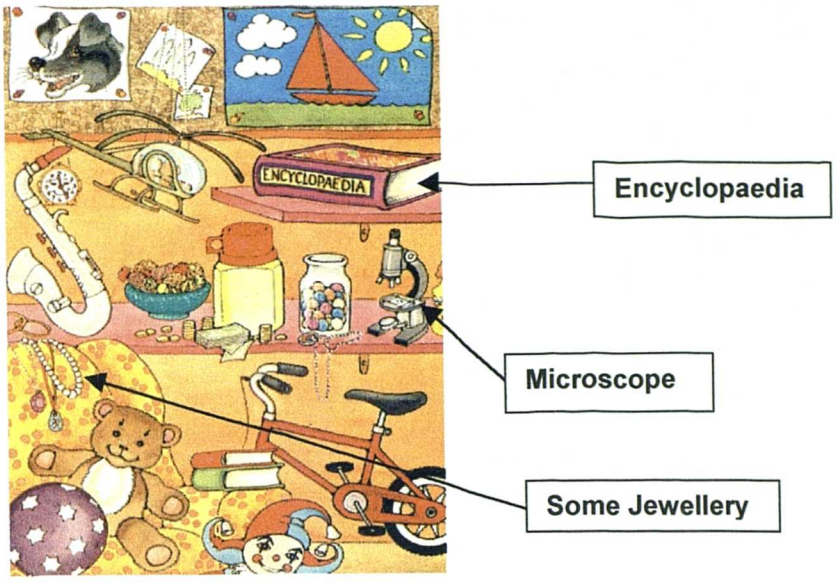
6.5.2 *What's in a word (or in a picture)?*

Bertha knew she had a fiddle but not that it was also known as a violin and so when asked to point to the violin in the picture, she was unable to do so, despite her own instrument sitting upon a nearby shelf.

Gregory Howarth's mother also played a fiddle, not the 'violin' and he too was unable to point to a violin. Mr Howarth remarked that the PIPS Baseline pictures did not allow for diversity in cultural knowledge.

Janet Keel, was not quite 3 and a half years old. Her reading was not strong: she experienced difficulty with all the assessment words and with written numbers. Her picture recognition and mental mathematics skills were good and the picture based maths were simple for her. Both parents were surprised at how well she did and were very pleased. Janet herself was keen and interested. The microscope that she was asked to point to, however, posed a particular problem because Janet had not seen one that style. She and her sister had regular access to a modern microscope, whereas that used in the illustration, as shown in Image 6.1, was an old model and quite different to what they were accustomed to using. Janet knew what a microscope was, she just could not see one in the picture.

IMAGE 6. 1: PICTURE VOCABULARY



When asked to point, in a picture, to an encyclopaedia, Erica Walker asked:

'What is an encyclopaedia?'

On the same point, Mr Jagger asked:

'What happens when a child asks a question such as, "What is an Alphabet?" and "What is an encyclopaedia?"'

His son had just asked both these questions. Mr Jagger continued:

'Are they encouraged for showing initiative?

Rita White, upon being asked to point out, 'some jewellery' in the above Image 6.1, said nothing, instead, ran off to gather up some necklaces and a crown for 'Dobbin' her rocking horse. She then collected a blackboard and as words were read out to her, she, instead of pointing them out in the pictures, wrote the words out and attempted to find matching object around the house. This made the assessment rather a long process, but it was apparent that she was

understanding the questions, even though she opted for an unorthodox method of responding.

William Jagger's mother remarked that:

> 'This test is very middle class. Words like 'Violin' and 'Saxophone' are unsuitable because a child should not be marked down just because he has not been exposed. A child could be very skilled in other areas. William's nephew knows all about steam trains which is very technical.

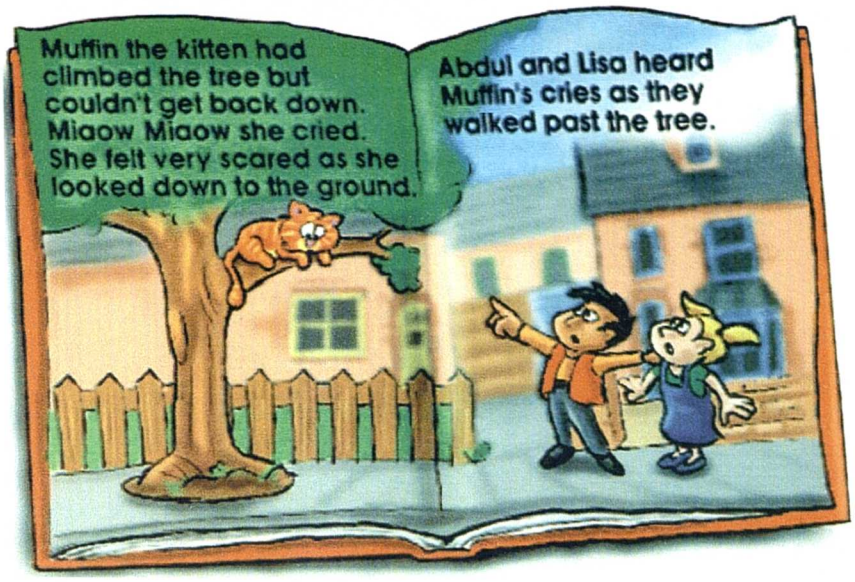
Both Mr and Mrs Jagger were professionally involved in music and so William had been exposed to a diverse collection of musical instruments.

6.5.3 *Story Time*

Sheila could not understand how the story sheet, depicted below in Image 6.2, represented a book and so her mother had to pick up a real one to illustrate the point.

Upon being asked to indicate where the story began, Bertha Heslop thought it best to start with the shortest paragraph. Rose White, however, tried to look at the previous page. As Rose could read, she found the assessment question perplexing because she was expecting to find the title page for the story. William Jagger pointed out that the answer could be 'either page' because neither bore a heading; he wondered, therefore, why the story should start on one page as opposed to the other. After all, both pages, William noted, began with new paragraphs.

IMAGE 6.2: IDEAS ABOUT READING



Rita was further confused by the question:

'Can you point to a word on the page?'

She wanted to know:

'Which word?'

Asked to point to a full stop, Rita managed to touch each one simultaneously using one hand.

After having the unfinished story read to them, the children were asked:

'What do you think might have happened next?'

Rita had already declared her version of events before any of the questions had even been read out to her. She did, however, expect there to be a 'correct' end. Asked if she often corrected her daughter, Mrs White replied that she did. William decided what had happened in the story before he was being asked: notably his parents told him he was right, whatever he said.

Often, the children replied 'don't know' in reply to the question about what happened next: this meant, however, that they did not know what happened next; they did not mean that they could not think of an answer. Many of the children, perhaps because of an unfamiliarity with school norms, could not grasp what they were being asked to do.

Mr Richardson commented that:

> 'The instructions need to be more explicit. Home educated children might find this question difficult, not because of the task, but because of the wording. From my teaching experience, I'd say that school children would expect what they saw happening and what was anticipated by the narrator, to be the same, whilst the home-educated children would not understand, from the phraseology used, that they were expected to produce a pre-determined 'right' answer.'

Certainly, it was this researcher's experience that many of the cohort found considerable difficulty with this exercise.

This did not prevent some children giving their versions of what happened after the children in the story spotted a cat up a tree, as comments from children A, B, and C illustrate:

Child A:

'They came and pulled his tail and danced along the fence'.

Child B:

'Pull the tail and the cat will fall down'

Child C:

'Muffin goes bonk'

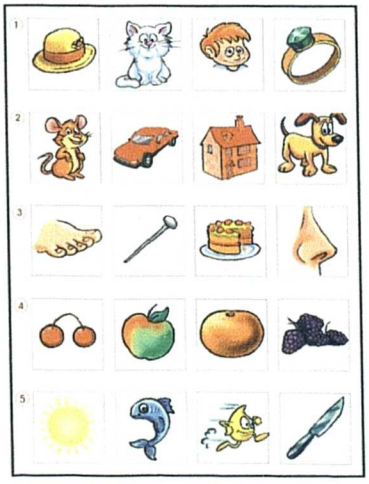
Mrs Wentworth, whose daughter gave answer 'C' giggled:

'What happens when the child gives Muffin's story a politically incorrect ending?'

6.5.4 *Rhyming Confusion: Rhyming Fun*

Image 6.3, below, shows one of the pages from the rhyming section. Children were asked to say which of the words associated with the 2nd, 3rd or 4th pictures rhymed with that relating to the 1st picture, e.g. hat and cat.

IMAGE 6.3: WHAT RHYMES WITH HAT?



When Erica answered that 'cherries' went with 'berries', it was unclear whether she was rhyming or making a 'small, round and more-than-one' connection, particularly since she had paired 'hat' with 'head', as other children also did,

regardless of whether they understood the concept of rhyming or not. William also, matched 'butterfly' with 'bin'. Colour was a further obstacle, since 'sun' and 'run' were the same colour, as were 'nose' and 'toes'. Rose Woods also experienced difficulty in making 'rhyme' connections when there were more obvious relationships to refer to. It certainly appeared the case that the children were processing the strongest and most familiar associative links first, regardless of whether they understood the task[12]. Some children scored poorly 'on task' and yet were skilled 'rhymers': some others, who did not understand rhyme, nevertheless, scored moderately well.

For Roger Richardson the rhymes were elementary; before there had been time even to explain the exercise Roger had rhymed every row correctly. Another child, John, also found the task ludicrously simple and yet refused to complete the rhyme section, preferring to demonstrate his talent at rhyming 20 or more words at a time and stringing them into silly rhymes:

'berry, kerry, merry, gerry, zerry, rerry, fiddly diddly middly piddly'

It was at odds with the underlying rationale of the assessment that such children score zero.

Brian Carey's answer to a question of whether or not he understood rhyme was immediate:

'Ged went to see Ted in his shed
Ged was in bed and he had a bad head.'

William's father suggested that the rhyming section would have been better without the pictures, that, he observed, distracted the child from the task.

Certainly, all the children found the exercise easier when they were allowed to say the words themselves. William could also rhyme expertly, yet he did not understand the language used in the assessment. His father prompted him with:

'Those silly verses we make up'

William found rhyming a hilarious activity: his father talked of his son's natural tendency towards rhyming. He later enquired, in view of William's difficulty with the wording used in the test:

'Is the aim to see whether the child understands the language used for explanation or whether he can rhyme?

Erica also did not appear to understand this task until her mother said:

'You remember those silly word games we play.'

Such parental reminders sometimes made the difference between a child being able or not being able to complete the task. It was the word 'rhyme' that confused the children, not the concept. The test instructions themselves helped to explain the nature of rhyme and certainly school children taking the assessment would have been familiarised with the concept of rhyme as part of the 'Literacy Hour'[13]. None of the home-educating parents went any way towards providing answers.

6.5.5 *Reading*

Gregory had not been taught to read but had picked up casually on the words, Sainsburys, Rocket, Car and Bus, scoring 44 and 49 respectively for 'Start'

and 'End of Reception' reading, despite being one of the very youngest members of the group.

Mrs Graham declared that she would not know how to 'teach' reading. Her son scored 71[14] at the 'Start of Reception' for Reading.

Like many children, Sheila Smithson knew only one class of letters, lower case: other children knew only uppercase because their parents had considered it most important that their children learn first to read emergency warnings. William experienced difficulty with letter recognition. His parents believed that since the most important words (e.g. 'EXIT', 'FIRE DOOR') were written in uppercase, this was the place to begin. William's father pointed out that many children learn lower or uppercase letters in isolation and that the test did not allow for the child who has learned using a variety of methods, phonetic, word, name, upper or lowercase. William, it transpired, wrote with a typewriter, where keys are labelled in uppercase; he was considered by his parents to be quite an 'able' typist. Mr Jagger also found the letter displays in the assessment to be unappealing, commenting that they would have been:

'Better in colours with less on a sheet.'

William's own response to being asked to read out letters in a mixture of upper and lowercase, was:

'Can read some, some I can't'

His parents pointed out that William preferred to draw answers rather than say them. In this respect, he was similar to Rita White who had chalked her answers on to her chalkboard.

The two letter sheets were divided into types of letters, with the apparently 'easier' letters on the sheet 1 (left) and more difficult ones on sheet 2 (right) .

a	e	c
o	D	s
g	L	i
m	P	H
	B	

k	J	Q
W	z	F
T	u	V
N	X	Y
	R	

An Independent Sample T-test showed, however, that the difference in means for the children's scores on each letter sheet was small, as Table 6.10 shows.

TABLE 6. 10: THE DIFFERENCE IN SCORES BETWEEN THE TWO 'LETTER RECOGNITION' SHEETS (N=35)

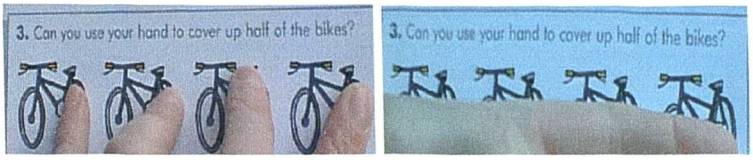
	Mean Score	St. Dev.	Significance of Difference
First Page	9.19	4.24	p<.367
Second Page	8.18	5.05	

The following section, 'Words', required children to relate one of four words to an accompanying picture. Mr Walker, however, pointed out that one of the words, 'aeroplane', disadvantaged some children simply because so many children's books now opted for the word 'plane'. Asked to point out the word 'car', Brian silently left the room, returning with a book which he opened. He pointed out a word on the page; it read, 'car'.

6.5.6 *Arithmetic*

During the 'Start of Reception' maths section, where the child is shown, say, a picture of three rabbits and asked to add or subtract from that number, Jack Green enquired, 'How about if I covered them up with my hand?'. During the 'End of Reception' assessment, a number of the children, when asked to cover up half the four bicycles, placed their hands, either over just the top or bottom only of the bicycles or, as in some cases, over one half of each bicycle, as shown in Image 6.4.

IMAGE 6.4: CAN YOU USE YOUR HAND TO COVER UP HALF THE BIKES?



Gregory Howarth covered up the items, where subtraction was involved, and also employed a time gaining technique:

'I have to think first'.

Sheila Smithson's maths skills were fine but she suffered a slight problem remembering how many puppies she had seen before they were covered up. William also experienced the same problem with this question.

Jack consulted a number line for his mathematics that he could imagine using even when not actually touching it. His overall end score of 60 masked the 88 points he achieved in mathematics.

William's mathematics assessment showed that he was above average, although he did not understand the phrase used in the assessment, 'one more'. For children introduced to advanced mathematical language from a early age, it was evident that some 'child-based' phraseology, such as that used in the assessment, confused them. Mr Jagger had a Mathematics degree and Mrs Jagger commented that she never initiated a mathematical session with her son, preferring instead to follow his lead:

> 'William will start to add and then if I am in the mood I will start up, if he feels like it.'

Steven Graham was quick at mental mathematics, whilst Roger Richardson, having completed his 'End of Reception' assessment, quipped 'have you got any more easy sums for me to do? He had scored 30/30, computing all sums quickly and effortlessly, in his head, eg. 430+210.

6.5.7 *Idiosyncrasies*

Terry was an unusual boy, very much a child but with reading skills beyond his years. He lived on a large 'grey' estate in a depressed industrial town, with his disabled parents. Both parents were strict, fundamental Christians who considered 'the belt' an appropriate remedy for misbehaviour. Despite this apparent harshness, the household was child-centred and both parents were clearly proud of their son and doted upon him.

Terry's father described coaching his son in reading and mathematics whilst his mother worked with him on writing. The emphasis was on the 'three r's'

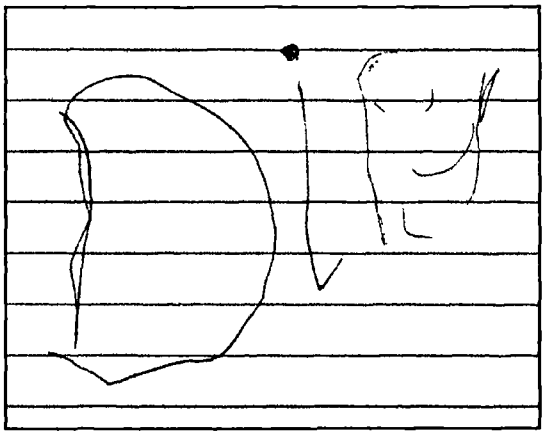
and they had adopted a routine of 'fixed subjects but no fixed time'. Mr Upton commented that:

'Sometimes we feel progress is slow'.

He described his son as 'lazy' because he would rather read his 'Noddy' comics, although he added that Terry understood the importance of education and complied because of this. The shelves of the family's small terraced council house were packed with reference books and videos relating to history, music and children's interests.

During the assessment Terry traced the letters with his finger, reading them easily whilst doing so. This, he said, helped with the 'funny script' (font). Where there were too many pictures he became confused by them and when there were too many random letters on a page, this too made the task of recognition more difficult, despite his being a fluent reader. His writing did not mirror his reading ability although the letters were clearly recognisable. Terry chose to use the pseudonym 'Dipsy' (Image 6.5). He referred to his parents as Lala and Tinkiwinki.[15]

IMAGE 6.5: TERRY'S NAME AS HE WROTE IT



Curiously Terry did not like the number 8: 7 was his favourite number but 8 he ignored. What was remarkable was Terry's ability to 'correctly' compute arithmetic whilst removing 8 from any equation: thus, for Terry, 10+8=10 whilst 10+17=27. He disliked the planet Neptune for its eighth place from the sun. Terry's parents referred to his mother's many miscarriages: at the time of the interview and subsequently, it would have been improper to make further enquires on this point, but it is quite possible that Terry's dislike of the number 8 was in some way connected with these miscarriages.

During the second assessment Terry had been joined by a new sibling whose presence had provided him with an opportunity to take a break from his study routine. Nevertheless he retained his lead in the assessment, scoring 78 and 74 respectively.

6.5.8 *A Poor Value-added Score?*

Jane Moore was growing up in an autonomous atmosphere. Her score at the 'Start of Reception' was 76, yet her 'End of Reception' score was 57. By the time of the second interview her life had changed dramatically. She had moved from a suburban house in a busy town, to living communally, in a community, some miles from the nearest road. There were a number of other children in the community and, together, they had created a world of their own, 'independent' of the adults around them. From morning till night, Jane and her peers were masters and mistresses of the rambling, decaying property where they lived and the many acres of land surrounding it. The impression of an observer might have been reminiscent of 'Lord of the Flies'[16].

For Jane, the 'End of Reception' assessment could not possibly have reflected ways in which her awareness had grown and extended over the 'year', or give so much as a hint of the sophistication and power of her new, 'child' world. These aspects of her experience were visible to the researcher during her second visit and also emerged as a result of the interview, in which both Jane and her mother spoke of the changes to their lives over the previous year.

6.5.9 *Creating Context*

Many parents acted as Bertha's did during the 'Start of Reception' assessment, by interrupting the picture identification sequence to add questions of their own: this was generally a response to the child, as he or she picked up on all sorts of clues in the pictures, making connections with ideas beyond the assessment. Mr Richardson remarked, after observing his son during the assessment, that:

> 'Attention can drift - you saw how seeing the tent led Roger to recall his holiday in a tent and lose sight of the task. This had nothing to do with his skill 'on task'.'

John Chatwell, who scored 65 and 53 respectively, only wanted to answer questions in the way that suited him. Thus the assessment was not easy to administer although it was clear that he was far more capable of the assessment tasks than his results showed him to be.

6.5.10 *Giving Time and Space*

Terry's mother interrupted each time that he made a mistake. During the PIPS assessment number work, both Terry's parents anxiously leaned over him. Although they were silent, this overbearing parental presence clearly affected his thought pattern and his ability to complete the questions.

Ian Ashdale's mother held her son's hand firmly as he pointed, making it appear as if he had no control over his limbs. She spoke fast, stating clearly what her son had and had not done, and therefore ignoring elements of the assessment.

Many of the children shook their heads in firm denial of the answer, before pointing to the correct answer a few moments later, if given the time. It was easy to think that such children, Bertha was one, were not understanding. Some parents, for example, Mr Richardson, urged their children to take their time, trying to make the assessment as much fun as possible.

It appeared that parents' presence could affect performance, either positively or negatively although the researcher ensured, insofar as was possible, that parental influence was kept to a minimum.

Children such as Gregory Howarth were confident enough to ask for time to think, besides also, on several occasions, expressing the need for a rest:

'I think I'll do it later'.

His mother, Mrs Howarth, observed how a child in a classroom situation might not have the opportunity to either ask for time or take a break during an activity.

6.5.11 *What the parents knew*

Jim Mason's mother stated with confidence that her son had performed exactly as she had expected ('Start' score 59). Another mother said very confidently, 'Tracy did exactly as I knew she would, without exception ('Start' score 78).

Jane Moore's mother was surprised by what her daughter knew because she had not taught her any of the concepts ('Start' score 76). Brain Carey's mother also expressed amazement ('Start' score 74).

These two contrasting reactions were representative of all the parents interviewed. It was interesting just how many parents were astonished by their child's ability[17]. Margaret Lowe's mother watched with glowing pride as her daughter, the youngest participant, read fluently a text containing words that she knew her daughter had not previously encountered.

As Jasmine Turner's assessment began, Mrs Turner came into the room and interceded that Jasmine, a dyslexic, did not know any letters of the alphabet and that she was wary of making her daughter feel inadequate. The researcher offered not to continue, but Mrs Turner responded that:

'You can go ahead if you want to but I can tell you now, it is a wasted effort'.

Jasmine recognised many letters and read 6 of the 8 words without difficulty. At first Mrs Turner was taken aback by her daughter's performance. Jasmine was ecstatic: she scored 74 for her reading ability and 68[18] for her rhymes. By the time Jasmine ran out to the garden to tell her father, her mother had recovered and expressed her astonishment.

6.5.12 *General Comments*

Mr Jagger criticised the assessment:

'It does not credit children who think to ask or make comments that themselves might show the brightness and lateral thought of the child. '

His final comment was that the assessment was too long and that some children might lose interest in some parts and want to get on with the next section. Moira Hyde's mother also described the assessment as 'too long'.

In respect of length, the distances to be travelled by the researcher to each family, meant that the assessment had to take place at one sitting and so the assessment was necessarily long. It was possible that in a classroom situation teachers might have included breaks between sections: the instructions, however, did not make clear whether or not breaks were to be encouraged.

6.6 SUMMARY

The children scored well, both at the 'Start' and 'End of Reception'. Their poor value-added scores, particularly in 'Reading' obscured the fact that the children began the year very much ahead of their school peers and many finished it, still ahead. In view of the children's scores, it was notable that two thirds of the parents had teaching experience. The participant's comments indicated that there were aspects of the assessment used that had made it inappropriate, such as the inability of the test to explore the diverse curriculum of the children learning at home, or give weight to the diversity of children's language.

Contrary to the finding by Thomas (1998) that home-educators would not understate their children's abilities[19] this study found that there were parents who, after explaining to the researcher that their child could not read, were astonished when it emerged, during testing, that their child could read quite well. One of the most salient features of the PIPS Baseline testing was that so many parents were astonished to find their children so academically and developmentally advanced.

The commentaries, whilst providing an insight into the broad skills and abilities of the home-educated children and their rich learning environment, also revealed the ways in which the home-educated children were unaccustomed to the irrelevant and restrictive processes of formal assessment.

Baseline Endnotes

[1] According to 1998 data supplied by the CEM centre, 5.1% of children scored over 75%, that is, 91.5 points. The national sample consisted of 58,169 children.
[2] Confirmed in an email from the PIPS Project to P. Rothermel
[3] Information supplied informally by staff at the CEM Centre, University of Durham, where the PIPS 'Reception' assessment was designed.
[4] Two children aged 44 and 60 months, did not participate in 'End of Reception' assessment.
[5] The information in this sentence that relates to national data was supplied in an email to P. Rothermel from Paul Jones, PIPS Project, 21.10.99. Regarding the extremities of the age range, he wrote, 'but pupils of these ages are VERY much the exception'.
[6] The reason for this was mentioned in the Methodology Chapter 4. Briefly; the ages of some children could not be ascertained precisely prior to the researcher's visit.
[7] The child may have progressed but not in terms of expectation, relative to national norms and their own 'starting' place. Chart 5 shows, by the inclining lines, that all the children progressed, yet Table 6.3 indicates that 54.5% of the sample were given a double negative (--) value-added score.
[8] Only reading was assessed at these levels.
[9] Independent Samples T-Test revealed by the 'End of Reception' the difference in scores had gained a significance of $p < .048$ where $t = 2.061$ (df 31). The difference between the 'Start of Reception' raw scores had not been significant $p < .972$ (df 33).
[10] Classified according to the highest Social Class between the parents.
[11] $p < .037$ where $t = -2.169$ (df 31) and $p < .015$ w here $t = -2.570$ (df 33).
[12] Discussion indirectly related to this point appears in Green and Coulson (1995) and Roth and Bruce (1995)
[13] See the DFES http://www.dfes.gov.uk/ltraw/school.shtml, explaining the literacy hour.
[14] Scores were standardised to a mean of 50 and an SD of 10. About 66% of pupils nationally score between 40 and 60, whilst 2-3% score over 70 or below 30.
[15] Names taken from the television show for children, 'Tellytubbies'.
[16] William Golding (1954). A book about children who survive a plane crash and create their own, child society on a desert island.
[17] Numbers were not noted specifically.
[18] The highest possible score.
[19] See Chapter 2.

CHAPTER 7: LITERACY - PERFORMANCE INDICATORS IN PRIMARY SCHOOLS YEAR 2 (PIPS 2) AND NATIONAL LITERACY PROJECT ASSESSMENTS (NLP) YEARS 1, 3, 5

ABSTRACT

Age-related literacy assessments were administered to 67 home-educated children. Instruments used were the NLP tests for 5, 8 and 10-year-olds (Years 1, 3 and 5) and the PIPS Year 2 measure for 7-year-olds. Although literacy was the focus, the PIPS measure also contained sections on maths, non-verbal ability and self-esteem. The home-educated children were selected from amongst those families who had returned the initial home-education questionnaire. The research mandate was to investigate academic attainment of children learning at home and explore the effect on such children of their learning environment. Results revealed that most of the children attained high scores: 29.4% of the PIPS group attained the top score band normally occupied by just 2.5% of children nationally. In the top 3% band for NLP attainment were 70.5% of the home-educated Year 2 group, 20% of the Year 3 children and 35.5% of the Year 5 home-educated cohort. The children may have benefited from the freedom to develop their skills in the context of individual development, at a speed initiated by them.

7 LITERACY RESULTS SECTION: OVERVIEW

The initial two sections are quantitative. The first provides the numerical data from the National Literacy Project (NLP) assessments and the second gives the results from the Performance Indicators in Primary Schools Year 2 (PIPS Year 2) assessments. These two sections are followed by a review of

associated familial commentaries consisting of scanned images, parent and child remarks and researcher notes. These are used to highlight how the children fared with the assessments - information that would not necessarily have emerged from the score analysis alone. The commentaries also serve to provide an understanding of the way in which home-educated children learn and because they are taken from the assessment process the information given is of a type that could not have emerged from simple interview. That is to say, by taking these commentaries and exploring them, a far greater insight into these families was gained than would otherwise have been possible. Combined with the interview data, these 'windows' into the children's environment were unique.

7.1 NLP ASSESSMENT QUANTITATIVE DATA

The 'NLP' assessment was taken by 49 home-educated children aged between 60 and 122 months. Selection details appeared at Section 4.7.3. From the initial 60 families selected from the questionnaires as potential NLP participants, only 50 could be contacted; however, all these agreed to take part. One child did later refuse to complete his assessment (his mother did it orally with him, see Section 7.4.5) and thus, there are 49 in the final analysis. Table 7.1 shows a breakdown of the assessments according to participants' numbers, ages and sex.

TABLE 7. 1: BREAKDOWN OF ASSESSMENTS AND PARTICIPANT DATA

Assessment	N	Ages range in years and months	N Male	N Female
NLP Year 1	17	5.1-6.1	7	10
NLP Year 3	15	6.1-7.11	7	8
NLP Year 5	17	6.10-10.2	8	9
Total	49	-	22	27

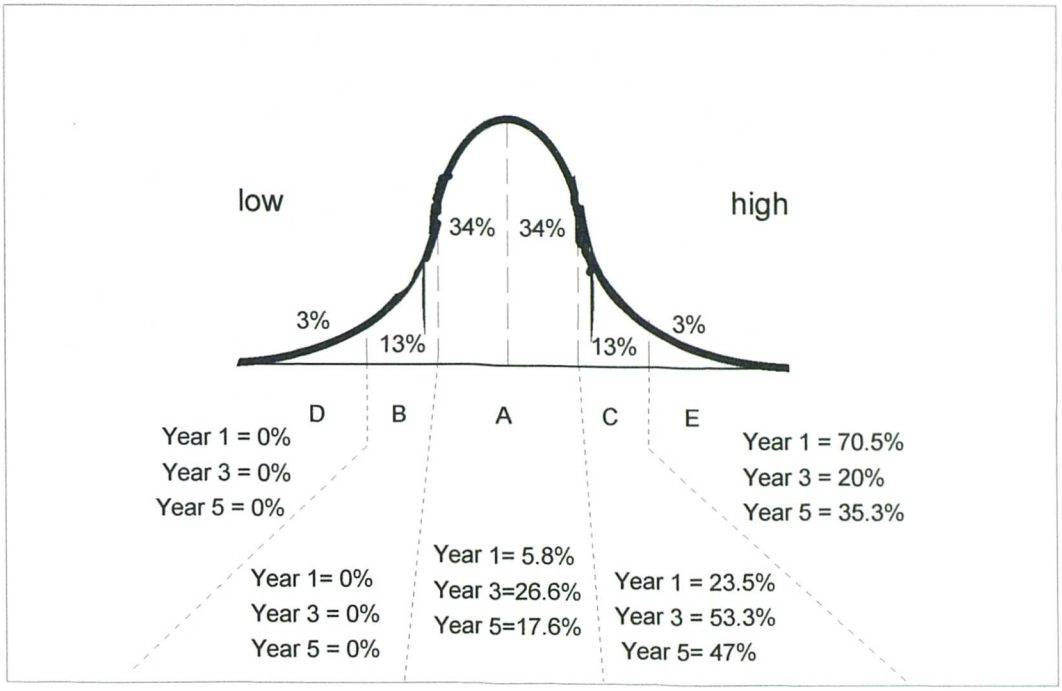
TABLE 7. 2: MEAN RAW SCORES FOR NLP 'PATTERNS IN LANGUAGE' YEARS 1, 3 AND 5 (MAXIMUM SCORE POSSIBLE IN BRACKETS)

Yr	N	Mth	Word Choice	Resp -ond	Letter Rec.	Word Rec.	Spell -ing	Voca- bulary	Writ- ing	Raw Score	St. Score
1	17	68	N/a	N/a	26 (26)	32.5 (40)	16.7 (30)	N/a	13.8 (25)[1]	88.5	127.8 (>130)[2]
3	15	89	20.8 (22)	13 (15)	N/a	N/a	24.6 (36)	28.7 (>30)	19.6 (>29)[3]	107	120.1 (>130)
5	17	113	28.9 (30)	14.3 (18)	N/a	N/a	31.5 (38)	28.4 (30)	33.2 (>40)[4]	137	122.4 (>130)

Table 7.2 provides the raw and standardised mean scores[5] for the home-educated children. A key for these tables is provided in the endnotes[6]. The national standardised mean was 100 with a standard deviation (SD) of 15. The Year 1 children performed to the highest standard amongst the sample. Some caution in the interpretation of these standardised scores is needed; in Year 1, 12 of the 17 participants scored above the highest noted standardised score of 130; in Year 3, 3 of the 15 fell in this category and for Year 5, 6 out of 17 children scored over 130, thus signifying that 42.8% of participant's scores were recorded only as 'above 130' without their precise standardised scores being provided. The raw scores provided an accurate picture within their own assessment group but for further cross-task comparisons to be drawn it was necessary to use the standardised scores. It could thus be argued, that those results achieved using standardised scores tended towards the conservative. For example, the standardised mean scores given in Table 7.2, would have been substantially higher had the full score range been used. This scoring system, however, was that used by the assessment's authors and was adopted here to maintain the validity of comparison with national samples. There was also an assumption

of normal score distribution as Figure 7.1 shows, in relation to this study's NLP scores.

FIGURE 7. 1: % OF NLP SCORES WITHIN A NORMAL DISTRIBUTION BELL CURVE[7]



Charts, 7.1, 7.2 and 7.3 illustrate the home-educated children's scores for the 'NLP' literacy assessments[8], contrasted with national norm bands.

CHART 7. 1: RAW SCORES & NATIONAL NORMS FOR THE NLP YEAR 1 ASSESSMENTS

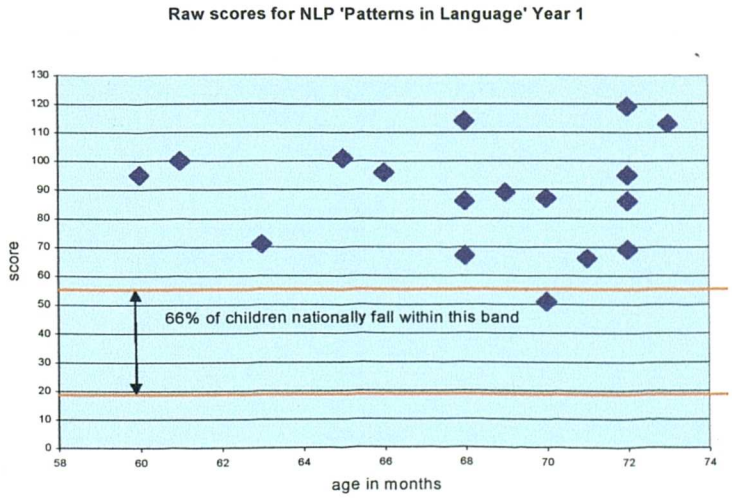


CHART 7. 2: RAW SCORES & NATIONAL NORMS FOR THE NLP YEAR 3 ASSESSMENTS

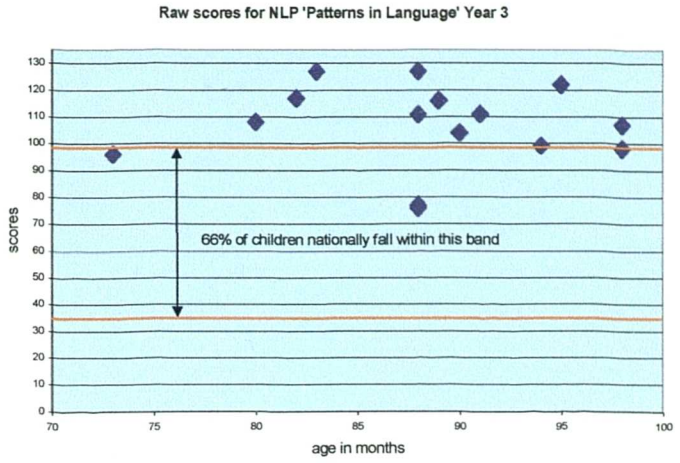
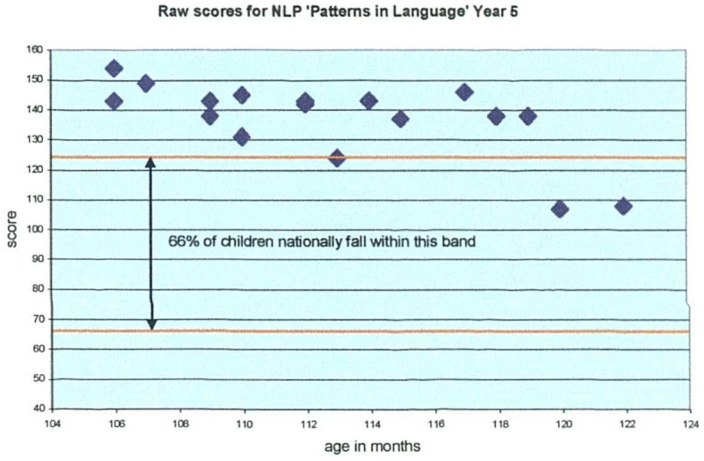


CHART 7. 3: RAW SCORES & NATIONAL NORMS FOR THE NLP YEAR 5 ASSESSMENTS

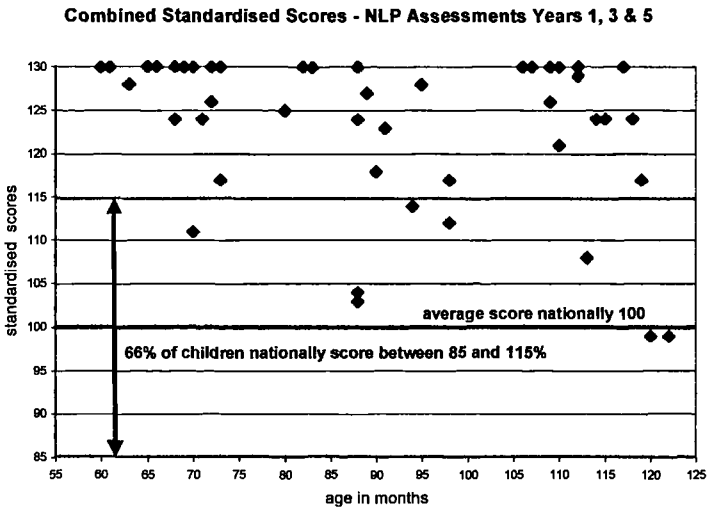


None of the home-educated children's raw scores were below the national norm although as Chart 7.4 shows, once scores were standardised and age taken into consideration, two children were marginally below average for their age.

Chart 7.4 illustrates the combined standardised scores of all the children from Years 1, 3 and 5, who were given an age appropriate, 'NLP' test. Normally, 68% of children are expected to score between 85 and 115 on this test; however amongst the sample presented here of 41 randomly chosen[9],

appropriately aged, home-educated children, just 17% fell within this category, whilst 80.4% scored in excess of 115 points. Nineteen children, 46%, scored above the highest measurable score of 130.

CHART 7. 4: 'PATTERNS IN LANGUAGE' SCORES FROM ALL THREE YEAR GROUPS



7.1.1 Specific task results from the NLP 'Patterns in Language' assessments

All the scores relating to the 'NLP' assessment are summarised in Tables 7.3, 7.4 and 7.5[10]. A description of the tasks appears at Appendix 7.4. All Year 1 participants (n= 17) (Table 7.3) knew every letter of the alphabet. The 40 'Word Recognition' items were recognised by 23.5% of the five to six-year-olds and 70.5% scored above the upper measured limit of 27 points for that task. 'Spelling' goals of >22[11] were achieved by five of the seventeen children (29.4%), although one child did not complete this task and gave no correct answers to another. The final task for the Year 1 group was 'Writing'; this was not attempted by two of the participants and was too difficult for another whose attempts gained a *nil* score. Nevertheless, ten children (59%) scored over the upper limit of 14 marks for 'Writing'. The 'Writing' task

was open ended and there was no defined top mark. 'Spelling' would therefore, appear to have been the task causing most difficulty. This can be seen most easily by contrasting the number of '>' signs in the three columns, 'Total Word Recognition', 'Spelling' and 'Writing'. Z-score[12] calculations and independent t-tests (Appendix 7.5) supported this indication although it appeared that whilst the children found 'Spelling' the most difficult, the difference between the 'Writing' and 'Spelling' tasks was in fact, negligible. The Year 1 children found the 'Word Recognition' task to be substantially easier.

Most of the Year 3 home-educated children (n=15) managed the assessment without difficulty (Table 7.4): 40% scored full marks for 'Word Recognition', 66% scored above the designated limit for 'responding to text', 66% achieved over 50% in 'Spelling', 40% gained a complete score for 'Vocabulary' and 20% (3) achieved a mark above the top score of 29 for 'Writing'. In comparison with their home-educated peer group, two children scored poorly[13], but nevertheless, achieved above average marks.

TABLE 7. 3: YEAR 1 COMPLETE SCORES TABLE

Scores of National Literacy Project Year 1 (version B) Children and Ages at 9/97 with, in brackets where appropriate, the highest measured score for each task. The maximum raw score possible for each task is given in brackets within the heading columns.

Sex	Age	Letter Recognition (26)	Total Word Recognition(40)	Spell (30)	Writing Task (@ 25)	Raw Score Total	Standard-ised Score
f	6.1	26	40 (>27)	30 (>22)	17 (>14)	113	>130
f	5.6	26	32 (>27)	24 (>22)	14	96	>130
f	5.5	26	35 (>27)	24 (>22)	16 (>14)	101	>130
m	5.8	26	39 (>27)	30 (>22)	19 (>14)	114	>130
f	5.8	26	26	22	12	86	>130
m	5.11	26	35 (>27)	5	0	66	124
f	6	26	19	12	12	69	126
f	5.8	26	24	0	17 (>14)	67	124
f	6	26	40 (>27)	30 (>22)	23 (>14)	119	>130
f	6	26	30 (>27)	12	18 (>14)	86	>130
m	5	26	34 (>27)	19	16 (>14)	95	>130
f	5.9	26	22	20	21 (>14)	89	>130
m	6	26	33 (>27)	19	17(>14)	95	>130
m	5.10	26	29 (>27)	19	13	87	>130
f	5.1	26	40 (>27)	13	21 (>14)	100	>130
m	5.10	26	25	-	-	51	111
m	5..3	26	40 (>27)	5	-	71	128
Total N = 17							

TABLE 7. 4: YEAR 3 COMPLETE SCORES TABLE

Scores of National Literacy Project Year 3 Children and Ages at 9/97 with, in brackets where appropriate, the highest measured score for each task. The maximum raw score possible for each task is given in brackets within the heading columns.

Sex	Age	Word Choice (22)	Respond To Text (15)	Spelling (36)	Vocab-ulary (30)	Writing (@30)	Total Raw Score	Standard -ardised Score
m	7.6	21	14 (>13)	12	27	30 (>29)	104	118
f	7.4	20	15 (>13)	23	30 (>28)	23	111	124
m	6.8	19	14 (>13)	24	26	25	108	>125
f	6.11	22 (>21)	15 (>13)	36	30 (>28)	24	127	>130
f	7.11	21	14 (>13)	32	29 (>28)	26	122	128
m	7.10	19	13	28	30 (>28)	9	99	114
f	8.2	22 (>21)	14 (>13)	15	26	21	98	112
f	7.7	21	14 (>13)	25	29 (>28)	22	111	123
m	7.5	19	10	32	22	33 (>29)	116	127
f	6.10	22 (>21)	14 (>13)	36	28	17	117	>130
m	8.2	22 (>21)	13	14	29 (>28)	29 (>29)	107	117
f	7.4	22 (>21)	15 (>13)	36	30 (>28)	24	127	>130
m	7.4	20	11	10	25	11	77	104
f	6.1	20	14 (>13)	30	30 (>28)	0	96	117
m	7.4	22 (>21)	7	17	30 (>28)	0	76	103
Total N = 15								

TABLE 7. 5: YEAR 5 COMPLETE SCORES TABLE

Scores of National Literacy Project Year 5 Children and Ages at 9/97 with, in brackets where appropriate, the highest measured score for each task. The maximum raw score possible for each task is given in brackets within the heading columns.

Sex	Age	Word Choice (30)	Respond To Text (18)	Spelling (38)	Vocabulary (30)	Writing (@50)	Total Raw Score	Standard-ised Score
F	8.8	30	18 (>17)	38 (>37)	30 (>28)	38	154	>130
F	9.2	30	12	28	28	33	131	121
F	8.11	30	17	36	27	39	149	>130
m	9.5	28	12	28	28	28	124	108
F	9.11	29	16	33	30 (>28)	30	138	117
m	10.2	29	13	17	29 (>28)	20	108	99
F	9.7	30	16	38 (>37)	30 (>28)	23	137	124
F	9.9	30	12	38 (>37)	30 (>28)	36	146	>130
F	9.2	30	16	37	29 (>28)	33	145	>130
F	10	29	4	13	28	33	107	99
m	9.6	29	12	31	28	43 (>40)	143	124
F	6.10	27	16	34	26	40	143	>130
m	9.4	29	17	36	29 (>28)	31	142	129
m	9.4	30	16	30	28	39	143	130
F	9.10	30	15	23	27	43 (>40)	138	124
m	9.1	30	15	37	30 (>28)	31	143	>130
m	9.1	30	17	38 (>37)	27	26	138	126
Total N=17								

The eight to nine-year-old group, Year 5 (n= 17) (Table 7.5), in contrast with Years 1 and 3 children, included two participants scoring under the national norm of 100, due in one case to difficulty with the 'Respond to Text' task.

The children generally appeared to find the Year 5 assessment more difficult relative to the performance of those taking Year 1 and 3 assessments. 'Word choice' did not cause too many problems, with ten participants (58.8%) achieving full marks. Only one child (5.8%) reached the top mark for 'Respond to Text' and just two children (11.7%) managed to climb above the designated upper limit of 40 for 'Writing'. However, 23.5% of participants achieved the top score of 38 for 'Spelling' and 47% reached full marks for 'Vocabulary'.

The pattern of accomplishment for Year 5 children mirrored to an extent, that of Years 3 and 1. The z-score analysis (See Appendix 7.5) seemed to support the idea that the Year 5 participants found the whole assessment more difficult than their younger peers had found Year 1 and 3 assessments. As for Year 3, above; 'Vocabulary' was the task where students fared best, whilst they found the remaining tasks more difficult.

Table 7.6 represents all Year groups' mean standardised scores for each of their assessment tasks: showing that the home-educated children consistently scored above the norm of 100 on each task.

TABLE 7. 6: MEAN STANDARDISED SCORES FOR EACH YEAR'S SEPARATE ASSESSMENT TASKS

	Letter rec.	Word rec.	Spell	Write	Vocab	Word choice	Respond to Text	Mean total
Year 1	111	127.7	112.4	119.9	*	*	*	117.7
Year 3	*	*	107.6	102.2	126.1	124	124.4	116.8
Year 5	*	*	115.7	120.9	127.8	120.3	113.9	119.7
Totals	111	127.7	111.9	114.3	126.95	122.1	119.1	

* no test for this age group.

The mean totals for the year groups have been derived by averaging the scores for each individual pupil's standardised grade on each task, as can be seen in Table 7.6. This provided an indicator of average task performance overall, relative to other tasks and Year groups within the sample.

Earlier in the section, Table 7.2 also provided standardised mean totals but these differed in that they related to individual cumulative raw score progress across the assessment, which was summed, before being converted to a standardised total score and then averaged amongst the year group. The

means provided in Table 7.6 should not therefore, be contrasted with those given in Table 7.2 or with national figures, since they represent different measurements[14].

7.1.2 *Comparison of Means between Year Groups*

An independent samples t-test was used to investigate the differences in means between Year groups' standardised scores[15], where the standardised mean[16] for all three Year groups nationally was 100. With all the scores for each age group standardised, there should have been little if any difference between the mean totals for each group: the difference between Years 3 and 5, at $p<.520$[17] (30df), for instance, was negligible and the difference in scores between years 1 and 5, yielded a moderately low significance level of .065[18] (32df). A comparison of scores for years 1 and 3, however, revealed a level of significance at $p<.005$[19] where $t=3.068$ (30df). There were substantial variations in the Standard Deviations for each year group: that is, Year 1 SD was 4.82, Year 3 SD was 8.98 and Year 5 was 10.61.

The reason for these differences is unclear. However, since the Year 1 assessment differed in style from those for Years 3 and 5 and the SD for Year 1 was just 4.82 (the children's scores were grouped in the upper range) the variation in significance levels was, perhaps, predictable. It was possible that as the home-educated children's learning became increasingly more suited to their individual needs and interests, their experience progressively diverged from that of the school children and analogy with the schoolchildren in terms of academic expectations was no longer appropriate. Similarly, in

Chapter 6, it was seen that the home-educated children performed less well on the PIPS 'End of Reception' assessment (particularly in language), than anticipated in terms of nationally expected progress. This however, does not explain their overall high levels of attainment.

7.1.3 *Gender differences (NLP)*

Using an independent samples t-test the difference between the 'NLP' assessment standardised scores for the males and females was found to be significantly in favour of the females: $p<.002$ (2 in 1000) where $t= 3.204$ (47df). Table 7.7 provides the mean scores for these NLP groups. Notably the SD for the males was almost three times as great as that for the females, indicating wide variability in their attainment.

TABLE 7. 7: MEAN SCORES FOR MALES AND FEMALES IN ALL NLP YEAR GROUPS COMBINED

	N	Mean	Std. Deviation	Std. Error Mean
Female	27	127.0370	4.6532	.8955
Male	22	119.4545	11.0700	2.3601

A brief review of the NLP assessments by counting male and female references revealed that the male-female ratio was: Year 1 - 12:13; Year 3 - 3:2; Year 5 - 5:6. Overall, the 20:21 male to female ratio of references appeared to represent a gender balance.

7.2 QUANTITATIVE DATA FROM PIPS YEAR 2 ASSESSMENTS[20]

Eighteen children[21] took the PIPS Year 2 assessment. Originally 25 families were approached. Two families declined to continue after seeing the test; one mother felt the test was 'too demanding' and in another family the child

'didn't feel like it'. One family could not be contacted to be approached, four families returned the completed assessments too late for inclusion and another completed it but forgot to return it (but did so eventually months later). The five late returns were fully completed and similar to the bulk of those analysed.

The assessment evaluated the children's skills in 'maths' and 'reading': it also sought, under the heading, 'Context', to determine the children's 'Self-Esteem', 'Attitudes', 'Non-Verbal Ability', 'Picture Vocabulary' and 'Cultural Capital'[22]. More detailed descriptions of the assessment sections are presented in Appendices 4.9 and 4.10.

Table 7.8 represents the sample's standardised mean scores for each of the five sections assessed. The national standardised mean was 50 with an SD of 10. Full scores are provided in Appendix 7.6.

TABLE 7.8: PIPS YEAR 2 HOME-EDUCATED SAMPLE STANDARDISED SCORES: MEAN 50 SD 10[23] (MEANS STANDARDISED TO 100[24] WITH AN SD OF 15 ARE GIVEN IN BRACKETS UNDER 'TASK MEANS')

	Context		Assessment		
	Picture vocabulary (n=18)	**POP* [26] (n=18)**	**Maths (n=18)**	**Reading (n=17)**	**Individual Means[25]**
TASK MEANS[27]	66.38 (124.5)	63.38 (120)	63.94 (121.9)	64 (121)	63.54 (119.96)
Standard Dev. (sd)	8.87	7.10	5.95	9.82	7.50
National Mean	50	50	50	50	50
Nat. Standard Dev.	10	10	10	10	10
Error Margin	±4	±4	±4	±4	

*Problems of Position (POP)

Image 7.1 represents a scatterplot comparing 'Reading' with 'Context' for each participant. Children[28] who fell close to the orange regression line,

running central-diagonally, performed 'as expected' (PIPS Project 1998e). Better than expected performance is represented by the children above the line and the converse is true for those below. The 95% prediction band[29] is represented by the area between the two blue lines. As can be seen, the children fell mostly above the line, indicating a high level of performance. Only five children were below the orange line, and just one of these outside the 95% prediction interval. The 'Reading' boxplot[30] to the right illustrates the high median score attained by this cohort and also how close together the group scores fell. The 'Context' (see above for definition) boxplot, on the other hand, shows a wider spread of scores with the median score roughly in the middle of the score range.

IMAGE 7. 1: SCATTERPLOT REPRESENTING READING ATTAINMENT COMBINED WITH CONTEXT SCORES

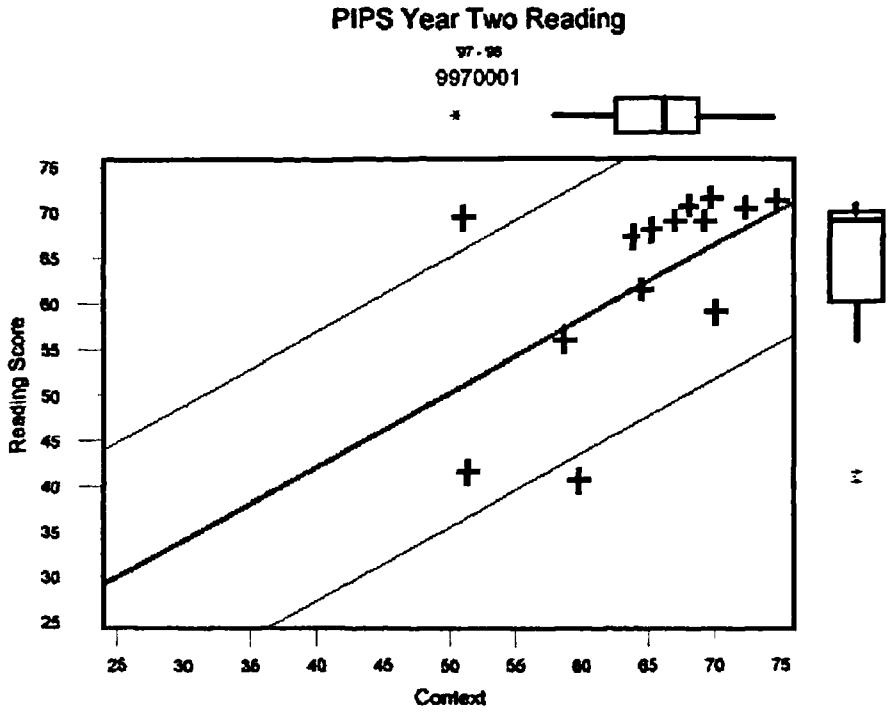


Table 7.9 illustrates the comparison between the percentage of children nationally who fell into each of three score bands[31] following the raw score to standardised score conversion.

TABLE 7. 9: SCORE BAND COMPARISON OF SAMPLE WITH NATIONAL NORMS

Standardised scores	% nationally	Reading % of this sample (n=17)
40 and over	**84%**	**100%**
60 and over	**16%**	**77.4%**
70 and over	**2.5%**	**29.4%**

As Table 7.9 shows, 29.4% of the sample children achieved a 'Reading' score over 70, whilst nationally, just 2.5% of children attained such a high score.

Chart 7.5 illustrates the pattern of individual scores in the test areas, contrasting these with the means of both the home-educated and the national samples. The home-educated cohort mean was higher than that for children nationally. Intrapersonal differences on the four tasks are clearly visible in the chart although they are only substantial for several of the participants, ie. Jemima Bell or Matthew Bateson.

CHART 7. 5: PIPS YEAR 2 COMBINED STANDARDISED SCORES CONTRASTED WITH 2 MEANS

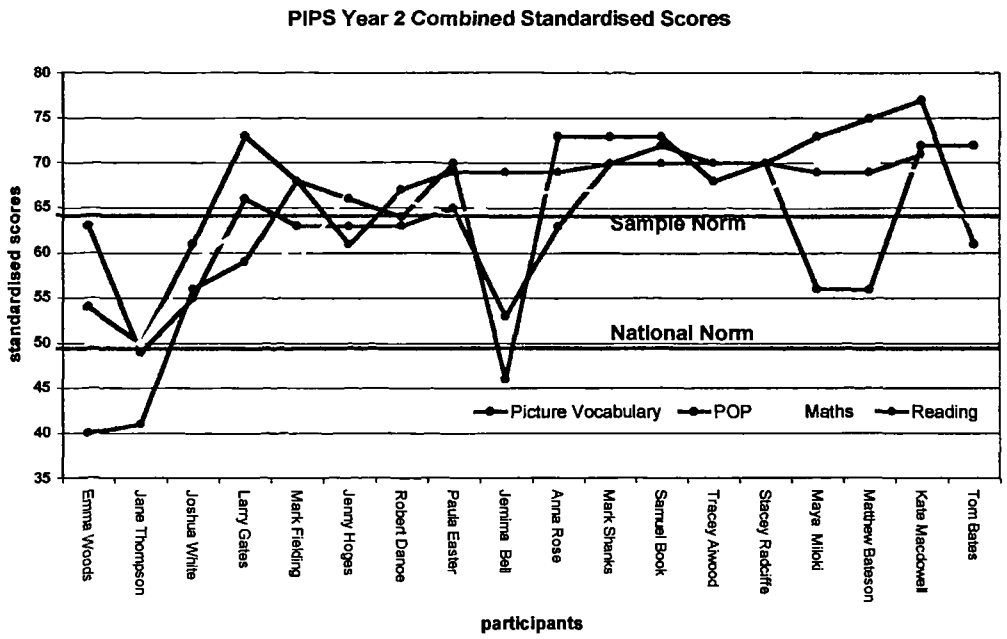


Chart 7.5 does, however, depict a similarity in performance between the yellow 'Maths' and blue 'Reading' lines. An independent T-test calculation of task pairs showed that the level of inter-task difference was small ($p<.984$), as opposed to the greater difference in performance between, for example, 'Picture Vocabulary' and 'Pictures of Position' (POP)[32] of $p<.271$.

From the evidence provided so far, it appears that most of the home-educated children, though performing to a generally good standard, varied both interpersonally and intrapersonally in how they managed the different tasks: this was despite there being no significant inter-task difference[33] and no significant difference between tasks when studied in each of the six possible pair-wise combinations[34].

7.2.1 *Cross-Test Literacy Comparison*

Table 7.10 illustrates the differences in reading attainment across the six assessments used in this research. Whilst t-tests indicated that there were significant differences between 3 (in bold) of the 5 pair-wise combinations of measures (described in Table 7.10 as 'Difference'), there was consistency between the scores for PIPS Year 2 and the NLP Year 3 assessment, and between those for the NLP Years 3 and 5. It was hoped from this comparative analysis that through the existence, if any, of non-significant differences between consecutive year groups, it would be possible to demonstrate the existence of group characteristics within the home-educating cohort. The substantial differences between mean scores, however, were balanced by one common characteristic across the six assessments, namely, that the home-educated cohort consistently produced means above the norm. Other than the PIPS 'End of Reception' mean score, means were more than one SD (15) above the norm (100) and in the case of the PIPS 'Start of Reception', over 2 SDs over the norm. The difference between PIPS 'Reception Year' scores could perhaps, be attributed to the difference in participant's attitudes to this measure: the initial assessment was clearly considered fun and participants had anticipated that the second measure would be equally amusing. However, the 'End of Reception' test focused on academic merit and thus was not so well received by the participants, some of whom displayed signs of stress[35] during assessment.

TABLE 7. 10: COMPARISON OF HOME-EDUCATED CHILDREN'S READING ATTAINMENT AT DIFFERENT AGES

	Type of Assessment					
	PIPS 'Start of Reception' 'Reading'	**PIPS 'End of Reception' 'Reading'**	**NLP Year 1**	**PIPS Year 2 'Reading'**	**NLP Year 3**	**NLP Year 5**
Approximate Age in Years	4	5	6	7	8	10
Stand. Score[36]	131.88	111.27	127.8	121	120.1	122.4
Cohort st. dev.	12.80	17.21	4.82	14.7	8.98	10.61
N	35	33	17	17	15	17
Difference Start/End scores		**t = 5.62 p<.001***				
Difference End/Year 1 scores			**t = -3.86 p<.001***			
Difference Yr 1/PIPS 2 scores				**t = -1.81 p<.079***		
Difference PIPS 2/Yr 3 scores				t = -.197 p<.845		
Difference Year 3/Yr 5 scores					t = -.651 p<.520	
Overall Scores Difference		F=9.196: p<.001				

*Significant Differences

As Table 7.10 shows, there was no evidence of progressive age related deterioration in the standardised reading scores.

7.2.2 *Gender differences (PIPS Year 2)*

Using a one way ANOVA to explore any differences in performance between boys and girls, it emerged that gender difference, although in the boy's favour, was not significant (p<.227)[37]. Separate independent task T-tests further indicated that there were no significant differences between genders for each of the four tasks. Table 7.11 illustrates the mean scores for each task, as calculated by gender using an independent T-test: boys are seen to out perform the girls and their SDs have a narrower range than those for the girls.

TABLE 7. 11: MEAN SCORES BY GENDER

	Girls (n=10)	standard deviation	Boys (n=8 *n=7)	standard deviation
Picture Vocabulary	64.70	10.73	68.50	5.80
POP (a non-verbal assessment)	62.40	7.63	64.62	6.67
Maths	63.70	7.39	64.25	3.95
Reading	62.90	12.12	65.57*	5.68

Interestingly, whilst the girls excelled over the boys in the NLP assessments (see Section 7.1.3), this trend was reversed in the PIPS Year 2 tests with the boys exhibiting a slight lead and the girls this time demonstrating greater SDs and thus, more variability in achievement. Earlier (see Section 6.4.4), the PIPS Baseline assessments had shown girls to be significantly ahead at the 'Start of Reception' but only marginally in the lead by the 'End of Reception'. What seemed to be the case is that gender differences in the home-educated cohort were variable, unlike the national picture where boys are seen consistently to fall behind girls (DfES 2001d, S.2.13).

Further quantitative comment on gender is made in Section 8.1.1.

7.2.3 *Results as Grades Awarded*

Participants' work was marked using grades 'A' - 'E' , 'A' being the highest grade. The percentage of children nationally in each grade category is shown in Table 7.12, together with the percentages of home-educated children falling into each of those same categories. Table 7.12 illustrates how in 'Reading', 70.5%, of the home-educated children achieved grade 'A' where normally only 10% of children are expected to achieve grade 'A'. At the lower end of the scale, none of the participants in this study were

allocated an 'E' grade. Those 70.5% of home-educated children in the grade 'A' band scored above the 90th percentile.

TABLE 7. 12: PIPS YEAR 2 GRADING SYSTEM

Grade	% of home-educated sample Reading (n=17)	% of pupils nationally	Percentile ranks > or < the median 50
A	**70.5%**	**Highest 10%**	**90th percentile**
B	**11.7%**	**Higher 15%**	**75th percentile**
C	**11.7%**	**Middle 50%**	**50th percentile**
D	**5.8%**	**Lower 15%**	**35th percentile**
E	**-**	**Lowest 10%**	**10th percentile**

7.2.4 *Value-added Scores*

Value-added categories, providing concurrent data[38] were calculated[39] using scores from the two tasks considered to provide 'Context' to the assessment (see Table 7.13). The value-added scores were used to inform on children's 'Reading' performance in relation to their 'Vocabulary', 'Non-Verbal Ability' and 'Cultural Capital' measures[40]. Appendix 7.7 contains a table presenting 'Reading' and 'Maths' achievement in contrast with value-added ('Context'), together with individual 'Attitude' outcomes. Table 7.13 displays the percentage of participants nationally that fell into each of the 5 value-added categories, contrasted with the percentages of current participants in each category. Performance 'as expected'[41] was represented by a zero.

TABLE 7. 13: PIPS YEAR 2 VALUE-ADDED CATEGORIES

Value-added	% of children nationally	% of participants Read (n=17)
++	10%	5.88
+	15%	11.76
0	50%	64.7
-	15%	11.76
--	10%	5.88

Thus, it can be seen that the percentages of home-educated children's concurrent value-added scores for 'Reading' were more or less on a par with those of children nationally. Attitudes too, as Table 7.14 illustrates, were

generally balanced, with 72.2% of the sample indicating some degree of satisfaction from reading.

TABLE 7. 14: ATTITUDES TOWARDS READING

	Reading Attitudes (n=18)
Unhappy☹	27.7 %
Happy☺	50 %
OK😐	22.2 %

7.3 SUMMARY OF THE LITERACY QUANTITATIVE DATA

Section 7.1 showed how the children's NLP scores were confined by a standardised score system in which high raw scores were considered too unreliable to have standardised counterparts. Since the home-educated cohort did so well at the NLP tests it would have been helpful to be able to measure them in standardised terms that reflected their ability. As it was, the most that could be said was that 43% of the children scored above the highest standardised score available. The Year 1 children fared the best on the test, followed by the Year 5 children then the Year 3 children. As Figure 7.1 shows, the score band occupied nationally by the top 16% of schoolchildren, contained 94% of the home-educated Year 1 children, 73.1% of the Year 3 children and 82.3% of Year 5 children. Just 2 of the 49 children were found below average for their age. The home-educated children appeared to find the assessments increasingly difficult with age and this may have been as a result of their educational content diverging away from that of schoolchildren, as they grew older. From the 18 children who took the PIPS Year 2 test, 77.4% of the home-educated children scored within the score band occupied by 16% of schoolchildren nationally. Overall, there was no clear gender difference and this may have been the result of the absence of peer pressure, of the type found amongst schoolchildren.

Also, home-educated families were seen to share out the responsibilities and tasks connected with the family and this may have neutralised any trend for one gender outperform the other.

7.4 NLP YEARS 1, 3 & 5, AND PIPS YEAR 2 COMMENTARIES

The children's scores in the literacy assessments were revealing but so too were the comments that the tests attracted from the children, their parents and their siblings. A selection of these responses is recorded here, some were verbal whilst others were written as annotations on the assessment booklets. Where marks are given in the text, they are standardised, unless otherwise indicated. The responses are categorised by topic rather than assessment (and identified by the tags 'Year 1', 'Year 2', 'Year 3' and 'PIPS 2'), and can be roughly divided into two parts - comments relevant to all the literacy assessments, and task specific comments.

The value of these commentaries is that they provide a 'window' into the rich learning environment of the home-educated children. There was evidence of the children working without pressure, seeing themselves as part of the family whereby interruptions and noise were routine. Many of the parents were surprised at how well their children performed, a counterintuitive finding in view of these parents spending so much time with their children; and from this, it appeared that home-education was perhaps far more efficient than even the parents anticipated. There was evidence of metacognitive thought with the children themselves well aware of their limitations in terms of what they knew and what they didn't know. Children's learning was negotiated,

and differentiated for each child within the family, according to individual needs. What becomes clear from these commentaries is the inappropriateness of assessing home-educated children with school-style tests and this, in turn, raises the issue of how home-educated children's performance might be gauged otherwise, were such a need to arise. For local education authorities monitoring children's education, the proposition that home-educated children should not be measured by criteria devised for schoolchildren may assist in the drive to formulate policies for alternative assessment.

7.4.1 Freedom to Enjoy the Assessments without Pressure

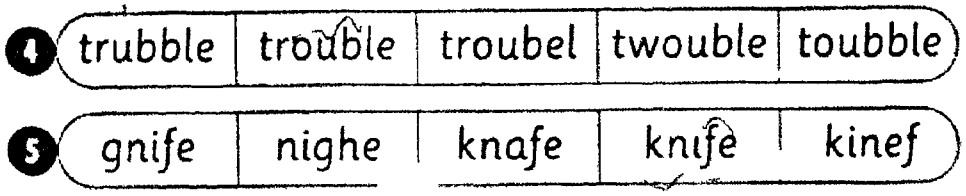
The willingness with which many of the children participated was evidenced by the pictures returned with the assignments. The children, on the whole, enjoyed doing the tests and seemed to benefit from the absence of pressure. From Mary Keel, to accompany her completed her Year 1 'Word Recognition' task there was a rainbow (Image 7.2), indicative of her relaxed approach towards the assessment.

IMAGE 7. 2: MARY KEEL'S RAINBOW



Mary was keen to show what she could do and was excited about taking the assessment. Image 7.3 shows her sense of fun as she undertook the test.

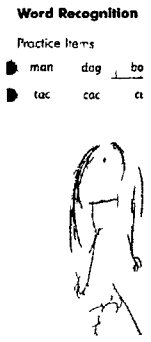
IMAGE 7. 3: SAMPLES FROM A WORD RECOGNITION TASK



Mary, who achieved a standardised score in excess of 130 for this section and also for her assessment overall, was not alone in finding the task relatively simple. Chris Sol (Year 1) scored over 130 overall and his mother remarked:

> 'He enjoyed the exercises but said that they were 'a bit simple' - the arrogance of a five year-old. If you need us again don't hesitate to call.'

IMAGE 7. 4: ANTHEA'S DRAWING



Anthea Haliday achieved the same score as Chris and the playful note seen in Mary's work was again evident here, this time in the form of a self portrait as illustrated in Image 7.4:

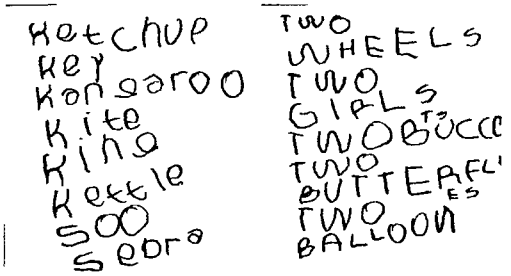
Someone who gained the slightly lower mark of 124, but still well over one SD, was Lilia. Her mother wrote:

> 'She found it quite difficult, especially the final written task, but enjoyed it.'

However, her sister, aged four, whose contributions are shown in Image 7.5, was more enthusiastic:

'Alice was quite keen on completing some work for you and I've enclosed some words she copied out of one of her books.'

IMAGE 7. 5: WORDS BY ALICE, AGED 4



It might also have been keenness to participate that led James' (Year 1) mother to write:

'This is the first time in his life we have ever managed to persuade him to write more than two words without checking how to spell them!'

A number of the PIPS 2 children also thoroughly enjoyed the exercise. One parent noted:

'I enclose Tracey's test. She completed in one sitting and enjoyed it. She did it unaided and even worked out how in many instances without the instructions.'

Samuel too had liked elements of the assessment:

'He was disappointed to find that there weren't more questions in the Problems of Position!'

Although the PIPS Year 2 test appeared to be stretching some of the children, the 'Dictionary' section featured parental commentary on Larry's performance:

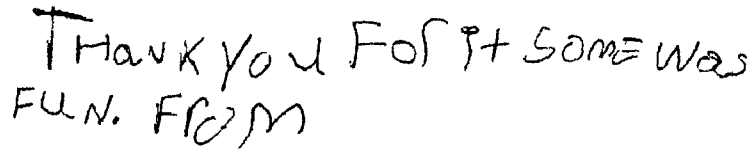
'Did not take a lot of notice of dictionary but knew all the answers from his own knowledge'

Anna Rose had a few comments of her own on the reading sections. 'Reading Quiz':

'Easy!' and 'Funny! (Can we get Muffin[42] for my birthday?)'.

One child wrote that he had found some of the PIPS 2 fun (Image 7.6):

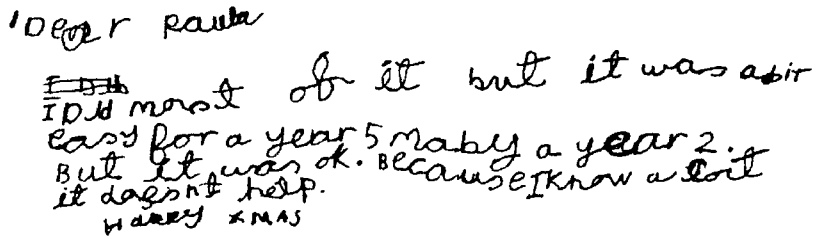
IMAGE 7. 6: THANK YOU FOR IT SOME WAS FUN. FROM



Calum Baxter was arrogant about his Year 5 test. He wrote a note, reproduced in Image 7.7 that read:

'I did most of it, but it was a bit easy for a year 5, maybe a year 2. But it was OK. Because I know a lot it doesn't help.'

IMAGE 7. 7: A NOTE FROM CALUM



He scored the top mark of 130 and his mother explained his apparent conceit:

'I'm afraid he lost interest very quickly – partly because it was too easy and partly because he doesn't like writing things out and, even after all this time out of school, still hates spelling tests...!'

There was from these children nevertheless an almost wholesale willingness to participate. It appeared that without the pressures to 'perform', common to the school environment, the children were motivated and enthusiastic. And when they were not so keen, they were confident enough to say so, rather than begrudge and bemoan *having* to take the assessment. There were of course, exceptions. The lack of pressure was lamented by one parent with children in two of the year groups:

'I was quite disappointed in the way they did in your tests, particularly misspelling words that I was sure they knew. My husband thought they were too relaxed about the tests, very different from a school situation.'

And, whilst not necessarily exceptions there were children who were openly encouraged by their parents into assisting with the research:

'She was happy to do [the test] but she hated the 'sentence writing' [Writing Tasks]. However, she reluctantly finished it because I told her she would be helping your work!

7.4.2 Some Parents were Surprised at their Children's Abilities

Some parents were surprised by their child's performance in the assessment as has been seen earlier in Sections 6.5.2 and 6.5.11. This appeared to be a counterintuitive feature of home-education since it was easy to assume that these parents would know exactly what their children were capable of.

However, it was possible, at least in some cases, that so called 'surprise' may have been the result of parents wanting to demonstrate false modesty by *apparently* underestimating their children's ability. It was conceivable too that some such parents were frightened of failure, themselves made vulnerable by participation in the assessment programme. Andy actually scored over 130 yet her mother had written:

> 'It would be interesting to know how Andy scores, especially as she is left handed and has slow speech and possibly a dyslexic problem!'

A further example of the way in which parents perhaps *safeguarded* against failure was offered by this parent, who wrote:

> 'I haven't looked at my daughter's answers so have no idea if an 'off-day' was happening but she wanted to do it and I thought out of the way before Christmas was a good idea.'

Similarly, Joe's mother explained why her son had not completed the writing assignment:

> 'Couldn't do the writing test as the most Joe can do is write his name (on a good day).'

Despite Joe's assessment being returned with the writing section missing[43], he was marked to the same criteria as all the other participants and nonetheless scored above the national norm for his age.

Although a number of parents expressed themselves in this manner, a more typical response to the assessment was that from the mother of Alec Farthing (Year 5) (score 121):

> 'She enjoyed doing them and completed them unaided. It was interesting to observe what she found difficult and what she found easy.'

And perhaps that of Mrs Howarth, who remarked about the Year 3 test:

> 'I felt some of the things were difficult, especially the, 'walking home' passage. I don't know what age range this is 'aimed at'. Alex had a good try though.'

Alex Howarth was the youngest person to take the Year 3 assessment but she nevertheless scored above average with 117.

There was then, a complex set of factors at work that might explain parents' attitudes to their children's performance.: some parents were anxious not to coerce their children into completing the assessment, others, including some of the aforementioned, were aware that their children would find the assessment difficult; there were parents quite possibly erring on the side of caution in case their children did not perform to standard. A further factor might have been that some children actually did under-achieve on these assessments. Sarah Soames scored an exceedingly high raw score and a standardised score of over 130, yet her mother commented:

> 'The first [test] she completed the lot in 18 minutes and did not want to spend any more time with it, or I feel sure she would have

done better. I didn't push it because I didn't want her to feel tested.'

It has been suggested earlier[44], that parents sometimes interpreted their children's abilities through comparison with their own capabilities or interpretations of what it meant 'to read' or 'to write'. Such parents appeared genuinely taken aback by their children's performance. One parent observed, surprised:

'P.S. I had no idea she could read so well - she mainly reads old Beanos annuals in bed.'

In the excerpt below, a parent excuses her daughter from non-completion of the reading section: the daughter, however, scored 40 (PIPS 2) on this section and whilst this was below the norm, she had actually completed only a part of the section, correctly answering almost all the questions attempted.

'Thanks for the test, Emma was able to complete it over a couple of days. As you can see she is not a very good reader yet, so was unable to do the reading section. We hope its ok and helps in your study.'

7.4.3 Dilemmas over Receiving Assessment Grades

With this research came dilemmas that neither participant families nor researcher had anticipated. All parents were told that they could receive their child's scores if they so wished. However, for many, the idea of judging by 'results' was the antithesis of the home-education ethos. The emotions expressed by the parent quoted below were fairly common. This type of remark emphasised the intrusion that the testing program caused:

'Paula: I'm not sure how I feel about 'results'! I sort of feel if there is a choice I'll wish I know if I say I don't want to, so I suppose I would like to know. On the whole I wish you hadn't given me the option!'

Ross Sands mother, on the other hand, was clearly keen to have an external view. Her son (Year 5) was one of the lower scorers and Mrs Sands wrote:

'Paula, I have put a few comments on relevant pages. Ross is read to a lot but doesn't do a lot of personal reading. He is a practical person like his dad and only reads if he can see a purpose to it. We have just begun looking at grammar. At the moment we do a lot of reading by me and then the children narrate the story back to me. Ross reads quite well but finds it difficult to get words from his head onto the papers. It would be interesting to know Ross's score and any comments about his work.'

Several parents who welcomed the scores qualified their request thus (italics added):

' I would like to know my daughter's level, *as perceived by this test.*'

So indicating that they were not willing to shake their own faith in their children's abilities. This belief in children's abilities was strong feature of home-education as the following comment also shows:

'I do not need to know any 'scores' - I know her capabilities well enough!'

Nevertheless, this latter parent was surprised to find out, at a later date, just how highly her daughter had in fact scored on the literacy test. There was a sense of her being quietly pleased to have 'outside' approval. There was no indication however, that these parents sought such approval.

7.4.4 Making Sense of the Assessments

Calum's (Year 5) attitude was typical of a number of home-educated children participating in this research; he did not perform well simply because the assessment held little interest for him. Donaldson (1978) spoke of the ease with which we can understand concepts that make 'human sense' and of the difficulty children have with the 'disembodied' thinking associated with school education. Most of the home-educated children were not accustomed to sitting under instruction all day, five days a week. Even the most formal families still tended to follow their children's and their own interests, keeping 'classwork' to either mornings or afternoons and even then, not maintaining a five day schoolwork week. One very large family in particular, kept formal 'school' hours for half the day, but the farm work also took precedence for part of the week and the children's interest was kept up by the 'human sense' they could make of their physical education and the manner in which that could be related to their academic work.

For the Year 3 and 4 'Writing Task' the instructions had asked the children to look at the example diagram (Image 7.8 and 7.9):

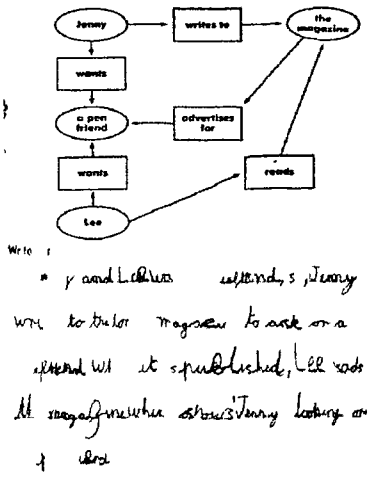
> 'Now write down what the [diagrams tells] us. Write in sentences and put in some words of your own.'
>
> National Literacy Project 'Patterns in Language' Year 3, page 12, 1998

Melinda Arnold's attempt at the Year 5 'Writing' task, 'Penfriends' (Image 7.8) shows her contorting the text so that it made 'human sense' to her. Melinda scored over 130 for her Year 5 assessment. Her text reads:

> 'Jenny and Lee want a penfriend, so, Jenny writes to the local magazine to ask for a penfriend. When it is published, Lee reads the magazine which shows Jenny's looking for a penfriend.'

Melinda can be seen in Image 7.8 to have Jenny not just write to a magazine, but to a 'local' magazine. Melinda also understands that the magazine needs to be 'published' before Lee can see the advertisement. The exercise did not require this type of detail and there were no extra marks for making the piece make more sense.

IMAGE 7. 8: 'PENFRIENDS' BY MELINDA
1: Penfriends



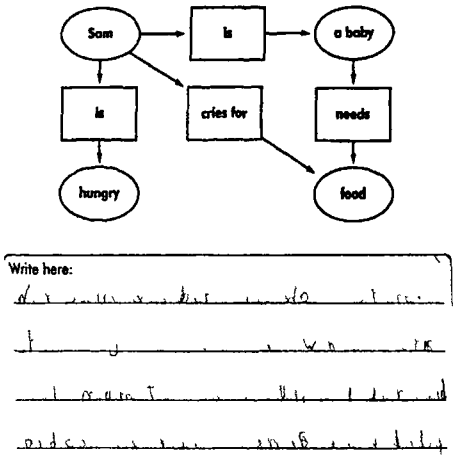
In effect, children like Melinda would be penalised for trying to make 'human' sense of the assessment because of time limitations. This tendency to mentally overwrite the task with prior knowledge in an attempt to make sense of it, was fairly common.

Simone too, could not resist the urge to make sense of her similar, Year 3 task (Image 7.9). She wrote:

> 'Wen sam was bon she was hangre. she criyd mosle. Wen sam cris Her mam fed har. Sam is 1 yar owld and can say mum. Sam is a clev baby.'

IMAGE 7. 9: SIMONE'S WRITING TASK

1: Sam the Baby



Evidently, Simone felt the compulsion to add and combine her own ideas with those of the text. Simone had understood the text, but implicitly, could not separate this from her own knowledge of babies.

For the same task Julie (one of the highest scorers in her age group) wrote (Image 7.10):

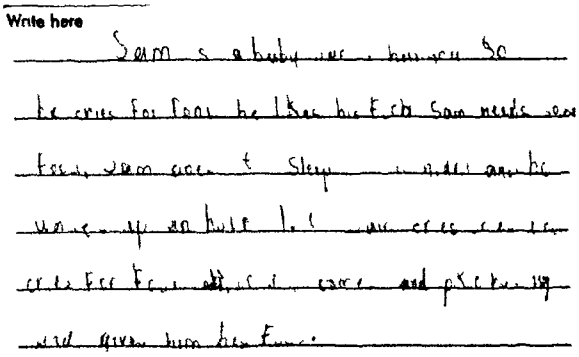
> 'Sam is a baby, the baby is hungry. When a baby cries it wants food. Babies need MUMMYS milk only.'

IMAGE 7. 10: JULIE'S WRITING TASK



Geoffrey Gordans, who scored 127 overall, also gave a description over and above that required for this task. As can be seen in Image 7.11 his writing suggests experience with babies; in particular that besides crying for food, babies need their mothers to give it to them and that until the food is forthcoming, they cry, and rather a lot. Geoffrey's text transcribed reads:

IMAGE 7. 11: GEOFFREY'S WRITING TASK



'Sam is a baby sam is hungry So he cries for food he likes his food Sam needs some food. Sam goes to sleep in the night and he wakes up an hour later Sam cries cries and cries for food. So Mummy comes and piked him up and gives him his food.'

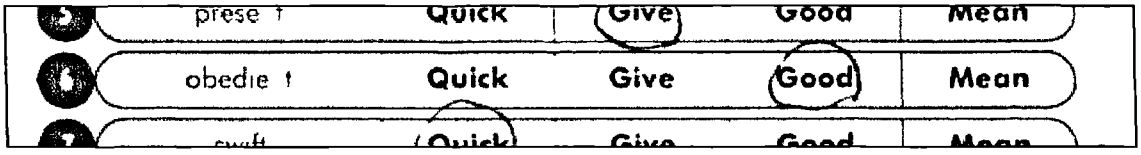
This inability to disengage the task from prior knowledge was apparent with this seemingly emotive text about Sam and also with other texts and exercises, for a number of the home-educated children. It was not so much a comment on their ability to write, as an observation on how their minds functioned. These children had not been trained to follow instructions however illogical, and therefore appeared to need tasks to make 'human' sense. For the home-educated children whose education was very much inseparable from day to day life experiences, the idea of illogical tasks was alien. The very nature of home-education, with the children active family members signified that they had to be responsible, independent and self-sufficient. Testing such children using exercises designed for schoolchildren, that is, children for whom education was synonymous with an environment where they were largely passive recipients, was, it seemed, highly inappropriate and tasks such 'Sam the Baby' only served to emphasise this.

Also in the context of 'human sense', came a logical question from Clara Stone:

'Were the Nazis good?'

This was her response to the Year 5 'Vocabulary' question represented by Image 7.12. This task required students to circle the one word from a choice of four in bold font, that best described the category in which the initial regular font word belonged. The correct answer to the word, 'Obedient', is 'Good'.

IMAGE 7. 12: VOCABULARY



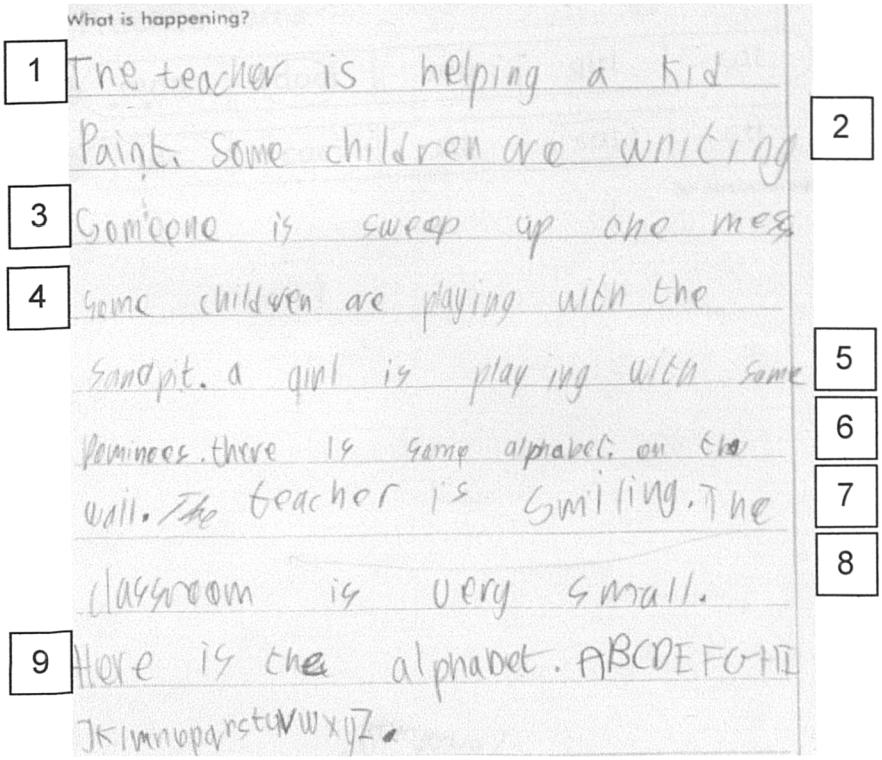
This 'Vocabulary' exercise did not make sense to several of the home-educated children: they appeared to see the words in different contexts to those intended by the assessment designers. Again, it was possible that without having been drawn into an understanding of school assessment convention, they stumbled over tasks such as this one. Julie Heslop also had problems with making sense of the Year 3 'Vocabulary' task questions. Her mother commented

> 'Even though according to the book she may not have the correct answer, I for one, could not argue that trees aren't food, encyclopaedias not fun and that babies need mummy's milk (written in large letters to show how important it is! Image 7.10)

The Year 1 'Writing' task, 'In the classroom 2' required the children to write just one sentence to describe what was happening in a picture. Some participants were over enthusiastic and, as above, such efforts went unrewarded because the assessment marking scheme did not allow for such eagerness. The point made here is not as a criticism of the instrument, but highlights the way in which the home-educated cohort were unprepared for the task-orientated methodology of the tests. Had the home-educated children been accustomed to the test routine they may have been less keen on the assessments, but since their learning was of a type that encouraged inquiry and self motivation, the children wanted to demonstrate their knowledge. It was somewhat demoralising to them to learn that this was not what was required.

As with Gestalt theory, "the whole is greater than the sum of the individual parts" (Sekuler and Blake 1990, pp 135-8), Image 7.13 shows work in which no one sentence is as good as the whole[45]. The overall the description of the scene is conveyed well and the child author appeared at ease with the written word. However, whilst the participant could express ideas in writing, her score, because of the rules, was based upon just one sentence. Appendix 7.8, details the allotment of marks for this task. The scoring mechanism appeared inappropriate to the highest scoring children, who, by writing longer sentences increased their chances of making a mistake and thus losing points.

IMAGE 7. 13: SAMPLE FROM A WRITING TASK

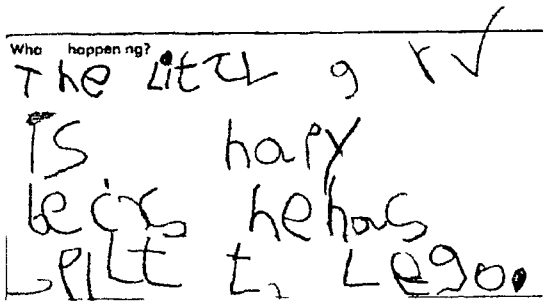


Sophie's response to the 'Writing' task, 'In the classroom 2' is illustrated in Image 7.14. It reads:

'The littl girl is unhapy becos she has spilt the lego.'

Sophie scored 18 points for her descriptive sentence and yet, had she written simply, 'She is reading.', then she would also have scored 18 points. By attempting the more elaborate sentence (with the chance of making more mistakes), Sophie had actually increased her chances of scoring a low mark. Thus more advanced home-educated children, were effectively penalised for their enthusiasm, a concept very difficult to explain to them.

IMAGE 7. 14: SOPHIE'S TEXT FOR 'IN THE CLASSROOM 2'



In the 'Responding to Text' task, Simone could not understand why anyone would ask her whether, 'He's come back, look he's all right!' meant the same as, 'There he goes, look, he's OK!'. Simone and some of the others, in trying to follow their own logic were distracted from the task at hand by seemingly illogical assessment devices that they had difficulty figuring out. Speaking of incomprehensible testing strategies, one father wrote:

> 'My kids will be looking for the catch with such illogical questions, unconnected with daily living'

Referring to the 'Respond To Text' task, Julie's mother pointed out that by implying that young blackbirds continued to live in the nest whilst learning to fly, that the text was incorrect.

> 'It might be worth pointing out that blackbirds typically leave their nest before they're fully 'on the wing' and continue to be fed by their parents for 1 – 2 weeks on the ground. As a result, the mortality rate is very high. [...] Julie found the work quite boring as it involved a lot of writing.'

Julie's response to the question, 'Make up a question of your own about the story' was:

'Why is the story untrue?'

Larry found the 'Invitations' section (PIPS 2) confusing. The page contained a noticeboard style display of different invitations that children needed to read before answering questions on the next four pages. The parental comments at the base the page read:

> 'Looked at information on the left and seems discouraged by the amount of it. [...] Could not be bothered to read information on left page (too much?) [...] Answered from logic, rather than reading the invitation.'

These comments emphasised the way in which the home-educated children were disadvantaged, not through a deficiency in reading ability, but rather because of their striving to seek logic where there was none. The non-symmetrical, 'over-busy' illustrated text was of a type that would not realistically be found outside a school environment. Moreover, the test, had been purposely designed in this way, probably in an attempt to capture a schoolchild's interest and thus was not characteristic either of life or ordinary book-based text.

Without access to a sample of the schoolchildren's 'NLP' and PIPS assessments it was not possible to say with certainty whether their apparent inability to objectively separate task from logic and experience was more widespread in home-educated children than in children at school. However, the home-educated children's high mean scores did suggest that they were

more articulate than their school peers and their written comments indicated they were more vocal. It was notable that even with access to examples of schoolchildren's work, the absence of parental comments would render analysis of such partially inadequate since the samples could not be examined to the same extent as those involved in this study. Combined data from the home-educated children's assessment program did nevertheless, provide convincing evidence that these children were active and independent in thought and action.

As the comments show, if the home-educated children questioned the sense of what they were asked to do, so too did their parents, indicative it seemed of the way in which these home-educating families had chosen to 'take control' of their lives *[children's education]. It was easy to see why some* authorities, as previous research has suggested *(ie. Petrie 1992)*, might see such families as 'difficult', particularly since they were confident enough to question the wisdom of what they were asked to do. One father wrote:

> 'Just a comment if you have opportunity to feed back to the originators: I was rather shocked at how sexist it is - the high number of male characters - even bugs and animals are made male. This is just unacceptable in 1998. Second: the emphasis on vehicles and travel and the very low content relating to home and play, where children spend most of their time. This is a bias in favour of certain personalities and again, in favour of 'male' activities and interests.'

Analysis of the gender content demonstrated that there had, in fact, been just 2 female names used, in comparison with 11 male names, one reference to 'man', one boy's face and 17 sets of male 'happy' 'ok' and 'sad' faces (51 faces) and another 6 boy's faces on 'Maths' question 6. Vehicles and travel were referred to often, however it was difficult to assess the amount of home and play references since so many of these were ambiguous.

7.4.5 The problems with using School Style assessment in the home

Three of the Year 3 parents described how they had accommodated their children in completing the assessments. The first two cases highlight the home-education environment in which the tests were taken, this is to say, tests were conducted at home, where life and education were as one. Test administration needed to fit around the running and convenience of the household as a whole and around the individual characters of those within. The NLP test was ordinarily completed at one sitting although the instructions did allow for a break to be taken (Appendix 4.11). Mrs Darcy wrote of her daughter Freya Darcy (score 124):

> 'She loved the 'word choice', 'vocabulary' and 'spelling' (despite not being able to) and the 'responding to the text' was OK. All of them she did in less than the allocated time but she did them in three separate exercises. Hope that was OK. Zac [Freya's brother] wanted to know why you didn't send him a test.'

Fred's mother also explained:

> 'It took a few days for Fred to get them completed, partly because we always seem to be so busy and partly because he only wanted to do a bit at a time. I hope that's okay. (dyslexic).'

And Jo Shackleton's mother recounted:

> 'At long last Jo has completed the enclosed assignments for you. He has been reluctant to complete them because of the writing required - something he hates doing. [...] One thing this has demonstrated to me is that even though Jo can read virtually anything - because he does most of his learning orally, rather than by writing, his spelling is poor. This is something that we can now work on.'

Whilst the comfort in which the children took these assessments at home may be levied as a criticism against this research, the main point is that these children were never subjected to the usual rigours and stress of testing. For them, this home environment was as much normal to them as school was to schoolchildren. The absence of stress was a characteristic of home-education and attempting to replicate it at home would have defeated the object of the research, which was to find out about the home-education process and environment. Quite possibly the children did so well, not because their education was superior but simply because they felt 'at home'.

One father, Mr Kurt, was anxious about the risk of his daughter's self-esteem being affected by any difficulties she might encounter with the assessment.

Simone was emerging as a cautiously confident reader and her father did not want to see this progress damaged. He therefore explained that he had:

'helped her to read it'

But commented on her efforts with 'Respond To Text' that she had not needed:

'as much help reading as I expected to give her.'

and on 'Sentence Writing' that she:

'took longer than 10 minutes but was independent'

The researcher had herself undertaken the PIPS 'Reception' assessment with Simone's brother and took the view, from what she had seen, that Mr Kurt was more likely to have overstated his involvement owing to his protective and emotional involvement. However, marking Simone's assessment and others where help was indicated, the researcher ignored the assisted sections, marking only the work that was completed unaided.

Home-educating parents apparently found it very difficult to deny assistance to their children. Many parents found this denial stressful, since an important aspect of home-education was having someone permanently on tap to answer questions at the moment they arose. The situation whereby questions went unanswered during a set period of time, was clearly unfamiliar and disconcerting to many of the children. One parent overcame this urge:

'We wouldn't mind finding out about his results as he wants to know how many he has right. I did not want to tell him this

> otherwise he would have changed his answers where he has made a couple of mistakes.'

Emphasising just how difficult it was for some parents to resist assisting, Mark's mother commented:

> 'I managed to avoid helping him at all. Mark objected to being timed for the last question so I had to pretend that I was not timing him. He finished 20 of the questions within the eight minutes.'

Worried she might have done something wrong, another mother wrote (unnecessarily):

> 'I'm sorry if we didn't do it right - the idea of structure seems a bit foreign to us I guess.'

As this quotation suggests, the process involved introduced a hitherto unfamiliar dimension to many families. These families really did approach learning in a very different way from that used in schools.

Another parent expressed anger and frustration at the PIPS Year 2 test. A copy of her letter appears at Appendix 7.9. Fortunately, a telephone conversation resolved this situation and resulted in an invitation to visit. The letter however, emphasises the antipathy echoed by many home-educators towards testing. The emotional 'cost' for many of the families, in assisting with this aspect of the research was apparent, but those asked to help generally understood the rationale behind the testing program, namely, that there was a need for home-education related evidence to be made available.

Some of the above comments did raise the issue of collaboration, leading to inflated scores. However, several 'NLP' original assessments and re-tests were undertaken in the presence of the researcher with very little difference in scores[46]. It appeared, therefore, that assessment reliability was maintained. Furthermore, as has been seen above, there were no overall substantial differences in standardised scores between the researcher administered 'PIPS Reception' assessments and the largely parent-administered 'NLP' tests.

A further indicator of the very distinct environment that home-educated children learned in, came from annotated comments written on assessments. Clearly these were very different conditions to those imagined by the test designers. The following quotes are from four families:

1) 'I'm afraid that one of the cats and the baby got hold of the books, which didn't improve their appearance, for which I offer my apologies!'

2) 'I am sorry that the sheets are not tidy. Somehow some egg white got spilt on the CABS sheet and then the baby, in a fit of annoyance got hold of the 'NLP' sheet and added her contribution as you can see.'

3) 'Fred's answers on the front page are the ones with rings round them and all the scribbly bits are the baby's], so I hope you can make sense of it - he did get all the right answers.'

4) 'We are sorry for the delay in returning the work but we had to wait for Mary to be alone (quiet from Janet! [her sister])'

7.4.6 Were the Children Capable of Metacognitive thought?

Moseley et al. (1998) found that some[47] of their 1,603 Year 1 children made consistent 'guesses' by marking the same word position throughout the test. None of the home-educated children, completing either the 'Word Recognition' or 'Vocabulary' tasks, marked the same word position throughout the test. Given the average standardised score of 127.7 for Year 1 'Word Recognition' and 126.95 for Years 3 and 5 'Vocabulary', there were, perhaps, not enough children in the lower score range to explore this possibility further. Notably however, in the Year 5 'Vocabulary', three participants who did not receive full marks, lost these points through non-completion of the questions and not because they had circled the wrong answer. That is to say, all the questions these children responded to were correct and all those they were uncertain about, they left blank, rather than make a guess. It appeared that 25% of participants were aware of the boundaries of their knowledge, showing perhaps, signs of metacognitive[48] thinking (Blakey and Spence 1990). Whether or not this ability can be associated with home-educated children, is a theme to be discussed later, in the Discussion.

7.4.7 Individual Approaches for Individual Children

When Mr Kurt expressed exuberance over his son's performance in 'Word Choice' he revealed the way in which he approached each of his three children's abilities very differently. Of his son, surprised, he said:

> 'Finished in 3 minutes! Self checked and changed one right answer to wrong and one wrong answer to right!'

What was interesting was that Simone Kurt had actually scored substantially higher than her brother and yet her father's quiet and cautious reaction to her work contrasted substantially. The careful, delicate nature of Simone was treated with gentleness whilst the more bullish, confident nature of her brother was accepted with fervour. The researcher's contention, having interviewed the family was that the father was perhaps, more surprised by his son's so willing participation. The younger son, Thomas, had achieved an above average mark on the PIPS 'Start and End of Reception' measure, coaxed on, at the time, by his father's enthusiasm and manner of making the whole exercise seem like fun[49]. The individual approach that parents took with each child was, it appeared, a feature of home-education. This was a style of learning where there was no need to have all the children following the same model and no need for the 'teacher' to treat every child similarly.

7.4.8 School? No Thank You

There was a section in the PIPS 2 section that asked children about their attitude to school. Several of the home-educated children nevertheless answered this section in order to air their ideas about school. Larry, described his hypothetical attitude to school in Image 7.15: Matthew, who like Larry, had never been to school, expressed his feelings similarly (Image 7.16):

IMAGE 7. 15: LARRY'S THOUGHTS ABOUT SCHOOL

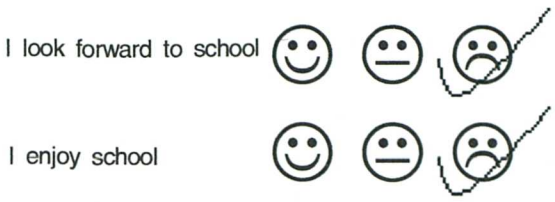


IMAGE 7. 16: WOULD YOU ENJOY SCHOOL?



7.5 SUMMARY

In terms of a normal distribution bell curve, most of the home-educated children's NLP test scores were in the upper 16% band. However, despite high scores, it appeared from both results and commentaries, that the home-educated sample found the NLP assessments increasingly difficult with age as their experiences diverged from that of school children. The home-educated children, for example, exhibited difficulties understanding test norms that school children would have taken for granted.

The home-educated children managed the literacy aspect of PIPS Year 2 well, illustrating that when combined with the 'Context' scores, their concurrent value-added performance was, more or less, centred at the 'as expected' level. The group demonstrated considerable differences in both interpersonal and intrapersonal performance, whilst maintaining a fairly homogenous group standard across the four tasks measured by PIPS Year

2. Comparison of the PIPS Year 2 data with that gathered from the PIPS Baseline Assessment and the NLP tests, demonstrated a largely stable, above average level of performance between the ages of four and ten years. These children did not, generally speaking, follow holiday periods and it can be inferred therefore, that the home-educated cohort would not have fallen victim to 'vacation stagnation' (Tymms 1998).

The children highlighted anomalies in the tests, exhibited lateral thinking and made various attempts to make 'human sense' of the questions. As such, they often failed to grasp the task in terms of giving the answer the tester wanted. 'Miscomprehension' thus affected children's scores by providing erroneous data about their academic abilities: furthermore, the error margin (Tymms 1998), might, in the case of those home-educated children who had not experienced an environment of assessment, have been even greater than predicted.

It was evident from the standardised score ceiling point of >130 and the way in which the children's more articulate answers did not earn them any more marks that the test objective was to establish the lowest level each child was at, rather than the level itself; thus, masking their capabilities. By providing comparison with national norms, the test was perhaps, inappropriate for home-educated children whose parents, having the children around them every day, would need children who were independent and responsible.

A recurring theme throughout the comments was the evident disparity between what the children were capable of and what their parents believed them capable of academically. The children themselves exhibited no such worries and appeared metacognitively aware. Parents were often anxious about the testing, feeling both confident that their children were acquiring knowledge in a useful way, and also wanting to know their child's level in conventional terms.

There was no clear explanation for the children's high performance. It may have been because they were relaxed at home in a familiar environment although, home would have had its own stresses such as sibling interruptions and household noise. Perhaps though, it was the emphasis on independent thinking that meant that the children were able to do well even with material unfamiliar to them.

When including the comments, the question was, do they add anything to this research? The answer is yes. The commentaries indicated some of the problems involved with assessing home-educated children: namely that for many, 'testing' conflicted with the very nature of their home-education. The extra insight that came from the commentaries assisted in gaining an understanding of the home-educated participants that could not possibly have been so fully explored from score observation alone. Further, these comments show conclusively that Thomas' (1998) intuitive assumption that parents would over estimate their children's abilities, was incorrect. Such a finding has implications for the way in which home education is monitored by

LEAs. After all, if the parents are considered to be overestimating when in fact the opposite is true, this can have a very detrimental affect on how home-educating families are viewed by external monitors.

Chapter 7 Literacy Endnotes

[1] There was no maximum score for this task: 25 is an approximate score, including a maximum of 10 for each letter of the longest word and 5 for the use of conjunctions.
[2] (>130) indicated a raw score above the highest standardised score (2 x SD) calculated.
[3] 40 is approximately the maximum. Since this is a writing exercise the marks do not have a limit. The upper score bracket is >29.
[4] The upper score bracket here is >40
[5] The raw mean was calculated by summing each participant's total raw scores. The standardised mean score was calculated by converting individual's total raw scores to standardised scores, summing them and dividing them to find the mean.
[6] Yr (year) Mnth (age in months) Respond (Respond to text) Letter (Letter recognition) Word Rec (Word recognition) Raw Score (Mean raw score) St. Score (Standardised mean score)
[7] Norm 100. 68% of children are expected to be within one SD (15) of 100 (85-115). 95% of children will fall within two SDs (70 to 130).
[8] There was a choice of calculating scores with or without 'Writing', however, all the sample were calculated as if they had completed the writing section, whether or not they had.
[9] From amongst the questionnaire returns
[10] for full tables see Appendices, 7.1, 7.2 and 7.3
[11] > (more than) 22 was the highest measured score
[12] The z score is a standard score that can be used to assess similarities between different scales by converting disparate measurements into a common one (Kennedy 1983). To calculate, chose mark for comparison, minus the class mean, divide by the SD = z (larger z = greatest achievement).
[13] They scored103 and 104.
[14] When independent section standardised scores are summed and a mean score calculated, this creates an end score closer to the SD than would have been the case with the addition of raw scores. Supposing a child did well in one section (i.e. 1 x SD over the mean) and did well in a second section (i.e. 1 x SD over the mean), the average mark would make them 1 SD over the mean; however, if the raw scores were summed, the end score would be higher above the SD because cumulative attainment is being assessed rather than independent section attainment. A standardised score of 115 in all sections creates an overall average of 115 (16% of pupils in each section are therefore getting better scores). However, these 16% will probably not be the same children in each section, so in effect, the numbers of those above are actually becoming fewer. The child's standardised score, therefore, drops as he goes down on the percentile ranking and moves closer the mean. Thus this method of calculation informs most accurately about how well the child has performed per section as opposed to overall.
[15] Standardised scores calculated by the end conversion of individual total raw scores (Tables 7.3, 7.4, 7. 5).
[16] Calculated by the CEM Centre, University of Durham
[17] 52% (52 in 100)
[18] 6%(6 in 100)
[19] 5 in a 1000 or 1 in 200
[20] Results relating specifically to the PIPS Year 2 'Maths' section are contained in Chapter 8.
[21] Year 2 in 1998 were born between September 1990 and August 1991
[22] The measure of educational support in the home.

[23] Standardised to a mean of 50 and an SD of 10. Quoted error 9 points: this means that the actual score might be + or - 9 points.
[24] Mean derived by taking PIPS 2 standardised scores, as provided by the CEM Centre, University of Durham and converting each one to a 100 standardised score ((PIPS Standardised score - 50) \10 x 15 + 100) before summing and averaging.
[25] Individual means were derived by calculating each participant's mean score across the four domains and using all the individual (four domain) means to calculate a group mean.
[26] Problems of Position - domino type pictures where children were asked to pick out patterns.
[27] Means were calculated by summing all participants' standardised scores for one section and averaging them.
[28] Each participant is represented in Image 7.1 by a black cross.
[29] Where 95% of children should score.
[30] Boxplot: The middle 50% of participants lie inside the box, with the length decided according to the score range of this 50%: the cohort's middle scoring participant is represented by the internal bar. External lines attached to the box represent the majority of other children. Participants beyond the lines are called 'outliers'.
[31] As calculated according to normal distribution.
[32] POP is the non-verbal assessment involving identifying patterns using domino-like designs
[33] Using a one way ANOVA.
[34] Using independent T-test ('Picture Vocabulary' & 'POP'; 'Picture Vocabulary & 'Math'; 'Picture Vocabulary' & 'Reading'; 'POP' & 'Math'; 'POP' & 'Reading'; 'Math' & 'Reading').
[35] In view of the positive attitude of the participants to the 'PIPS Start of Reception' assessment, this had not been anticipated by the researcher.
[36] Standardised Score SD 15 & Mean 100
[37] By combining scores on each of the four tasks (n=71) and segregating each score by gender. Boys n= 8 and the combination meant that n=31 (4 x 8 = 32 less 1 in reading): girls n= 10 and combination meant that n=40 (4 x 10), thus the total was 31 + 40 = (n=71). ANOVA result was: Female mean was 63.4 & SD 9.3 : Male mean was 65.7 & SD 5.5.
[38] As opposed to value-added based on prior achievement.
[39] Calculated by the CEM Centre, University of Durham
[40] As illustrated by Image 7.1.
[41] 'in line with the score predicted from their contextual score' (PIPS Project 1998e)
[42] Muffin the Magician
[43] There was in the marking scheme the option to mark with, or without the writing section
[44] In Chapter 6.
[45] Sentence (S.) '1' has a capital letter, a full stop and 2 words of 7 letters, whilst S.'2' has a capital letter, 8 letter word but no full stop. S. '3' shows 'sweep' without the 'ing', but has both a capital letter and full stop. S.'4' starts with a capital letter but S.'5' does not and neither does S. '6' which appears to contain 2 full stops. S.'7' is competent but S.'8', whilst grammatically good uses the word, 'classroom' which cannot contribute to the score since it appears in the text several times and might have been copied. S.'9' shows the author able to spell a rather difficult word as well as demonstrate an ability to reproduce the whole alphabet.
[46] See Appendices 7.1,7.2,7.3
[47] In the Year 1 Word Recognition (group A) samples nine children (0.9%) and in the Word Recognition (group B) sample eight (1.4%) children, who opted for the same response position throughout the test.
[48] Metacognition is thinking about thinking, knowing "what we know" and "what we don't know." (Blakey and Spence 1990).
[49] This assessment had been administrated by the researcher. The parent's 'coaxing' was by way of treating the imminent assessment as a game about to be played.

CHAPTER 8: MATHEMATICS
PIPS YEAR 2 (WITH PIPS 'RECEPTION' MATHS)

ABSTRACT

This chapter relates the mathematics results from the PIPS Year 2 assessment (a cross-sectional sample), analysing these together with the 'PIPS Start and End of Reception' 'maths' findings (a longitudinal sample). Eighteen children, 10 girls and 8 boys, participated in the PIPS Year 2 assessment and 35 children assisted with the PIPS Baseline measure. The rationale for examining this area of learning was that together with literacy, maths is considered to be an area of high priority in today's educational environment; thus it was pertinent to assess home-educated children in this domain. Although the 'maths' sections are integral to the PIPS assessments, it was considered important to discuss the mathematics results in a chapter devoted solely to this topic. The findings revealed that over 50% of the PIPS Year 2 cohort scored above the 50th percentile, with a mean of 64 from a possible 100 points across the three assessments. The value-added 'maths' scores were more or less 'as expected' and there was no significant gender bias in the results.

8.1 GENERAL MATHEMATICS RESULTS

'Maths' has been dealt with separately here, to facilitate a full investigation into the home-educated children's mathematical skills .

Table 8.1 illustrates the mean maths score for the PIPS Year 2 cohort, compared with those for the PIPS 'Start' and 'End of Reception'

assessments. For each of the PIPS assessments, the national mean was 50 with a standard deviation (SD) of 10. The sample's mean scores were all more than 1SD above the national mean and were fairly similar although the SD for the PIPS 'End of Reception' was over twice that for PIPS Year 2.

TABLE 8. 1: PIPS YEAR 2 HOME-EDUCATED SAMPLE STANDARDISED MATHS SCORES

	Age	N	Mean	Standard Deviation
PIPS Start of Reception	4	35	63.97	7.68
PIPS End of Reception	5	33	64.45	12.5
PIPS Year 2	7	18	63.94	5.95

Table 8.2 illustrates the national score bands[1] and how the home-educated children fitted into these bands.

TABLE 8. 2: SCORE BAND COMPARISON OF PIPS SAMPLES WITH NATIONAL NORMS

Standardised scores	% nationally	PIPS 'Start of Reception' Maths (n=35)	PIPS 'End of Reception' Maths (n=33)	PIPS Year 2 Maths (n=18)
40 and over	84%	100%	100%	100%
60 and over	16%	74.2%	57.5%	77.7%
70 and over	2.5%	34.2%	27.2	11.1%

It was also possible to study the children's attainment as percentile levels as portrayed in Table 8.3: 66.6% of the sample scored above the 90th percentile and 88.8% above the 75th.

TABLE 8. 3: SCORES VIEWED AS GRADES AND ACCORDING TO THEIR PERCENTILE RANKING

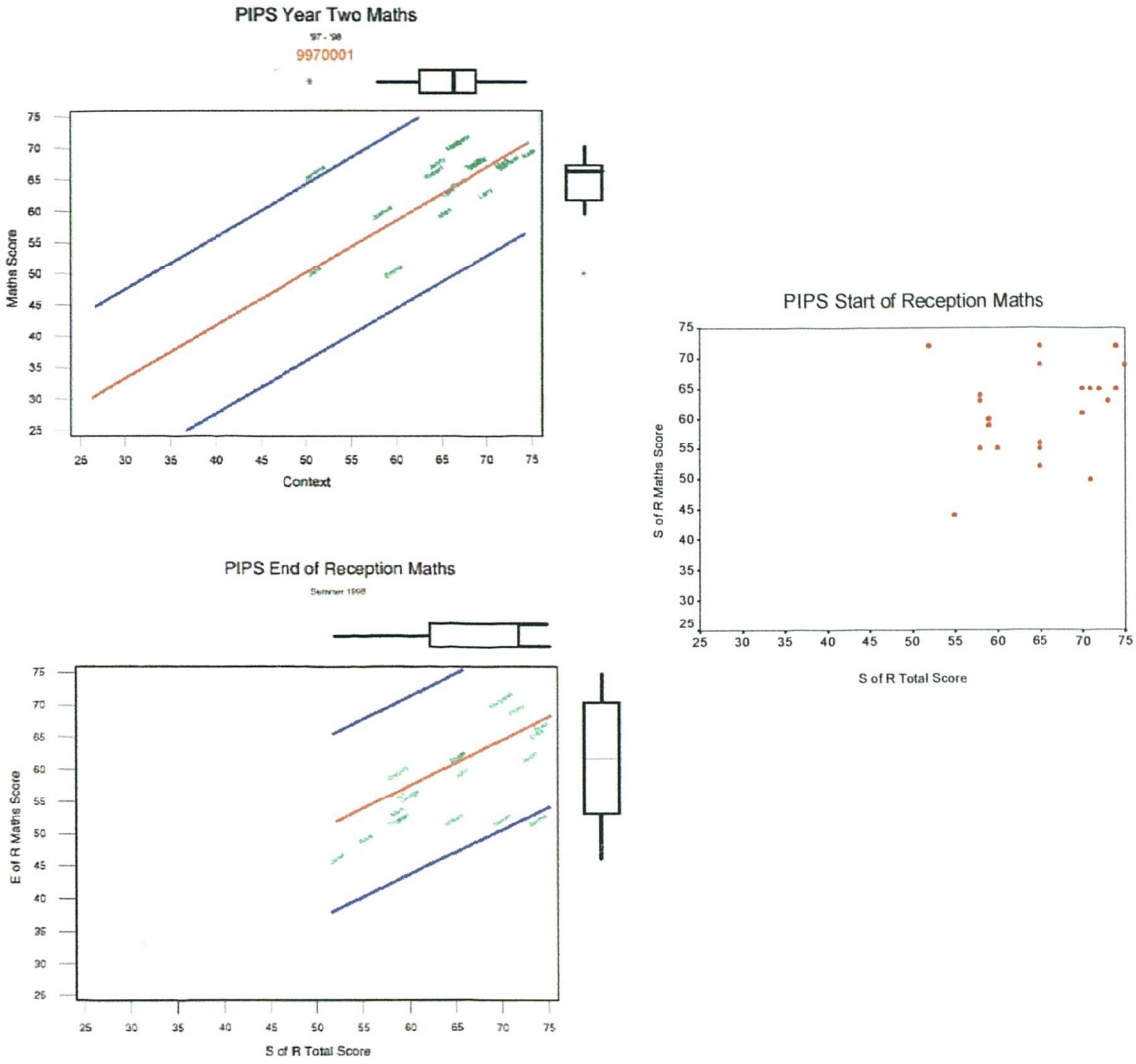
Grade	% of home-educated sample Maths (n=18) (total 99%)	% of pupils nationally	Percentile ranks > or < the median 50
A	**66.6%**	**Highest 10%**	**90th percentile**
B	**22.2%**	**Higher 15%**	**75th percentile**
C	**11.1%**	**Middle 50%**	**50th percentile**

Although an independent samples T-test suggested the difference in scores between PIPS Year 2 'Reading'[2] and 'Maths' means to be minimal[3], the SD

of Maths was 5.9 (n=18) and Reading 9.8 (n=17). This indicated that the range in home-educated 'Maths' scores from the group mean was substantially less than for 'Reading'.

The two larger scatterplots reproduced in Image 8.1 show the difference in group 'Maths' performance between the two year groups to be small. Although the 'PIPS End of Reception' scatterplot contrasts 'Maths' with 'Total Score' (Maths and Reading combined) and the PIPS Year 2 scatterplot shows the 'Maths' score against 'Context', comparisons in performance can nevertheless, be drawn. The boxplots[4] on the left hand side, for example, both relate to performance in 'Maths'. The PIPS Year 2 cohort can clearly be seen, by reference to the box and its whiskers, as a close knit group whereas the PIPS 'End of Reception' group produce a rather different picture with a wide spread in scores. Similarly, the 'Context' scores for PIPS Year 2 are far closer than the 'Total Scores' of the younger group. Within both groups, most of the children's scores were within the two blue 95% 'best fit' lines, many falling close to the central 'as expected' red line: there appeared to be a tendency to be slightly below this line for the Reception group and to be just above it for the Year 2 children.

IMAGE 8. 1: PIPS SCATTERPLOTS[5] CONTRASTING 'START' AND 'END OF RECEPTION' MATHS WITH 'START OF RECEPTION' TOTAL SCORE, AND YEAR 2 MATHS WITH YEAR 2 CONTEXT



The right-hand scatterplot has been added for comparison, although in the absence of boxplots and lines of 'best fit, no conclusions can be drawn from it. It is possible however, since the same 'X' and 'Y' axis scale has been used, to see that the group were performing to a similarly high standard at the 'PIPS Start of Reception'. Standardised scores have been used in each graph.

8.1.1 GENDER DIFFERENCES

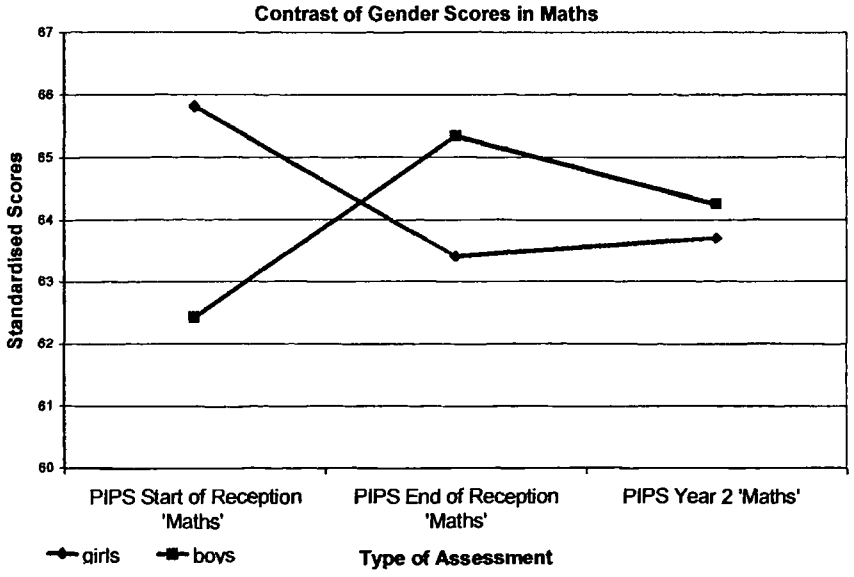
The extent of gender difference in 'Maths' was negligible, although boys outperformed girls at PIPS Year 2 and PIPS 'End of Reception' 'Maths' whilst girls outscored boys at the 'Start of Reception', as can be seen from Table 8.4.

TABLE 8. 4: PIPS HOME-EDUCATED SAMPLE'S MEAN SCORES BY GENDER

	Girls	No.	SD	Boys	No.	SD	Sig.
'Start of Reception' 'Maths'	65.81	16	8.72	62.42	19	6.52	.198
'End of Reception' 'Maths'	63.40	15	11.45	65.33	18	13.58	.665
PIPS Year 2 'Maths'	63.70	10	7.39	64.25	8	3.95	.852

Graph 8.1 depicts the symmetrically opposite performance of boys and girls over the assessment cycle. Whilst the differences in scores were not significant, it can be seen that the girls' performance dipped at the 'End of Reception' to the same extent that the boys' levels rose: the girls' performance then increased by the same amount as the boys' attainment fell.

GRAPH 8. 1: PATTERN OF GENDER PERFORMANCE OVER THE TESTING PERIOD



One parent[6] voiced his belief that PIPS Year 2 was a male orientated assessment. Table 8.5 illustrates the gender break-down between tests. In terms of facial images alone, the PIPS Year 2 assessment contained 57 boy's faces and zero girl's faces.

TABLE 8. 5: NUMBER OF GENDER SPECIFIC IMAGES BETWEEN TESTS

	male	Female
PIPS 'Start of Reception'	6	7
PIPS 'End of Reception'	2	1
PIPS Year 2	68	2

An investigation of gender differences above and below the median standardised scores revealed the following: that in the PIPS Year 2 assessment, 55.5% of boys were in the lower portion of the group and 33.3% in the upper half; PIPS 'Reception' scores indicated that at the 'Start of Reception' the split was 60.6% of boys below and 48.48% above; whilst for the 'End of Reception' 62.8% of boys were under the median score and 48.71 above. Thus in each of the three assessments, higher proportions of boys than girls were amongst the lowest scorers in the groups.

8.1.2 VALUE-ADDED

PIPS Year 2 'Maths' achievement was contrasted with participants 'Context' marks[7], in order to assess the home-educated children's concurrent value-added scores. The graph headed PIPS Year 2 'Maths' and shown in Image 8.1 depicts this contrast. Table 8.6 shows the children's value-added scores for both PIPS 'Reception' and PIPS Year 2 'Maths' components. The PIPS 'Reception' group's value-added was more or less 'as expected', whereas

the PIPS Year 2 'Maths' value-added results in contrast, have a skewed distribution, towards high value-added.

TABLE 8. 6: PIPS VALUE-ADDED 'MATHS' CATEGORIES

Value-added	% of children nationally	PIPS 'Reception' % of participants Math (33)	PIPS Year 2 % of participants Math (18)
++	10%	15.15	5.5
+	15%	9.09	16.6
0	50%	51.51	72.2
-	15%	12.12	5.5
--	10%	12.12	0

TABLE 8. 7: ATTITUDES TOWARDS MATHS

	'Maths' Attitudes (n = 18)
Unhappy☹	11.1 %
Happy☺	33.3 %
OK😐	55.5 %

The PIPS Year 2 assessment also included an attitude scale for 'Maths'. Table 8.7 revealed that a majority of the home-educated children were indifferent towards mathematics.

8.2 COMMENTARIES: PIPS YEAR 2 ASSESSMENTS

The 'Maths' section of the PIPS Year 2 assessment attracted some remarks, the more pertinent of which are presented here[8]. Many of the remarks however, echo those noted in Chapter 7. There was, for instance, the persistent dilemma about parental assistance. Parents felt unable to refuse their children guidance and the researcher in turn, was compelled to mark with a zero any assisted answers. This admission of aid, nevertheless, provided valuable qualitative data that informed on the make up of the cohort.

IMAGE 8. 2: PIPS YEAR 2 MATHS QUIZ

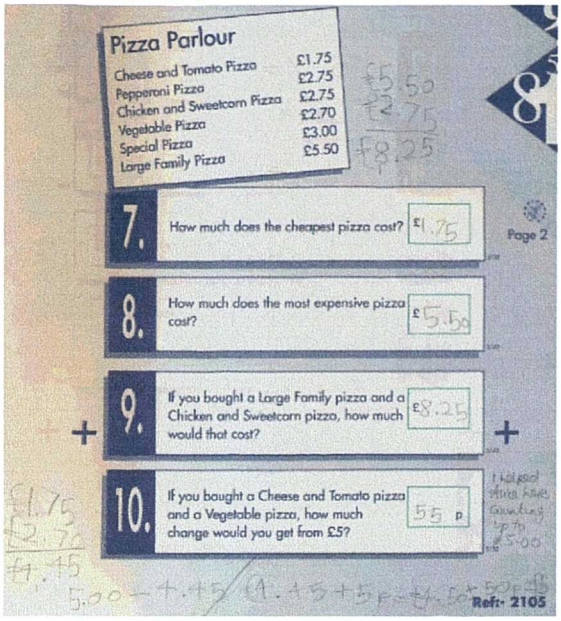


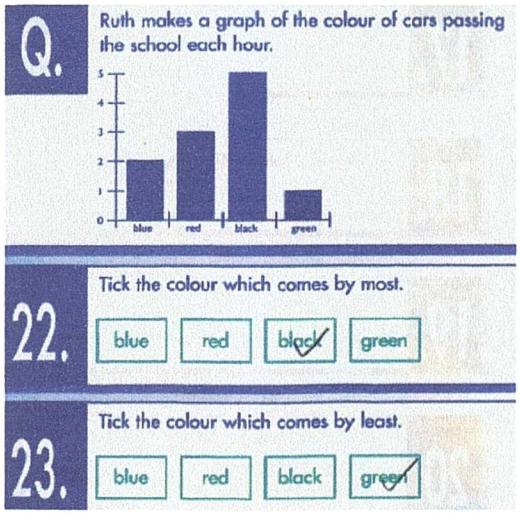
Image 8.2 gives an example of Kate's workings, with a note at the bottom right hand side added by her mother:

> 'I helped with counting up to £5.00'

The extent of Kate's own working out, however, is visible in the Image.

A curious dilemma arose for one child when presented with questions 22 and 23, illustrated in Image 8.3 but resolved by Mrs Easter's resourcefulness:

IMAGE 8. 3: TOO MUCH LIKE SCHOOL



> 'At first she refused to answer Q's 22 & 23 because they had to do with school - so I told her that she wasn't doing it because she was at school but because she was an environmentalist with the anti-

car campaign - she said okay then. (I realise that's irrelevant I just found it amusing)'

This comment emphasised the difficulty in assessing the home-educated children whose rationales were often mystifying (see for example Section 6.5.7, Idiosyncrasies). Had Mrs Easter not been present, her daughter would not have answered the question, thus being judged not to have known the answer. Finally, Mrs Easter commented:

'I find it hard watching her write wrong answers & not being able to explain things to her. I think she finds it strange that I wouldn't help her. What's the point of the exercise if you can't learn?'

Mark's mother was puzzled by her son's attitude and performance:

'I was surprised when he ticked the glum face for 'I think maths is easy' as he has always seemed to sail through his maths work-book. It also surprised me that he managed to do the maths question '9' as we have not learnt adding of money. He just counted on his fingers and wrote down the answer.'

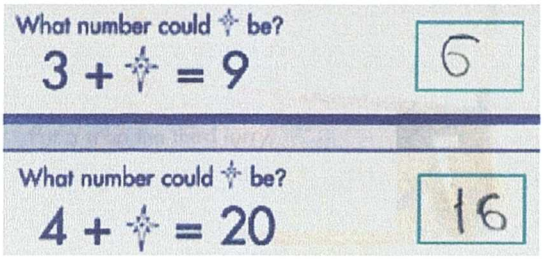
As with Mark, some of the participants simply had not covered elements of the work. Integral to the Year 2 test were assumptions about what the [school]children would have covered. The symmetry question was correctly answered by 42% of the children nationally with moderate discrimination[9] at 0.47, but as this parent pointed out, if the work had not been covered, it could prove difficult:

'We haven't "done" symmetry yet, or working with money much, but she made a good try!'

Referring to the two items shown in Image 8.4, Mrs Easter explained:

> 'She asked me what the ✯ was? I said, "they've used that instead of 'n'".'

IMAGE 8. 4: MISSING NUMBERS



For a child unused to tests and school-based conventions, such characters as the ✯ could clearly present problems, whereby children might be unable to perform elementary tasks simply because they lacked prior inferential knowledge of school assessment techniques. Although the star image would, for most people, be very obviously to related to a missing number, it is conceivable that without that prior understanding the question might appear illogical.

In terms of what the children could achieve with assistance, for example, working within Vygotsky's Zone of Proximal Development (Vygotsky 1978), Matthew's father was adamant that with assistance his son could have managed the questions. As it was, under test conditions, the questions were set at too high a level and remained unanswered. Image 8.5 shows Matthew's father's comments: it reads,

> 'Can be helped to work these out but cannot really work at this level.'

IMAGE 8. 5: MATHEW'S FATHER EXPLAINS:

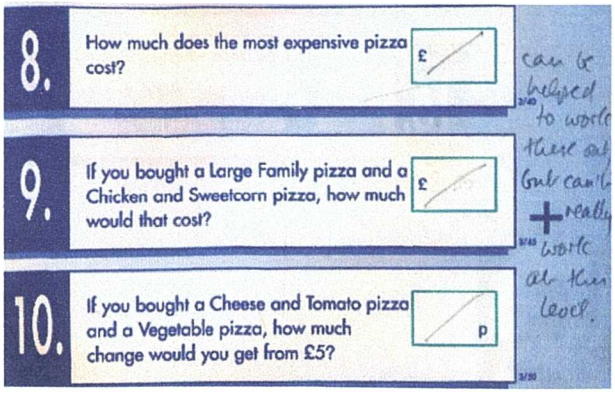
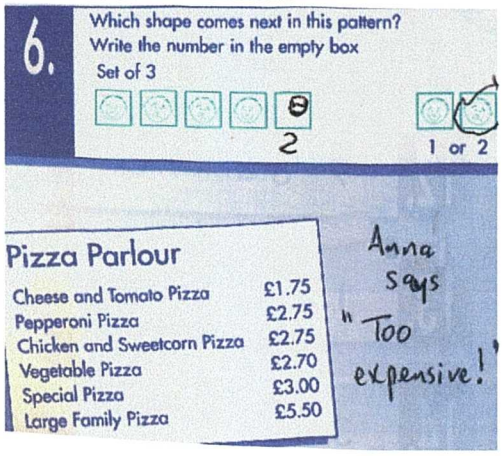


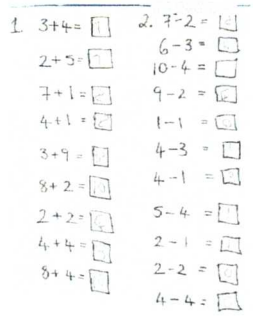
IMAGE 8. 6: OPINIONATED



In the maths sections too, the home-educated children were able to continue the sense of fun seen earlier in Section 7.4. The reference to price at Image 8.6, although made in jest, may also be evidence that this child was conscious of context.

Emphasising the close familial environment experienced by home-educated children, siblings often wanted to be involved. Jane's younger sister had been provided with a test of her own (Image 8.7) from which she derived considerable pleasure and pride, sending it on to the researcher together with her sister's assessment booklet.

IMAGE 8. 7: YOUNGER SISTER JOINING IN



The commentaries here add to those incorporated into Sections 6.5 and 7.4 to provide a background to the assessment programme that offers insight into the learning environment of these home-educated children.

8.3 SUMMARY

The results showed the home-educated four, five and six-year-olds to be performing at above the national average in mathematics. The mean scores for each group averaged in excess of 60 points where the norm was 50 and one standard deviation equated to 10. In the score band occupied by 2.5% of children nationally, 34%, 27% and 11%, of the home-educated four, five and seven-year-olds, respectively, were placed. Translated into percentiles to facilitate comparison with North American home-education maths results, (see Section 3.3.2) this meant that, 88.5% of the UK home-educated cohort scored above the 90th percentile. The SD of the PIPS Year 2 group was smaller for mathematics than it had been for reading, suggesting the maths attainment to be similar across the group. The 'as expected' valued-added scores masked the fact that home-educated childrens' lead was thus maintained. Gender differences, whilst small, were in the girls' favour during the PIPS Baseline Maths but in the boys' favour by PIPS Year 2 Maths. The girls' standard deviations at 'Start of Reception' and PIPS Year 2 maths however, were larger than that for the boys. The point was made by one parent, that the PIPS Year 2 assessment had been male biased, was shown to be so and this may have influenced the scores. Whilst over 50% of the home educated children confessed to 'maths' indifference: 33%, however, claimed to enjoy mathematics.

Where parents had intervened in the PIPS Year 2 assessment process, explanations were given to the researcher that for the most part, amounted to simple explanations to their child about school-based conventions. Some parents it seems, prior to administration, had 'supplied' their children with the tools to make necessary calculations. Judging from parental feedback, parents were diligent and serious about the assessment administration. Many of the children found the assessment simple. The PIPS Baseline assessment had been administered entirely by the researcher, therefore avoiding parental assistance altogether. It was noted that the children completed their assessments in the comfort of their own homes, where they were able to relax and rest as they wished; this may have contributed to their high scores, although in contrast, there were those children who were put under stress by agreeing to complete the assessment. The qualitative data revealed how children and their parents reacted to the test contents; this provided a fascinating insight into their attitudes. Mrs Easter, for instance, recalled how her daughter initially refused to complete a question simply because it contained a reference to school.

Chapter 8 Mathematics Endnotes

[1] Calculated according to normal distribution.
[2] Discussed in Chapter 7.
[3] $p<.984$ where $t = -.020$.
[4] Boxplot: The middle 50% of participants lie inside the box, with the length decided according to the score range of this 50%: the cohort's median score is represented by the internal bar. External lines attached to the box represent the majority of other children. Participants beyond the lines are called 'outliers'.
[5] Image 8.1: 'PIPS Year Two Maths' and 'PIPS End of Reception Maths', were produced using the home-educated cohort data, by the CEM Centre at the University of Durham,.
[6] Cited in Chapter 7, Section 7.4.4
[7] This contrast was produced by the PIPS Project as part of their assessment analysis.
[8] PIPS Baseline 'Maths' comments appear in Chapter 6.

[9] Discrimination from -1 to 1: High discrimination (1) between examinees (item difficult for low attainers) and low discrimination (item was difficult: i.e. a low % gave correct response) or easy (high % gave correct response) for all and didn't discriminate well between examinees. Mid-range discrimination means a broad range of examinees answered the item correctly.

CHAPTER 9: SOCIAL AND PSYCHOLOGICAL DATA - CHILDREN'S ASSERTIVE BEHAVIOUR SCALE (CABS), REVISED RUTTER SCALE (RRS), GOODMAN STRENGTHS & DIFFICULTIES QUESTIONNAIRE (GOODMAN SDQ)

ABSTRACT

This element of the research involved 103 home-educating children aged from 4 to 11 years old. Three instruments were used: the Children's Assertive Behaviour Scale (CABS), the Revised Rutter Scale (RRS) and the Goodman Strengths & Difficulties Questionnaire (SDQ) in a total of 136 social and psychological based assessments. Questionnaires were either self-rated or parent-rated but referred to the children. The purpose of conducting these assessments was to establish whether the home-educated children experienced social or behavioural problems beyond the 'norm'. Some critics have suggested a relationship between home-educated children, social ineptness and behavioural problems. Results confirmed that the home-educated children were socially adept and did not display behavioural problems beyond the norm.

9 SOCIAL AND PSYCHOLOGICAL DATA RESULTS: OVERVIEW

A total of 103 respondents provided 136 assessments, namely, 43 CABS, 51 SDQ and 42 Revised Rutter Scale[1]. None of those invited to participate either refused or failed to respond. Except for seven child-rated SDQ questionnaires (completed by 11 year olds) all assessments were parent rated[2]. Beyond the initial questionnaire survey, 64 (62.13%) of the 103 participants had assisted with other areas of the research[3]. As far as could

be known, none of the children assessed in this section had attended school within the three months prior to assessment.

The following sub-sections discuss the results for each of the assessments and are followed by a discussion of the combined results from this chapter.

9.1 CABS RESULTS

The Children's Assertive Behaviour Scale (CABS) [4] contains 27 items that can be grouped into five sub-categories; 'Positive' (how a respondent manages in situations involving opportunities for positive expression); 'Negative' (how a respondent manages in situations involving opportunities for negative expression); 'Request' (measures the ability to formulate and react to, a request); 'Conversation' (examines the facility to make and/or be involved in, conversation); and 'Feeling' (explores the capacity to express one's own and understand another's feelings). For each item, participants could pick from answers a-e which were scored from -2 to +2.

The instrument was chosen because Shyers (1992) had used it with a home-educated sample. Therefore, Shyers procedure was adopted to allow comparisons to be made. However, when this writer later acquired a copy of Michelson et al's (1983) work on CABS, it transpired that the original authors had used a method of analysis that differed from that used by Shyers. Since both methods were valid and focused on differing aspects of social behaviour, both CABS' analyses are used here.

The difference between Shyers' and Michelson et al's analyses is as follows:

a) In looking at participants' 'Total Difficulties' scores (the addition of scores from all bar the Prosocial category) Michelson et al (1983) summed individual's scores as absolute values, that is, they ignored the + and - signs. Thus, a zero score represented assertiveness and the further a participant's score was from zero, the less assertive they were. This applied whether the category scores showed a person to be aggressive (mostly + scores) or passive (mostly - scores).

b) Shyers (1992) used an 'all values' approach whereby a '+' or '-' score indicated whether a participant was mostly passive or aggressive. A zero score represented equally passive and aggressive behaviour with the implication that this was the ideal. Shyers explained:

> 'I was interested in the degree of passivity vs the degree of aggression, so the positive vs negative angle was best instead of absolute values.'
>
> Email conversation with L. Shyers, 20.3.98

Taking a normal North American school-aged population of approximately eight to twelve years of age, Michelson et al. (1983) described an 'absolute value' mean of 13 with an SD of 7 as the general norm. Shyers (1992) found the 'all values' mean for his eight to ten-year-old home-educated sample

(n=70) to be –7.79 and schoolchildren (n=70) as -6.10. Shyers concluded that the schoolchildren were slightly less passive than those homeschooled.

Table 9.1 gives results from five CABS studies including the present one[5]. The present sample's 'all values' mean was -6.11, thus supporting Shyers' finding that the home-educated children were passive rather than aggressive. Using Michelson et al's 'absolute value' approach the UK sample with a mean of 16.11 were far less assertive than Michelson et al's 'norm' mean of 13.

TABLE 9. 1: CABS RESULTS FROM FOUR STUDIES, DISPLAYED WITH PRESENT RESEARCH DATA

Author	Wood, Michelson & Flynn	Michelson, Andrasic, Vucelic & Coleman	Rothermel absolute values	Shyers		Rothermel all values
Year	1978	1979	1999	1992		1999
Country	USA Florida	USA Pennsylvania	UK National	USA Florida		UK
Educated	School	School	Home	School	Home	Home
age	9	8-10	8-10	8-10	8-10	8-10
N	149	90	43	70	70	43
Mean	12.74	12.98	16.11	-6.10	-7.79	-6.11
St. Dev.	8.48	6.47	6.41	5.52	6.92	8.78
Min. Score	no data	no data	5	-21	-28	-30
Max. Score	no data	no data	33	5	11	10

Wood et al (1978) and Michelson et al (1979) are cited in Michelson et al. (1983)

Thus, the UK home-educated sample were less passive than Shyers' home-educated sample and considerably less assertive than either Wood et al. (1978) or Michelson et al (1979).

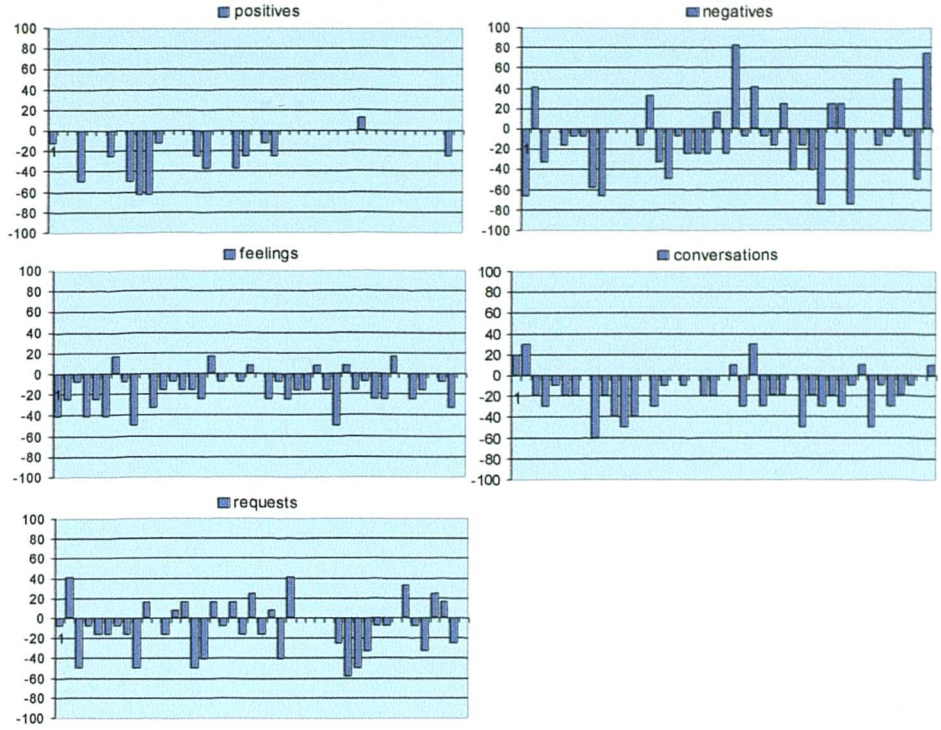
9.1.1 Confidence Interval

Using a confidence interval[6] it was possible to establish whether the means were similar between this study's results and those of Wood et al. (1978) and Michelson et al (1979) and between this study's results and those of Shyers (1992). The confidence interval assessed using 'absolute values' for this research was from 14.20 to 18.03, thus overlapping with Michelson et al.'s (1979) confidence band of 11.56 to 14.39. Shyers' 'all values' confidence band lay between -6.17 and 9.41 and so encompassed the current confidence interval of 8.74 to -3.48. So, the assertion that the UK home-educated sample was, where confidence intervals were used, as passive as Shyers' home-educated children and as assertive as Michelson et al's school children, thus, supported.

9.1.2 Scores by Sub-category

Graph 9.1 provides graphical breakdowns of the UK home-educated children's scores across the five sub-domains when individuals' 'all value' (Shyers 1992) scores were summed[7]. The 5 graphs suggest, by the amount of bars in the negative zones, that overall, the children responded passively.

GRAPH 9. 1: INDIVIDUAL SCORES ACROSS THE FIVE DOMAINS



The 'Positives' sub-category, shows that in situations involving an opportunity for positive expression, the larger proportion of the home-educated children would react with moderation; this can be seen in the high degree of 0 scores, 28 out of a possible 43. Asked about situations involving complaint ('Negatives') there were diverse reactions, ranging from very aggressive to very passive. The ability to make and accept requests was competent, as was the capacity to express their own and understand other's, feelings. The ability to converse ('Conversations') tended towards passivity whilst remaining proficient, assuming that zero was equal to the optimum reaction.

In summary, the domain graphs show that the children coped best where there was an opportunity for positive expression whilst needing, perhaps, to improve their skills in making and receiving complaints.

9.1.3 Participants' Comments

In contrast with the present generally unassertive and passive home-educated sample, one mother of five made the comments quoted below about her school attending child. The two older children now at school had previously been home-educated throughout their primary years, whilst the three younger primary aged children were currently home-educated. The child referred to had completed a CABS questionnaire[8], as had his home-educated sibling. In analysis, the child's responses were aggressive yet unassertive, his overall assertiveness score being 28, where the group mean was 16.11 and the 'norm' 13 (Michelson and Wood 1981). His passive-aggressive score (Shyers 1992) was +6 where the group mean was -6.11. The relevance of the child's score was that he had, up until a year previously, been home-educated since birth. He wrote, in answer to some questions:

> 'Shut up' (4[9]) // 'Say OK, talk quiet and then get noisier' (13) // 'Say nothing and push them out the way' (14) // 'Chin them' (15)'

His mother wrote:

> 'Jak started school in October 1996. Some of Jak's answers would have been different if this had been done *before* he started school especially things like 'chin him'. Sometimes, the social side of school life is with children you wouldn't have anything to do with.'

Despite Jak's mother explaining his responses, analysis revealed his younger, home-educated brother, Ty, to have gained an assertiveness score of 20 and a passive-aggressive score of 10. Thus Ty, though a little more

assertive than his elder sibling, was actually more aggressive. The difference between brothers appeared to be in their vocabulary rather than their actual responses. It was possible that Ty, who during interview had conveyed himself as gentle and considerate, wanted to be like his older brother, and so gave answers that he regarded as socially acceptable. Whilst the family had in the past lived an itinerant life, continuing to have traveller families to stop over on their land, they were, as far as could be ascertained, a gentle family.

However, the idea that schoolchildren were more aggressive was not that of Jak's mother alone; Mrs Bolan wrote of her home-educated son:

> 'George, unknown to me at the time, took the CABS paper to the sports club and said that his research showed that schoolchildren were more aggressive, choosing to call names and saying that if threatening to punch was an option, they would tick that'

In the context of the study at hand, test fallibility arose, not from a question of instrument robustness, nor even from questions over the different forms of analysis employed previously, but from the attitudes of the participants themselves. Some children went out of their way to provide answers that differed from those choices provided. A mother wrote:

> 'We have managed to complete your questionnaire. I must say, I did not like it, but have persevered by allowing our alternative 'f'. Some alternatives were so amusing (to Rick) that I think he chose them on that basis. I expect you'll be able to transpose Rick's

> answers into the choices offered. I valued his willingness to be involved with the project too much to confine him to the choices offered: indeed, his own ideas will surely tell you more about him than the restrictive choices offered (as I'm sure you appreciate). I know it's extra work for you, but you will be able to utilise it better than conformist answers!'

Avoiding the a-e scale, one lad had answered two of the questions in his own words, as follows:

(4^{10}) 'it depends on what I have forgot and who I am talking to'

(24) 'depends what the other person did'

In response to the researcher's request that the child provide answers within the 5 point answer scale, his mother commented:

> 'If you could ask the reason for giving the chosen answer you would get a much clearer picture.'

Analysis of each child's response in detail including their rationale, had been discussed during consideration of the methodology to be used in assessing social skills. It would have been advantageous and illuminating to gather this additional data, but the practicality was that the CABS questionnaire had been chosen as a screening instrument, employed to identify a general pattern amongst a sample of home-educated children. It was not selected as a tool for identifying individual needs. However, as with the other measures used for this research, comments made by participants were

noted for the light they shed on how the group as a whole reacted to the CABS questionnaire.

Rick was not the only participant who had found the questionnaire amusing. Several others did and this could, in part, be attributed to the use of American language throughout the questionnaire, e.g. the word 'dumb' was substituted to read 'stupid', following comments that some children might not understand the word 'dumb'. The other cause of amusement cited by those whose views were invited prior to administration, was that by inviting participants to say what they would do in situation 'X' the youngsters would take this further by jesting over the answers before writing down what they would actually do. Speaking of amusement one mother wrote:

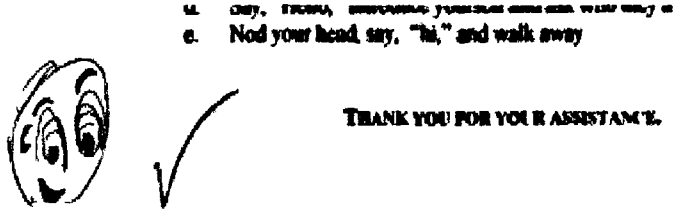
> 'John was very interested and amused to do the questionnaire, so here are his replies:...'

Whilst another family, Jehovah's Witnesses, remarked:

> 'We laughed till we dropped'

One participant, seemingly pleased with himself, simply drew a picture:

IMAGE 9. 1: ONE PLAYFUL PARTICIPANT

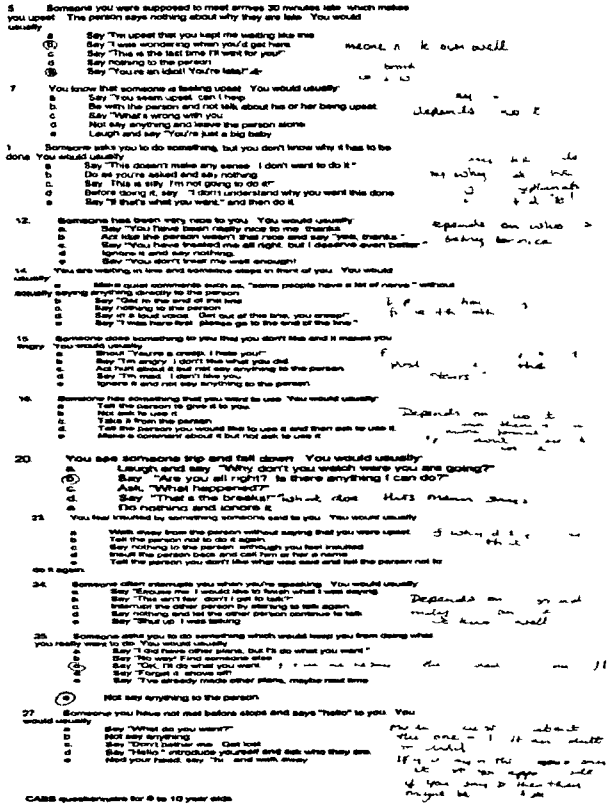


A father spoke of the family's enjoyment with the questionnaire and with the way they had used it to explore the issues further:

'Just half an hour each on their own, asking intimate, trusting, non judgmental, searching questions was really fun. They - and I loved it. Far from very demanding it felt really nice - we could happily do one of these every day.'

The extent to which families did add their comments can be seen below, in Image 9.2.

IMAGE 9.2: ILLUSTRATION OF THE EXTENT TO WHICH PARENTS AND PARTICIPANTS ADDED COMMENTS TO THE QUESTIONNAIRES



One mother, writing about her child diagnosed with Semantic Pragmatic Disorder, wrote:

'I hope I haven't messed this up for you, but as it is not a reading test, I read the first three questions to Danny to explain what to do and later on, at his request, read some more. I did talk to Danny

about being honest, but autistic children have very little, if any, understanding of this concept. In Danny's case this understanding is very literal and does not, to my knowledge, cover hypothetical situations. Danny was, in effect, saying what he thinks the right thing is, rather than what he would actually do. It is interesting that in some cases he would actually say out loud, 'I want c' or 'I want d'. Generally I would say Danny made himself slightly more passive and a lot more socially adept than he actually is.'

The idea of a 'right' answer was also referred to by another mother:

'My partner thinks 'social desirability' may have influenced both of them quite a bit.'

Overall, the results, concurring largely with both Michelson and Wood (1981) and Shyers (1992), suggested that the CABS portrayal of the group was a valid one.

9.1.4 Summary (CABS)

In conclusion, using the confidence interval for reference, the UK home-educated children were as passive as Shyer's (1992) home-educated sample and as assertive as Michelson et al.'s (1979) school sample. Thus it can be argued that the social skills of the home-educated sample represented here did not differ in any important respect from those reported in previous studies.

Overall, CABS appeared to be a robust test of social skills. From the 43 CABS assessed children, 29 had assisted with other areas of this research and aspects of them were known, beyond both the CABS measure and the initial questionnaire survey. Further, the researcher had the opportunity to observe and interact with 25 of the CABS participants in their home surrounding, during interview. It was therefore, possible to say, at least for those 25 children, that the analysis of their social skills according to the CABS concurred with the researcher's personal assessment of their social skills. The child-centred approach of home-education (Rothermel 1998) was perhaps, substantiated by the sample's difficulty with handling complaints and in their marginally higher than the normal level of unassertiveness. Such children may not need, whilst learning at home, to manage conflict to the same degree as schoolchildren do (Sluckin 1981).

9.2 REVISED RUTTER SCALE (RRS) RESULTS

9.2.1 Revised Rutter Parent Scale for School-Age Children

The total number of RRS child 'participants' was 42; 22 girls and 20 boys, aged from five to eleven-years-old with a mean age of 7.1 years. The RRS asks parent raters to respond on a 3 point scale to 50 statements that might apply to their child, such as, 'Cries easily'. The scores allotted are '0' for 'does not apply, '1' for 'applies somewhat' and '2' for 'certainly applies'. Specified items categorise into 5 groups, the main one being 'Total Difficulties', where the score range is 0-52. The other 4 categories and score ranges are, 'Emotional Difficulties' 0-12 (5 statements); 'Conduct Difficulties' 0-12 (5 statements); 'Hyperactivity/Inattention' 0-6 (3 statements); and

'Prosocial' 0-20 (10 statements). Parents reported on their child's behaviour during the previous three months.

Table 9.2 shows the mean scores for the children across the main 'Total Difficulties' and sub-score systems. The cut-off point for 'Total Difficulties' was 11, with the inference that any person with a higher score experienced behavioural difficulties. The home-educated sample mean of 8.38 was well below this level.

TABLE 9. 2: COMBINED MEAN SCORES FOR THE FIVE DOMAINS OF THE RRS (N=42: AGE 5-11 YEARS)

Domains	Total Difficulties	Prosocial	Conduct Difficulties	Emotional Difficulties	Hyperactivity /Inattention
Mean Scores	8.38	15.5	1.69	1.80	1.21
Max.Score Possible	52	20	12	12	6
Max. Scored	24	20	6	5	5
Stand. Dev.	5.17	3.24	1.63	1.68	1.38
Cut-off point	11	N/a	N/a	N/a	3
Participants above cut off	10	N/a	N/a	N/a	4

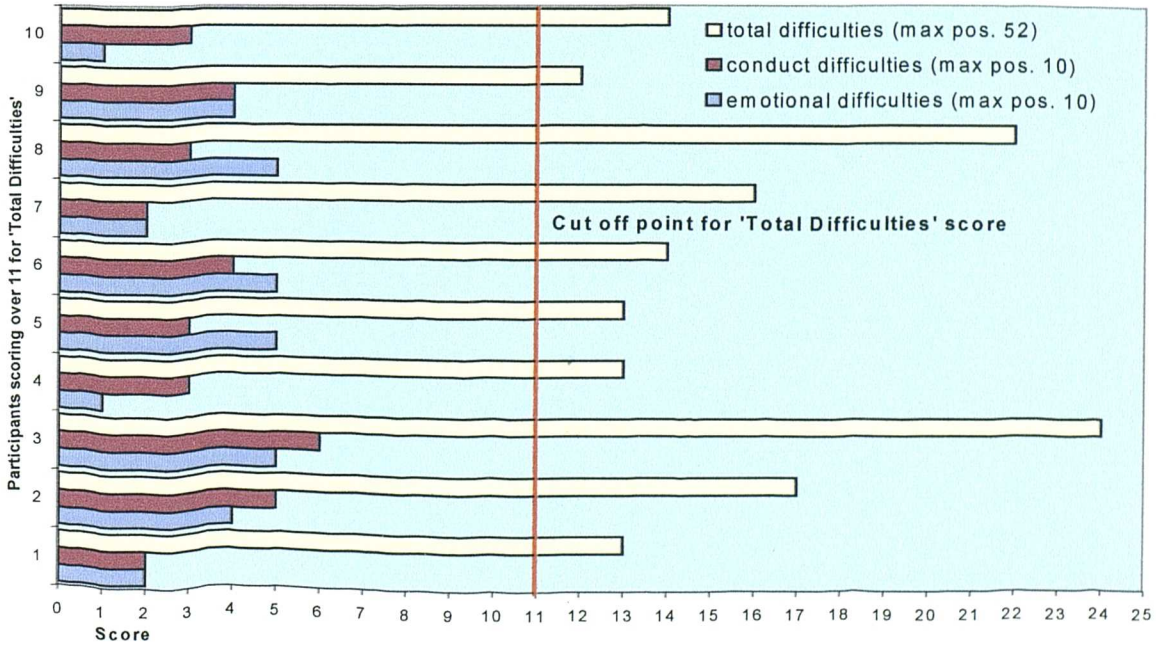
Ten home-educated children (23.80%) scored above 11. Where this happens, the area of specific difficulty is defined by the child's highest score in either the 'Emotional Difficulties' or 'Conduct Difficulties' domain (Elander and Rutter 1996). Four children scored above the 'Hyperactivity/Inattention' cut-off point of 3 (Elander and Rutter 1995) and of these, three had also scored over 11 points on the 'Total Difficulties' scale. Examples of difficulties defined by the RRS in each of the 3 difficulty domains are provided in Box 9.1.

BOX 9.1 RRS DIFFICULTY DOMAINS

Domain of Difficulty	RRS Item
'Emotional Difficulties'	• Cries/ refuses to go to school (a zero score unless withdrawn) • Often worries • Often miserable, unhappy, tearful, distressed • Fearful/afraid in new situations • Often complains of aches & pains
'Conduct Difficulties'	• Tells lies • Bullies • Disobedient steals • Fights or quarrels with other children
'Hyperactivity/Inattention'	• Restless • Fidgets • Cannot settle

Graph 9.2 represents the grading of the children with 'Total Difficulties' scores exceeding 11 points, together with their scores in the 'Emotional Difficulties' and 'Conduct Difficulties' domains. The graph shows that for three children their difficulties lay in the 'Emotional Difficulties' domain, whilst for another four they lay in the area of 'Conduct Difficulties'. A further three children displayed undifferentiated behavioural difficulties.

GRAPH 9. 2: 'TOTAL DIFFICULTIES' SCORES COMBINED WITH SPECIFIC DIFFICULTY SCORES (N=10)



Of the ten children represented in Graph 9.2 with a 'Total Difficulties' score over 11, six were from three families. Two of the children with 'Emotional Difficulties' had been withdrawn from school within the previous six months, whilst another child had been described by her parents as having a very high IQ and another had been diagnosed as having special needs within the autistic spectrum. All ten of these children had been interviewed for this research. Of the three families with two child participants each, one family was a one parent [father] family, the second lived a 'New Age', itinerant (inhabiting a variety of houses) lifestyle and the third family moved often owing to the father's work and he, in turn, was suffering from depression[11]. It was thus possible that the difficulties reported in the children may have been a response to the problems in the family.

Whist it was not surprising to find that the two children with SENs (autistic and gifted) were classed through the questionnaire as exhibiting difficult behaviour, it was unexpected to find the other 8 children so classified: their behaviour during interview had given no such indication; for example, two of the children from one family were extremely confident and articulate, but perhaps, as was noted during observation, overly so for their parent who had completed the questionnaire. This may have been the case for the other two families who interpreted both their children's behaviour as difficult, since, although to lesser degree, their children were also confident and articulate. The remaining two children, who had been withdrawn from school after experiencing bullying, were also lively and articulate. It was conceivable that the difficulties portrayed by their single parent father revealed more about his

personal difficulties than about those of his children (see Sclare 1997, Section 4.8.1). For the remaining thirty-two children, with 'Total Difficulties' scores of less than 11, their scores in the other difficulty domains were generally low, in keeping with their low 'Total Difficulties' scores.

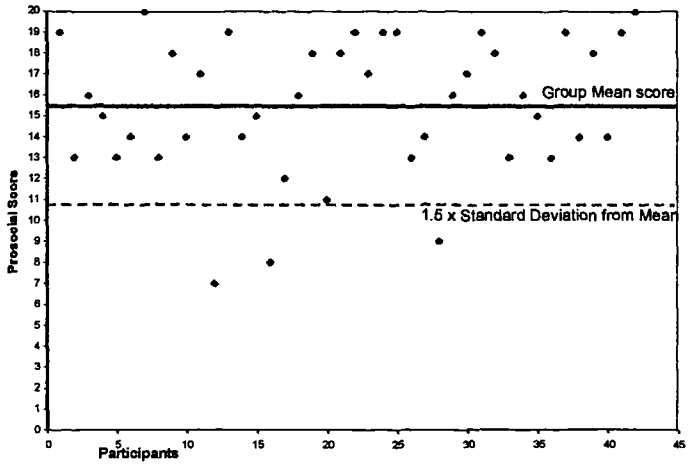
The 'Prosocial' mean score of 15.5 for the group indicated a strong degree of this characteristic amongst the sample. Summarised examples of 'Prosocial' behaviour were (Box 9.2):

BOX 9.2 PROSOCIAL ITEM EXAMPLES

- Fair in games
- Considerate to others
- Helps someone who is hurt
- Volunteers at home
- Kind to younger children
- Comforts distressed child
- Tries to stop quarrels/fights
- Shares with friends
- Helps children who feel ill
- Kind to animals

Graph 9.3 illustrates the children's 'Prosocial' scores. The mean is represented by a thick red horizontal line. A dashed-red horizontal line is drawn 1.5 SD from the mean at 10.7[12] points. Three children (7.1%) fell short, scoring 7, 8 and 9 on the 'Prosocial' scale and 11, 24 and 16, respectively, on the 'Total Difficulties' rating (cut-off point 11). One of the three children had been diagnosed with Autism.

GRAPH 9. 3: PROSOCIAL SCORES[13] (N=42)



Following the above analysis as detailed by the scale's author, the data was compared to that of Rutter et al (1974) as shown by Table 9.3. The RRS question numbers relating to each item are provided in Appendix 9.2.

TABLE 9.3: COMPARISONS IN BEHAVIOUR DIFFICULTIES (IN %), BETWEEN TWO STUDIES USING RRS

Source	Rutter et *al.* (1974)		Rothermel (2001) (this paper)	
Year	1970		1998	
Place	England		United Kingdom	
Informant	Parents		Parents	
Age group (years)	10-12		5-11	
Population	British		British	
Sex	Boys	Girls	Boys	Girls
Number	1564	1500	20	22
Aggressiveness	15.2	5.3	20	22.7
Anxiety	35.4	39.2	25	40.9
Hyperactivity	32.0	25.5	20	18.1
Lying	16.1	9.7	15	0
Nail-biting	28.8	33.1	10	4.5
Phobias	25.2	24.8	0	0
Stuttering	3.5	1.5	5	4.5
Theft	5.7	2.6	10	4.5
Thumb-sucking	6.2	13.0	10	9
Tics, twitches	5.9	2.9	0	0

Table 9. 3 shows that the home-educated sample demonstrated more signs of aggressive behaviours than the schoolchildren from the Rutter et al study, particularly for home-educated girls where aggressiveness was at 22.7% as

opposed to 5.3% for Rutter's girls. This contradicts the CABS data whereby the UK home-educated sample were judged as passive. Table 9.3 also indicates that whilst the home-educated boys were less anxious than their school counterparts, the girls, home and school, were similarly anxious. However, the home-educated sample did not suffer from tics or twitches. Theft amongst the home-educated boys was substantially higher than for the schoolchildren. 'Hyperactivity', 'Lying' and 'Nail-biting' were far less common amongst the home-educated sample than Rutter et al's schoolchildren. The frequency of lying amongst the home-educated girls was 0% contrasting with 9.7% amongst the schoolgirls. Phobias had been expressed by the RRS item relating to a child's fearfulness at new things or new situations and it was particularly notable that whilst 'phobias' were rated zero amongst home-educated children in the sample they had been particularly prominent amongst the school sample. Overall 23.8% of the home educated sample had been above the RRS 'Total Difficulties' score cut-off point and a further 4.7% on it. The norm according to Sclare (1997) was between 10-25%.

9.2.2 Participants' Comments

Some RRS participants wrote their comments on the returned papers, or, in one case, emailed their reaction. These commentaries provided a useful backdrop to the families' approaches in terms of psychological health. For example, there was plenty of evidence of the acceptance within families of imaginary companions. When responding to the item, 'Blames others' Jane Woolas, indicating the presence of imaginary friends, had replied:

'The Nungs!'

The theme of imaginary friends emerged often during this research and will be discussed further in the post-thesis Interview report.

The mother of Jane Moore, aged five-and-a-half-years-old, made several comments. Asked whether Jane was much liked by others she replied:

> 'I sometimes see children who are very 'conventional' in their upbringing shying away from Jane's openness. Generally she is very popular.'

And asked whether Jane helped out at home:

> 'I expect very little of this - whatever comes is freely volunteered'

The statement, 'tends to be on own, rather solitary', was considered one of the 'Total Difficulties' items. In response to this item, Mrs Moore said:

> 'Plays loads and loads with other children. Very occasionally wants to be alone and gets that space easily, then goes back to playing intensively'

Answering the item, 'Is often disobedient' she wrote:

> 'Doesn't get corrected'

On the subject of theft within the last three months, Mrs Moore replied:

> 'Only one occasion'

And on her daughter's attempt to prevent quarrels or fights, if at all:

> 'More in the role of 'defending' younger children - if she knows them well. Generally keeps well clear of conflict.'

Referring to tearfulness or fear at new situations, she replied

> 'No more than I see as healthy'

Final general comments from Mrs Rook and Mrs Moore respectively were:

> 'This would have been much easier using a continuum rather than 3 discrete categories'
>
> 'Sitting at the kitchen table filling this form in - I've found it confusing at times. Gary suggested notating it. Hope that's useful. If not - ignore it. The other form was easy!'

A mother, whose children scored above the 'Total Difficulties' cut-off point, commented:

> 'I hope this is useful. I shall look up Rutter and find out what it is all about. The questions are very hard 'Often tells lies' What sort of question is that? If I say DNA[14] he would be a paragon. If I say CA he would be unliveable with, so it has to be AS. I suppose it is designed to make us make awkward choices. And yes, I recognise that some of the questions seem to come up with contradictory answers!'

What all these comments indicate is the complexity involved with placing children's behaviour onto a three point scale, or indeed, any scale. Whilst the scale results provide a clear-cut portrayal of the group's behaviour, the comments highlight the complications involved, on an individual basis. Normally, such rating scales might be both parent and teacher completed so that comparisons can be made. However, with home-educated children no such corroboration of behaviour, as determined by those familiar with the child on a daily basis, can be made.

9.2.3 *Summary (RRS)*

The percentage of children identified as exhibiting a behavioural difficulty of some kind, was at 23.8%, marginally higher than the 22.3% prevalence found amongst a pre-school sample by Thompson et al. (1996); more than the 10% of ten to eleven-year-olds said by Rutter et al. (1970) to have shown signs of behavioural problems and greater also than the 18% found by Minde in 1977 (cited by Elander and Rutter I996) to have behavioural problems. All these samples were apparently 'normal' and the problems identified ranged from mild to severe. Rutter et al. (1975), however, with their inner city London sample of children from West Indian backgrounds, found at 25%, a prevalence exceeding that of this study. Nevertheless, just over 76% of the home-educated sample were rated as normal and on the 'Prosocial' scale, 93% scored as 'normal'. Overall, it was found that the home-educated sample exhibited far fewer behavioural problems than those represented in Rutter et al.'s (1974) London sample. Placing aside the 4.7% of home-educated children who were borderline cases, then 71.43% of the sample demonstrated their behaviour, according to the RRS, to be within accepted parameters. Parents generally found it difficult to categorise their children's behaviour and because the children were home-educated there was no way of cross checking outcomes with teacher ratings as there might have been had the children been in school. Previous literature however, suggests a low parent to teacher rating overlap (Rutter, Tizard and Whitmore 1970).

9.3 STRENGTHS & DIFFICULTIES QUESTIONNAIRE (SDQ) RESULTS

9.3.1 SDQ Overview

The 25 SDQ items are divisible into six categories. The main category is 'Total Difficulties', requiring summation of all the 'difficulty' items. There are four 'difficulty' sub-categories; 'Emotional Symptoms Scale'; 'Conduct Problems Scale'; 'Hyperactive Scale'; 'Peer Problems Scale'; and one further sub-category giving the 'Prosocial Behaviour Score'. Earlier research, Goodman (1997) identified the percentages of children expected to fall into each of three score bands, 'normal', 'borderline' and 'abnormal'[15]. Table 9.4 provides the percentages of the home-educated children whose behaviour, as interpreted by their mothers, placed them into each of these three score bands. Underneath the three score band headings are the percentages of children who would normally be expected to be within each score band. Where the percentage of home-educated children was larger than expected, the amount has been highlighted in a bold font.

TABLE 9. 4: PERCENTAGES OF INDIVIDUALS IN EACH SCORE CATEGORY WHEN VIEWED BY DOMAIN

(n=41)	Total Difficulties	Prosocial	Emotional	Hyperactive	Conduct	Peer Problems
Frequency	%	%	%	%	%	%
Normal (80%)	**92.7**	19.5	**95.1**	**85.4**	**97.2**	70.7
Borderline (10%)	4.9	**19.5**	2.4	7.3	7.3	7.3
Abnormal (10%)	2.4	**61**	2.4	7.3	0	**22**
Totals	100	100	100	100	100	100

As Table 9.4 illustrates, in marked contrast to the RRS results[16], the home-educated children here emerged as mostly 'Abnormal' in terms of their 'Prosocial Behaviour'. The related items were about trying to be nice to

others, sharing, being helpful when someone is ill, kind to little ones and offering to help others. Abnormal here would have indicated less willingness in the these behaviours. Whilst the RRS had contained 10 prosocial items, the SDQ used only 5 and this, together with the type of items chosen, may have accounted for the difference. In terms of the 'Peer Problems Scale', although 70.7% of the children fell into the 'normal' bracket, 22% were termed 'Abnormal'.

In terms of reliability the test identified one child with Asperger's Syndrome[17] as having 'abnormal' behaviour across the board, whilst showing as 'abnormal' three children who, by their parent's estimation, experienced no behavioural difficulties. Moreover, the only fully autistic child[18] in the sample produced a 'normal' score pattern similar to many of the children without SEN.

Whether the assessment was not as efficient as had been reported earlier (Goodman 1997), or whether the sample in question were in some way a 'special' sample, was impossible to determine without further evaluation of a kind not within the mandate of this research. Overall however, the assessment was useful in providing information that supplemented other data presented throughout this thesis.

Advantage was taken of an offer by two parents from one family to independently evaluate the behaviour of their three children[19]. Their data provided an indicator of the level of agreement that might be expected

between parents. There was agreement in all areas other than 'Conduct Difficulties' where the mother placed two children into the 'normal' and one into the 'borderline' band, whilst the father placed all three in the 'normal' bracket. There was agreement in the 'Prosocial' (abnormal), 'Emotional Difficulties' (normal), 'Hyperactivity' (2 'normal', 1 'borderline') and 'Peer Problems' ('normal') categories.

Seven home-educated children, aged 11 years, were evaluated by their mothers and also by themselves[20]. The results are provided in Table 9.5.

TABLE 9. 5 MOTHER REPORTED VERSUS SELF-REPORTED (N=7)

	Total Difficulties		Prosocial		Emotional		Hyperact-ivity		Conduct		Peer Problems	
	% moth	% *self*	% moth	% *self*	% moth	% *self*	% moth	% *self*	% moth	% *self*	% moth	% *self*
Normal (80%)	**85.7**	*85.7*	**28.6**	*42.9*	**85.7**	*100*	**85.7**	*100*	**85.7**	*100*	**71.4**	*14.3*
Border (10%)	**14.3**	*14.3*	**28.6**	*0*	**0**	*0*	**14.3**	*0*	**14.3**	*0*	**14.3**	*85.7*
Abnor. (10%)	**0**	*0*	**42.9**	*57.1*	**14.3**	*0*	**0**	*0*	**0**	*0*	**14.3**	*0*

Table 9.5 shows consensus only in the 'Total Difficulties' domain. Most notable of the differences was that represented by the 'Peer Problems' domain where the mothers, in terms of the SDQ rating, perceived their children to be more 'normal' than the children in fact felt themselves to be. In the 'Emotional Difficulties', 'Hyperactivity' and 'Conduct Difficulties' domains it was the children who believed themselves more 'normal' than their mothers had reported them to be. This finding was supported by the conclusion of Ekblad (1990) that mothers were critical of their children's behaviours.

9.3.2 Comparison between the RRS and the SDQ

Copies of both instruments appear in Appendices 4.14 (RRS), 4.15 (SDQ) and 4.18 (comparison of RRS and SDQ items). A sample of twelve children participated in both the RRS and SDQ, four of these also having completed a CABS questionnaire.

Amongst eleven of the twelve children there were no 'Total Difficulties' scores over the cut-off point on either the RRS or the SDQ. One boy's RRS score, however, fell upon the RRS cut-off point, whilst his SDQ score lay within the borderline category. The one child identified by the SDQ as having behavioural problems was also one of those identified as such by the RRS. Therefore, 'Total Difficulties' interscale reliability, in respect of these twelve children, was 100%.

A review of the RRS results in the 'Prosocial' area, however, revealed that only two of the ten children with a good 'Prosocial' score[21] on the RRS had scored as 'normal' on the SDQ. Five children were deemed 'abnormal' on the SDQ whilst having achieved good to high 'Prosocial' scores on the RRS. Just one child whose score was 'abnormal' on the SDQ had scored more than 1.5 SD's below the mean on the RRS. It appeared, therefore, that in the 'Prosocial' domain, interscale agreement may have existed in only three cases out of twelve. The SDQ identified a further four 'borderline' cases, however, and these could not be compared with the RRS where no such band had been calculated. Further, an analogy between scales over the

SDQ 'Peer Problems Scale' could not be drawn since this domain was not identified by the RRS.

Apart from there being fewer statements to consider throughout the SDQ than the RRS, some of the items may have triggered different responses, discussed below, to those expected by the scale's author. This being so, the reduction in items could have adversely affected the outcome of this scale. The concept of sharing for example, cited in the 'Prosocial Scale' was an issue raised often during the interviews, many parents viewing sharing as maturational rather than taught. Home-education it seemed, created an environment whereby such development could unfold 'in its own time', thus it was found that many of the children did not share their toys until far later than one might normally see in children who attend nursery or school. The same theory was occasionally voiced when speaking of the amount of assistance expected of the children; a comment to this effect was given in the section on the Revised Rutter Scale (see p. 23). This was not to say that all families followed such a philosophy, but the inclusion of those who did, may have led to the lower scores for these items than was anticipated by Goodman (1997).

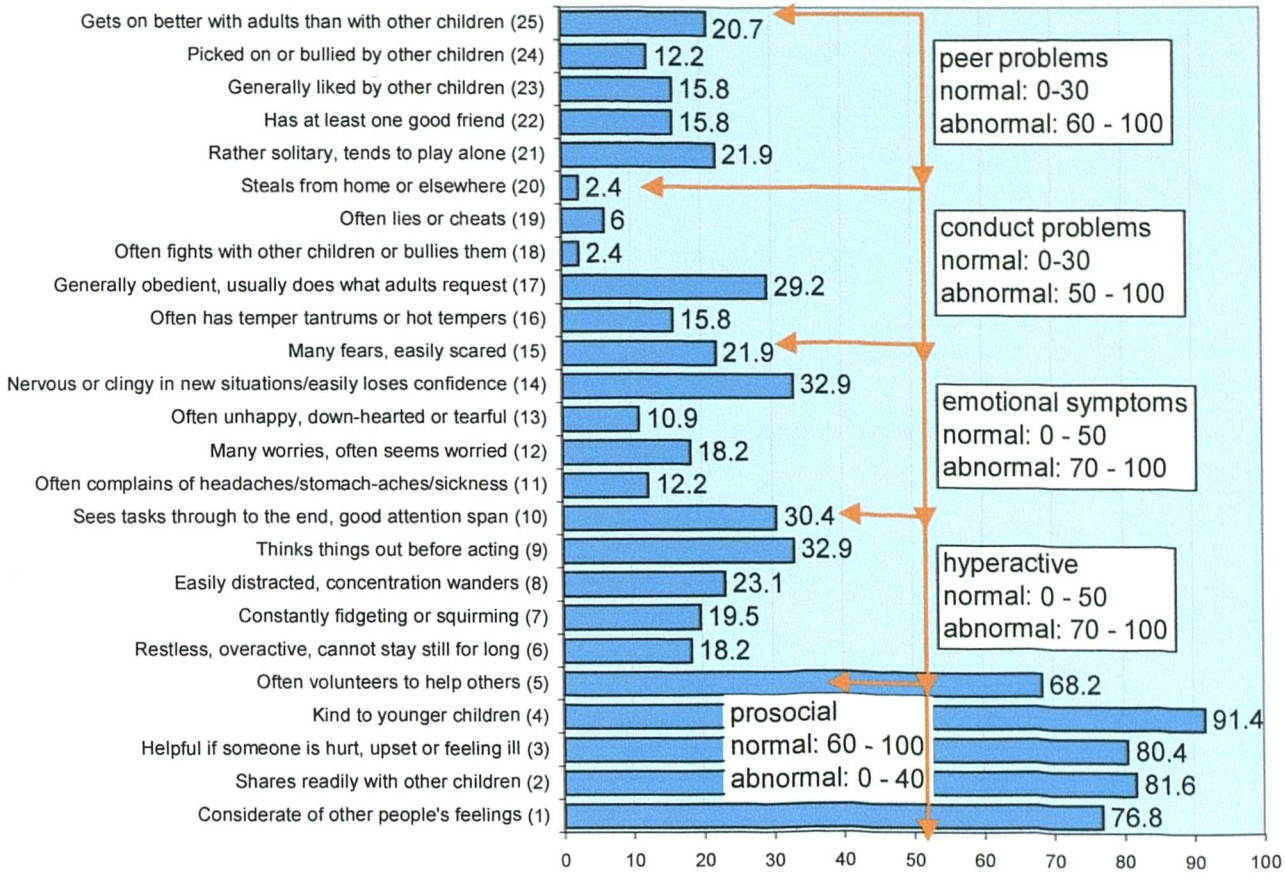
The 'Peer Problems Scale' reinforced other issues that had emerged during the interviews. For many home-educating families, the child that was 'solitary' and tended 'to play alone' was a desirable child: having one good friend may not have been considered essential, particularly in larger families: being 'liked by other children' was not particularly important for many

families, particularly where there were a number of siblings. Finally, for many home-educated children, more so, perhaps, for single children, getting on 'better with adults than with other children' was an everyday reality and was often viewed by families as an asset enabling their children, unlike schoolchildren they knew, to exude confidence in all types of company.

9.3.3 Further analysis of the SDQ

Graph 9.4 provides information about how the group answered each SDQ question[22]. The method used here to analyse the data is contentious and serves only to illustrate how the results appeared when, instead of taking the child as the unit of analysis, the group are used. The bar chart values refer to the group's overall score out of a possible 100 marks for each question; thus, for item 25[23] 'Gets on better with adults than with other children' the group scored 20.7 marks. Boxes to the right of the bars note the banding values for each domain[24]; the 20.7 for item 25, fell therefore, within the 'Peer Problems Scale' 0-30 'normal' banding.

GRAPH 9. 4: SDQ SCORES GIVEN AS MARKS OUT OF 100 WITH EACH ITEM, FOR THE WHOLE SAMPLE COMBINED (N=41)



What is interesting about Graph 9.4 is that, unlike Table 9.4 above, it shows the children as a group, to have fallen within the 'normal' band for each domain. Table 9.4 represented the children as measured individually, so that where a participant had scored, for example, 'somewhat true' for all five items, their score would have been 5 points and therefore, 'borderline'. However, if those marks were then combined with those for all the group's responses to that question, whereby a number of participants may have scored between 6 and 10 points, this 'borderline' response would have been absorbed into the group's answers, as a whole. Since the SDQ was chosen for its value as a screening instrument and also because of the interest in the

group's inclusive responses, the system of evaluation used in Graph 9.4 is substantiated.

The score for item 25, 'Gets on better with adults than with other children', though within the 'normal' banding was relatively high, as was item 21, 'Rather solitary, tends to play alone'. As indicated above, this was, perhaps, to be expected, given the sample. The same might also be argued for item 17, 'Generally obedient', where the group score lay only marginally within the 'normal' band: some families might have believed that by following their child's lead, the need for obedience was reduced in proportion to the corresponding lack of disobedience. One parent during interview had remarked, when asked about punishment:

> 'We do not order our child to do anything, therefore, he cannot be found wanting in obedience.'

A final comment on the SDQ came from a parent whose two children had participated, one with the RRS and one with the SDQ:

> 'Here is Janie's life on the line. Perhaps it's a good idea that the questionnaires are different so I don't go about comparing them, but I do any way. I've tried to be honest but I wonder how much painting over the cracks goes on, not just for me but for everyone talking about their children.'

9.3.4 Summary (SDQ)

Although the percentage of 'Total Difficulties' identified by the SDQ and the RRS, differed substantially overall, there was 100% agreement in the cross-scale sample of twelve children. In the 'Prosocial' domain, the SDQ differed significantly, both overall and within the cross-scale sample from the RRS. Socially, the SDQ found 61% of the home-educated children to exhibit 'abnormal' social behaviour, whilst only 7.1% of the RRS sample were thus identified. The SDQ 'Prosocial' and 'Peer Problems Scale' portrayal of home-educated children as lacking socially, very much reflected some of the views provided in Chapter 3 Section 3.4.2 (i.e. Shearer 1999; Hastings 1998) and it was easy then, using scales such as the SDQ, to understand how such sentiments could arise, the point being, that diagnosis is definition dependent.

The home-educated sample had been assessed as 'normal' by CABS analysis of their social skills where such skills have been interpreted by Michelson et al. (1983) as encompassing social behaviour, assertiveness and social competence. However, the Rutter and Goodman instruments (the Goodman questionnaire in particular) appear to take a different approach to social behaviour in that their focus is more on socially acceptable behaviour, ie. behaviour accepted as the 'norm' by school-going society, and this becomes clear through the items included in these instruments. Whilst the Rutter Scale items are broad in scope, the shorter Goodman questionnaire offers, it appears, brevity at the expense of diversity. Judging from the interview data, a number of the Peer Problems and Prosocial items were, for

the home-educating families, controversial insofar as the way in which the scores were awarded. The values of the home-educating families differed from those generally expected of school-educating families, where concepts such as sharing, playing in groups and being popular, are vital to the school ethos. Nevertheless, according to the SDQ, whilst home-educated children appeared 'abnormal' in some categories, as a group they rated as 'normal' and actually made up a larger 'normal' sample than Goodman would have expected (92.7% as opposed to the expected 80%).

Overall, the number of participants taking these social and psychological assessments was small. The three instruments provided for analysis from three 'points' (see Section 4.3) and as such assisted in providing a general view of the cohort. Whilst the RRS and SDQ were parent-rated and focused on children aged 4 to 11 years, the CABS centred on 8-10 year olds and was child-rated.

Social and Psychological Endnotes

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[1] See Chapter 4, Section 4.8.2 for a breakdown.
[2] There was for children over 11 years of age, a self-rated SDQ .
[3] They had either been interviewed, completed an academic assessment, or both.
[4] See Appendices 4.13 (questionnaire) 4.16 (categories) 4.17 (items by category).
[5] The UK sample included a child with an IQ 'in excess of 200' and another with Semantic Pragmatic Disorder.
[6] The 'confidence interval' is the result of a statistical test that provides a band either side of the mean (a 95% probability range), within which the 'true' scores can be said to fall. Equation is: Standard Error (divide SD by Sq root of n) x 1.96 and + or - the mean = confidence interval. This band allows for factors that may have affected the participant on the assessment day.
[7] See Appendix 9.1 for max./min. possible ranges and actual range produced by this sample.
[8] The schoolchild's results were not included in the main analysis.
[9] Question numbers are provided in brackets and can be matched with the questionnaire provided in Appendix 4.13.
[10] Questions are provided in Appendix 4.13
[11] as described during interview.

[12] 1.5 SD was selected as a 'Prosocial' cut-off point to create an analogy with the SDQ 80% normal band, which itself represented 1.5 SD from the mean, assuming a normal distribution (Kennedy 1983).
[13] With a line at the mean (15.5) and at the 1.5 x SD (SD) (4.8).
[14] DNA does not apply, CA certainly applies, AS applies somewhat
[15] These are the terms used by Goodman (1997)
[16] Using the RRS, the children's mean had been 15.5 from a total possible of 20 for their 'Prosocial' behaviour. The marked contrast between the children's scores on each instrument appeared to emphasise how subjective such assessments can be and that definitions of 'normality' depend upon the interpretation given by the instrument's author.
[17] This child had a Statement of Educational Needs.
[18] This child had a Statement of Educational Needs.
[19] Only the mother's evaluation was included in the main sample.
[20] Only the mother's evaluation was included in the main sample.
[21] Over one SD above the mean average.
[22] The group's score on each question was summed to provide a score out of a possible 82 (max 2 marks/question (participant: *n*=41)) and standardised to a mark out of 100. Bandings were calculated by taking the score band upper or lower limit, multiplying by n=41 and dividing by 5 (5 items/domain) before standardising to a score out of 100. These score bandings agreed in number with Goodman's bandings x 10.
[23] These item numbers do not relate to the SDQ numbering system.
[24] The 'borderline' band is missing since this can be easily calculated from the 'normal' and abnormal banding information.

CHAPTER 10: DISCUSSION

10 DISCUSSION: OVERVIEW

The first five sections of this discussion each relate to one of the earlier results chapters. Section 10.1 discusses the questionnaire data (Chapter 5) and also provides an overview of points raised during home visits which assist in placing the discussion in context. Section 10.2 reviews the PIPS Baseline assessments (Chapter 6), 10.3 Literacy (Chapter 7), 10.4 Numeracy (Chapter 8) and finally Section 10.5 considers findings from the Social and Psychological Skills assessments (Chapter 9).

10.1 QUESTIONNAIRE DATA:

10.1.1 HOW THE DATA COMPARED WITH PREVIOUS RESEARCH

This study found a considerable distinction between the North American 'homeschooler' (Gustavsen 1981; Gladin 1987) and the UK home-educator. UK home-educators were more likely to be town dwellers and were less formally 'educated' than their North American counterparts; families in the UK were less likely to have access to learning resources and although often religious, such families were, perhaps, less orthodox than in the USA. Of the US samples, Rakestraw's (1988) 'homeschooler' (see Section 2.1.1) most resembled the UK home-educators in that most of Rakestraw's families followed some kind of plan, made use of various resources, used mixed learning and teaching techniques and assessed their children continually through informal observation. A notable difference between Rakestraw's homeschooling family and the UK home-educator was in the more traditional style of the US families whereby fathers were the main breadwinners (in the

UK sample this often started as the model but then over time wage roles split as parents moved into part-time work), mothers undertook their children's education, homeschoolers were generally affluent, religious, made far more use of formal assessment than their UK counterparts and harboured expectations that their children would attend university. The three main reasons for homeschooling in the US also differed from the UK: in the US reasons given were; because parents considered it their responsibility to educate the children; to avoid negative peer influences (parents and children) and to control the instructional materials used. In the UK, the main motivations were freedom and flexibility so that children could learn in their own style and the family could maintain a close relationship with time together.

The current questionnaire did not include a question relating to income, nevertheless, based upon this researcher's familiarity with home-educators in the US and in the UK where the majority of UK home-educating families were in socio-economic Class II or below (Rose and O'Reilly 1998), it was possible to surmise that UK home-educators were generally less affluent than their North American counterparts. Ethnic minority home-educators in the present study appeared, prima-facie, to be in the minority (as they are in the US), although a glance through surnames and a review of the field-notes, indicated that whilst ethnic families were in the minority, mixed ethnicity families were relatively common. However, the absence of fully Asian families in the sample may well have concealed substantial number of such families who chose to keep their children at home (Rothermel 2000).

Home Education Advisory Service (1999, p.3) described home-educating families who home-educate from birth to be, 'very much in the minority'. However, although the research at hand found that only 27.57% of the school-aged children in the study had been home-educated from birth, a further 20.56% of the children in the survey (n=1,099) were pre-school age and 84% of their parents said they were planning to home-educate. In comparison, 25.53% of children had, at some point, been withdrawn from school. A common pattern appeared to be that most families withdrew a child from school but then home-educated subsequent children from birth. Having gained initial support from an organisation, such families were less likely to rely thereafter on organisations; thus, to say that 'from birth' home-educators are in a small minority is, according to the findings of this research, a distortion of the facts. This study found that the popularity of home-education was based equally upon poor experiences with schools (30.77% - perhaps including most of those 25.53% who had withdrawn their children) and family lifestyle (29.17%); however, bearing in mind the percentage of families that had earlier sent their children to school, Mayberry et al.'s (1995) observation that the home-education movement's expansion was a response to growing dissatisfaction with school education was, perhaps, either directly or indirectly, the case in the UK also, where such concern was partnered with a increasing sense, for many, that they had a choice: this was evident from the number of families who were home-educating siblings after withdrawing one child.

In terms of motivation (Section 5.4) to home-educate, this study concurred with the 1983 findings of Grant (Webb 1990) and, to an extent, with the Scottish studies by Paterson (1995) and Brunton (1996). Brunton's (1996) Internet related findings mirrored the finding here, that computer technology, whilst useful to home educators, was not yet a leading motive behind the growing interest in home-education, but rather a useful post-decision support tool.

The motives for home-education given in this study, reflected some of the Gustavsen's (1981) findings, despite his conclusion that 'moral issues' was the most popular motivation to home educate, which here, was listed by just 13.14%. Mayberry (1988) had found the larger proportion of home-educators to have been motivated by religion, whereas here, 'religion' featured exclusively only amongst 4.17% of responses. So far as religion was concerned it appeared that religious families did not home-educate as a consequence of their religious convictions, but rather because the type of person who was religious was also the type of person who was likely to home-educate; this conclusion was supported by the study's interview findings besides reflecting Mayberry's (1988) conclusion that 'new-agers' and religious families home-educated for similar reasons, i.e. wanting to take control over their lives.

Participants in this study stating that their children had special needs numbered 22.54%, contrasting with 19.87% of parents who cited 'special needs' as a reason to home-educate. Questionnaire commentaries and

interviews with families of such children indicated that, often, they home-educated because of a family philosophy that would have led to home-education regardless, particularly, it seemed, where a child experienced mild difficulties such as dyslexia. Significantly, asked what home-education meant to them, not one family mentioned 'special needs', indicative, perhaps of the way that initial motivations were sidelined as the families found other benefits of home-education (Appendix 5.3).

Almost half the families in the sample said that home-education was not as they had expected (see Section 5.6), adding, in most cases, that it was either far more rewarding, far more demanding, or both. Although only a very small percentage of respondents said that their children had not turned out as they had anticipated, casual conversations with home-educating parents suggested this was a fairly common view. One home-educator with grown children told how, despite having 'given' to her children in every way she thought best, she could see that in retrospect, the children were destined to be who they were, regardless of her efforts to affect their development. Meighan's (1995) idea that home-education worked well was vindicated by the absence of negative questionnaire comments from parents in this study, some of whom, as the field-notes showed, were experiencing difficulties.

There was evidence that flexibility was much valued by parents and this came across, not just in the question relating to 'meaning' but in parents' descriptions of their routines, formal or informal. It appeared that in even the

strictest families, learning followed the child's and parents' interests and although families did not always move towards the unstructured routine inferred by Webb (1990), Meighan (1995) and Thomas (1997), they did, as these authors also suggested, adapt to their children's changing needs. It was hypothesised that the more formal parents were those following the National Curriculum (Appendix 4.2 Question 11), whereas in fact, the converse appeared to be the case; it was the more confident parents (either formally or less formally educating) who shunned the national curriculum, while those parents wary of being under the watchful eye of family, neighbours, LEA inspectors etc. tended to follow the National Curriculum, or at least keep it in mind. Such parents might, perhaps, be classified as Blacker's (1981) 'compensators' (see Section 2.2 - 'compensators' were parents who were trying to compensate for school). The findings contrasted with those of Gladin (1987); for example, here, the 'academic' day was generally no more than 2-3 hours, as opposed to the US 6.6 hours, and although religious families often tended towards routines, they were often very child- and family-centred, consistently conscious, it seemed, of the importance of 'family' and of fitting their religious agenda around the children's own interests, perhaps thus ensuring that the children's adherence to more formal aspects of their education would be maintained. Petrie (1992) had cited one LEA as believing that the religious families tended to pursue structured learning, however, although this may be so, there was evidence in the questionnaires of both these and other families of, 'letting the inspector see what he wants' but then returning to their own idiosyncrasies once the door was shut[1]. Science and Maths, contrary to what this author

had anticipated (Appendix 4.2 Question 12), did not present major problems for the families. Parents in a considerable number of families were very confident of their own expertise in these areas and as Meighan (1995) reported, home-educating families adapted well to these areas of learning. Upon attaining levels of learning where specialist resources were needed, children tended to attend local colleges, having also reached an age where attendance was possible[2]. What was surprising was the minimal use of the computer for Maths and Science at a time when computer technology is thought to be leading the way to home-based learning for all (Hargreaves, 1997). Likewise, it was surprising to find at least 14.23% of families did not own a television.

Reviewing home learning in the families, it was clear that the space to develop non-academic 'intelligences' as described by Gardner (1993) (Appendix 4.2 Question 10) was one advantage of home-education. There was far more room for family activities, discussion, spontaneity. Respondents firmly believed that listening to their children, sharing experiences and involving the children in everyday responsibilities contributed to the children's education and growth in a way that school could never compete with.

There are those, anecdotally, who describe home-educators as abandoning external learning assistance and shunning the 'outside'; however, this study found that over 50% of families used learning support (tutors, dancing groups, sports etc.) and this, combined with the lack of community support

felt by many home-educators, demonstrated a need for home-educators to be involved and accepted by their communities: the majority of families did not choose or relish their 'isolation'. Few families could be described as insular, despite over 25% of the sample saying that they did not mix with other home-educators: many reported that they mixed with other kinds of people, perhaps a reflection of this researcher's growing sense that home-educators did not always get along with each other, often mixing out of duty rather than preference. Isolated or not, families did not generally believe that this was reason enough to [re-]adopt the school ethos they had abandoned, although as the research found (through the interviews), a number of families did succumb to this pressure.

Interestingly, 47.84% of respondents said they did not assess their children, with a further 28.64% reporting using very informal assessment such as discussion and observation. This non 'formal assessment' approach was supported by the findings from the assessment programme used in this research, where one of the overarching conclusions was that formal school style assessment was inappropriate for home-educated children whose learning took a very different pathway to that of schoolchildren.

10.1.2 FIELD-NOTES

As a result of the questionnaire survey, and as a precursor to a follow-up study, some of the families were visited, interviewed and field-notes taken. The following notes summarise the main points raised and provide an

informative backdrop to the research. Where there is specific mention of some families the text attempts to be self explanatory in its reference.

CATEGORISATION OF HOME-EDUCATORS

Insofar as it was possible to classify home-educators this research suggested that they could, perhaps, be classified on four levels; first, as a homogenous group; second as a collection of diverse groups with home-education in common; third, as families; and fourth, as individuals. The difference between this taxonomy and those previously noted is that this classification is by stratum rather than by type.

Level One - A Homogenous Group

There was evidence that the categories of home-educator discussed by Blacker (1981) and Van Galen (1991) (see Section 2.2) existed only in the broadest of terms, the reality being far more complex than that implied by these authors, with families moving between classifications to such an extent that attempts to classify families might be unhelpful. For example, whilst some religious families home-educated, they did not necessarily do so because of their religious beliefs any more than the New Age families could be described as home-educating because of their anarchistic or spiritual leanings. As Mayberry (1991) had inferred, these two groups had in common their desire to have control over their children's education. Families from these groups, and others too, were characterised by a commonality that had often led them into home-education rather than their denominational beliefs. It might be said that what these people had in common was a

concern for the environment, the community and the belief of absolute responsibility in respect of their children. These families might perhaps have differed from those who turned to home-education after trying school, although families who withdrew their children soon after starting school tended to have considered home-education at the pre-school stage. Many families withdrawing older children soon 'succumbed' to the influence of other home-educators, gradually homogenising with them in respect of their new 'social conscience' that extended beyond their parenting role to concern about society and the planet generally. It appeared that home-educators were people who took parental responsibility seriously; this was as applicable to the lady running from social services as for the family who used 'loving discipline' (corporal punishment).

Level Two - Group Differences

Whether various factions would view themselves as having anything in common was a different matter, since a further characteristic of home-educating families was the antipathy they often felt towards one another. At the level of family orientation, differences such as religion or secularism, formal or informal education, Jehovah's Witnesses or Catholics, mattered very much indeed. It was at this point that groups splintered, since membership of these categories was not directly connected to the causes of home-educating but rather came about as a result of families' need for a sense of 'community'; hence religious families who home-educated might have found fellowship at 'open house' evenings and families from more

secular backgrounds often amalgamated at 'EO' gatherings even though the relationships therein might well have been frail.

Not everyone felt the need to belong. The family of a girl (described in the field-notes) who had been in care were not members of any organisation or church: it might be said of them that their strength was in their fight against the way that, as they viewed it, those in authority had victimised them. Some families, as the interviews revealed, may not have been members of a home-education organisation but they did, nevertheless, have other affiliations.

Level three - Inter-family Differences

Within groups there also appeared to be considerable differences. The Thistle family were very different Jehovah's Witnesses from many of their 'brothers and sisters': most Witness families were child orientated whilst the Thistles were more doctrine driven. The Thistles were one of the few families who might be said to have home-educated because of their religion, despite their children having spent considerable time in school before being withdrawn. The secular families likewise, often had little in common with each other: formally educating families conceived their educational responsibility very differently from those who opted for the autonomous approach and whilst both sets may have sympathised with those secular parents who experienced psychological and social problems, they probably shared little mutual ground. Within groups too, there were those who home-educated from birth and those who withdrew children from school, those who

were in conventional families and those who were not, those with older children, those with younger children, those with one or more children in school and those with none. There was some suggestion that traditional parents preferred their children to mix with those from similar family compositions; a secular family with married mother and father might prefer their children to have friends from other such families, religious or secular, at school even, rather than with children from a non-traditional family structure even though they were fellow home-educators. Furthermore, there was a kind of snobbery about who were the 'real' home-educators: hence comments such as:

> 'They aren't really home-educating. They use tutors'

or

> 'Well we hardly have anything in common with travellers! They don't home-educate!'

Level four - Intra-family Differences

Even from the few families visited there was evidence of friction within families, although this was most often between immediate and extended family. Only one family, the Thistles, included children who specifically had not wanted to be home-educated. Many families spoke of periods where one or other family member had preferred the school option. Often it appeared that one or other of the children wanted, temporarily, to try school, but that this often passed. Conversations during home visits, with post-16 year old previously home-educated children of the families involved in this

research, suggested that, younger, they had sometimes felt the need to be with other children quite desperately, but overall were pleased that they had been home-educated and glad that their parents had pursued home-education with them. Webb (1999) and Knowles (1995) also reported similar satisfaction (see Section 2.2).

Nevertheless, there was the father who went along with his wife's decision whilst he would perhaps, have preferred his children to have been at school: the conflict was repressed but nevertheless present. Differences between spouses were common although most often the sceptical parent was persuaded in some manner or other. Further, there was plenty of evidence of problems with grandparents and parents' siblings, who disapproved of the family's decision to home-educate. It can be assumed however, that a number of families currently with children in school also have a parent who might have preferred home education but had been convinced that school was the better option.

Most of the children who were interviewed spoke of their pleasure at not having to be in school. Sibling conflict existed but this was, perhaps, less evident amongst the home-educated children who had been together from birth than within those whose separation from the family had brought them different experiences.

Intuitively, it appeared that those children who had access to large spaces should have been the most content; however, it was surprising to find that

even children living in the most cramped conditions were satisfied, and that space available bore no relationship with the level of harmony within the family. Similarly counter-intuitively, home-educating family structure and lifestyle seemed unconnected with the children's apparent well-being. Being well down the socio-economic ladder did not appear to unduly affect families' contentment with home-education and as the assessment results showed, neither did it affect negatively their academic performance (see Section 6.4.2).

SUMMARY OF POINTS NOTED IN THE FIELD-NOTES

Besides the types and levels of home-educators the other main issues raised concerned alienation from the wider community, a sense of 'searching for something', the way in which families changed over time, 'working' to the school year, and finally, the sheer joy of so many families at their decision to home-educate.

Alienation from the Wider Community

This was a topic that touched most of the families. Non home-educators often looked upon the families as 'strange' and unconventional, often feeling as if their decision to send their own children to school was inherently being questioned. Generally, families complained about the way in which children's out of school activities were geared towards school style learning and the assumption that the children were at school. Families often remarked that they and their children were questioned in the street during school hours and their children were 'tested' by other adults with questions

relating to maths or spelling. Indeed, 'not accepted in the community/isolating' was cited as the main disadvantage to home-education (Chart 5.7). Several parents commented upon the way that group activities for children often began with the leader asking children about their day or week at school, thus alienating the home-educated children who would be singled out by such questions. For traditional families who home-educated the situation was often uncomfortable; however, those families who were also travellers or religious (e.g. where women wore covered heads) or whose parents were lesbian, often suffered criticism from the assumption that they home-educated because of their different life-styles. Despite the many comments concerning alienation however, there were families who believed that they were accepted by their communities and whose children were happily involved with local activities and friendships; indeed, increasingly this seemed to be the norm.

Searching for Something

Families often appeared to be searching for something indefinable. This may have accounted for much of the change seen in some families over time. Most probably this was connected with the families' sense of identity, itself connected with the families' isolation from the community, imagined or otherwise. School life is fairly consuming for both parents and children; there are social events, meetings, school runs, after school events and the PTA; however, without these 'pegs' to arranged family life, some families were faced with a need to fill in the spaces. For some this was attained by joining a religion whilst for others moving to a community resolved the

issues. Searching for child-friends was a fairly consuming occupation as parents often worried about their children's social life - almost 19% of parents believed that their children might suffer socially without parental effort (Section 5.11). Where children were withdrawn from school this was particularly profound as parents worried about their children being 'left out'. Discussions with the home-educated children suggested that this was more a problem for the parents than the children: if the children were lonely they soon adapted and generally appeared to prefer their own company and that of a few friends, to being in school.

From the researcher's home visits there emerged a sense that families were sometimes pursuing an ideal that was neither school nor home-education. Part-time school seemed not to be an appropriate substitute. As the law stands, there is the choice to either go to school or to stay at home. Many families would have preferred a mid-way point perhaps akin to the learning centre model discussed by Rothermel (2000).

Working to the School Year

One of the anomalies found from this research was the extent to which home-educators actually fitted in around the school year. Whilst some families did feel acutely the absence of the school related 'pegs' there were many who could not escape them even if they had they wanted to. Many of the home-educated children had friends in school and so were restricted to playing with them only after 3.15pm. There were families with children both at home and at school and home-education therefore, was necessarily

organised around the schoolchild sibling's day. Home-educated children involved with after school activities - music, swimming, language and dance classes, Brownies, Rainbows, Woodcraft Folk etc. needed to be home from their home-education groups or to have completed their day's activities so that they could attend. It was clear that involvement with so called 'after school' activities was integral to the social life of many home-educated children and itself ensured that they were not isolated. It was the link between home and school-educated children and was often crucial for those home-educated children, in giving them a sense of involvement. The extent to which home-educators were influenced by the school time-table was perhaps hinted at by the 13% of home-educators who described their 'home-education day' as finishing by 3pm (Table 5.7).

This arrangement around the school timetable also applied to amenities that were better used whilst other children were in school, thus avoiding the crowds (ie. swimming, library, museums). Holidays too, were often taken, either during term-time to avoid high season costs or during holiday time to allow the children to meet and enjoy time with other children. After school activities involved half-term and long holiday breaks and this, inevitably, affected the home-educated children's own timetables.

Change Over Time

As families home-educated they often underwent a metamorphosis. Parents who had left school early themselves often found that learning in tandem with their children motivated them to take further or higher education courses

themselves. Others found it appropriate to re-arrange their working lives to enable them to share responsibility for the children. Fathers had more involvement with their children's day to day education and family life than might normally be expected had the children been in school. Flexibility and fluidity characterised many home-educating families as they searched for, tried out and found, a way that suited them. There was also change from home to school: sometimes the children simply wanted to try school and the parents acceded, whilst in other families circumstances altered so that home-education was no longer feasible. Occasionally parents decided that they did not want to continue the commitment.

For some the rate of change was faster than others. Quite conventional families, after deciding to home-educate, appeared to change, sometimes, quite radically, as they became more attuned to their new circumstances. One family when first visited, lived fairly conventionally, in a brick town house: the following year they were living in a community on a huge tract of rural land. The Johnson's became Jehovah's Witnesses, whilst the divorced parents of the girl taken into care, reconciled as a result of their problems related to home-education.

These 'knock on' effects often involved attitudes to childcare and medicine, tending to bring about the questioning of many 'taken for granted' aspects of conventional society. Noticeable, and an example of actual practice, was the way in which home-educators tended towards long-term breastfeeding of their children beyond infancy. This tendency became increasingly apparent

during the home-visits. At time when the WHO and UNICEF recommendations for breastfeeding are that it extends to a period of 2 years of age 'or beyond' (WHO 2000) and the natural age of weaning in humans, is considered to be from 2.5 years, with a maximum of 7.0 years (Dettwyler 1995), but when in the UK 44% of mothers do not breastfeed at all (Office for National Statistics 1995), home-educators were, perhaps, leading the way in child health and in protecting their children against infections through natural means. This finding was not about 'eccentric' home-educators choosing to nurse their children long term, but illustrated the way in which, because the mothers were at home, day-to-day practices altered and the parameters of what was possible broadened. Where parents were not restricted by work and school they could spend more time devoted to the care of their children. It was logical that if a mother was not preparing a child for school or getting ready to 'return' to work, there was no need to wean. Similarly, natural remedies that tend to involve frequent and varying doses throughout the life-cycle of the illness were far easier to administer to a child readily at hand throughout the day. In this respect, some home-educators reported previous problems with their children's schools because of the refusal by schools to administer non-prescription, frequently dispensed, remedies.

On the educational front, there were the changes made by families as they adjusted to the form of learning that best suited them. Some parents expected to become less formal with time, others more formal (see Section 5.6 for supporting evidence): quite often the reality was the converse of whatever they had expected, as children adapted in their own way to their

situation. As Thomas (1998) suggested, the children often discreetly manipulated their daily routine to one that best suited themselves. It was, thus, apparent that within families the children usually benefited from a routine formulated for each individual.

The joy of home-education

This research focused sharply on questions about the details of home-education. This meant that more tangible aspects such as academic levels, socialisation, problems, statistical data etc. were stressed during the research at the expense of the many benefits that families emphasised. Nevertheless, the enthusiasm expressed during the home-visits had been hinted at through the questionnaire with almost 35% saying that they had not realised before commencing home-education that it would be so fulfilling and so much fun (Section 5.6). There was a sense that families on the whole, 'lived' home-education and were extremely content with it, seeing themselves not just as home-educators but as families living a lifestyle of their choosing. This aspect of home-education is important because it highlighted the extent to which home-education was a 'spin off' from lifestyle choices, as opposed to a 'statement' being made by some anti-school lobby. The questionnaire data showed families speaking of learning together about things that matter, the freedom and flexibility that home-education brought them to live according to their own agenda, the sense of doing 'what we want when we want', with children being permitted the space to 'develop naturally' (Section 5.4). Many families valued their closeness and the time to talk and be together. These were aspects of family life that, it seems, often fall

casualty to the demands of everyday life where work, school and material standards overshadow the intimacies of a close and loving family life. The researcher observed children running free, enjoying their life and feeling fulfilled: and not just the children, but the parents also.

10.2 BASELINE ASSESSMENT

The baseline assessment focused on children aged 4 to 5 years in what would have been their Reception Year. This discussion looks at baseline assessment in the context of home-education; the initial 'compulsory education' year in which, according to Tymms et al (1997) children make a 'leap' forward; and the predictive value of such assessments whereby there appeared to be a correlation between attainment and parental attention. The section also discusses the possible reasons for the home-educated children's poor value-added scores, the reasons why children from lower socio-economic backgrounds outperformed their more affluent peers, and finally, the section explores the issues surrounding school starting age and parental involvement.

10.2.1 BASELINE ASSESSMENT IN THE HOME-EDUCATION CONTEXT

Baseline testing is used to assist in the planning of children's learning and the measurement of their future progress. In the context of home-education, however, there are two ways to consider this. First, at home children's learning was generally not 'planned' in the way it might be in school, particularly at this early age and parents appeared not to think in terms of 'future progress' but rather of allowing the children to learn at whatever pace

suited them. Second, with regard to assessing children's prior learning, the results suggested that the scope of the assessments was too narrow to be able to gauge, in any useful way, the extent of the children's knowledge and experiences. This narrowness might well apply to some extent with both home and school educated children. However, it was clear from the tests that there was an assumption about what children already knew, or should know, and it is likely that this was based upon what the test designers knew about most children's pre-school environments, that is, playgroup, playschool, pre-school. The home-educated children were different because so many had not attended formal pre-school settings and therefore, their experience prior to the baseline testing was, for many, very different from that of the schoolchildren. It was clear therefore, that in view of the individual and idiosyncratic learning experiences of the home-educated children, the assessment alone would not have been particularly useful to gauge the home-educated children's 'pre-school' knowledge.

The children's excellent scores on the PIPS 'Reception' assessment masked their diverse skills. In this respect the message conveyed through the assessment procedure was very much in agreement with the conclusions expressed by Tizard and Hughes (1984) who found that the work of early years teachers was limited by lack of knowledge about the children at home; the conversational input of the children, for example, was often meaningless to the teachers in the absence of knowledge about the children's home life. The situation they describe reflected that found from this assessment, namely that very little was revealed about what the children did and did not,

know: the test focus was so narrow that the results data, whilst of interest to this study, was of little significance in respect of individual children. There was the skilled fiddle player with all the cognitive development that such a skill entails, whose vocabulary score was limited by not having encountered the word 'violin' and whose reading scores were poor, despite the competence of the child in reading music: there was also the child who could type, but who lost marks because his fluency was with uppercase letters. There was a poor rhyming score for the child who would not rhyme to order but whose expertise at rhyme bordered on the expert: and the children who failed tasks simply because of not understanding the language of the assessment or the inferences being made by the procedures. All manner of skills went unrecognised by the test, the designers of which, like Tizard and Hughes' teachers, had no prior knowledge of the children being assessed. The 'End of Reception' assessment was based upon the prior knowledge that schoolchildren ought to have amassed by that point in their educational career; however, for the home-educated cohort, none of whom had followed the path of the school style curriculum, the latter assessment was substantially more different from their learning than the initial assessment had been. The difference between the mathematical components of the 'Start' and 'End of Reception' assessments was, for the home-educated children, startling: they were unable to see continuity between the two assessments, one involving covering up one bike etc. (Image 10.1) and the other more formally laid out (Image 10.2). Schoolchildren would have been submitted to a smooth transition between styles over the course of the year.

IMAGE 10.1: MATHEMATICS AT THE 'START OF RECEPTION'

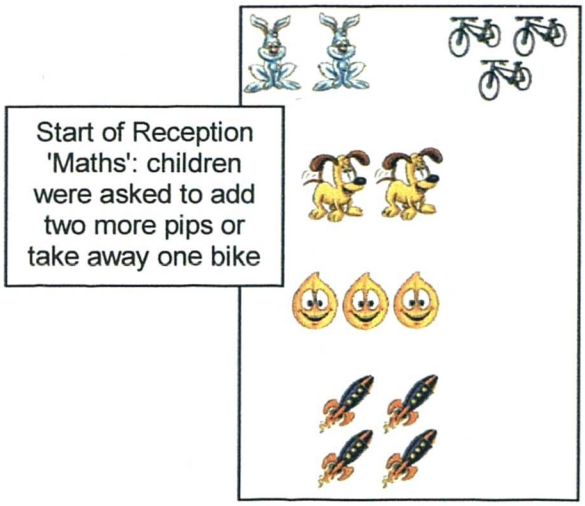
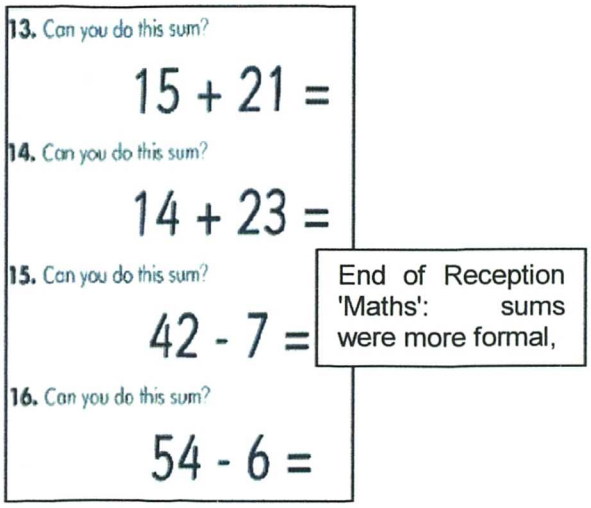


IMAGE 10. 2: MATHEMATICS AT THE 'END OF RECEPTION'



A further factor, one which in effect penalised the home-educated cohort, was that at the 'Start of Reception' they had performed especially well, with most children able to complete the set tasks. This meant that 10 months later the home educated sample had very little, if any, of the 'Start of Reception' assessment to 're-do', before being presented with the second, differently constructed, 'End of Reception' assessment[3]. Most schoolchildren, however, having performed less well, were 'treated' to a re-

run of the first, colourful and attractive assessment, many not completing very much of the second assessment at all. There was considerable difference, for the home-educated children, between having to point to the one word from a choice of four, that matched an accompanying picture (Image 10.3) and having to read a nonsense sentence such as, 'Nightmares are something I don't dream about' under a picture of a cat (PIPS 1998e), as illustrated in Image 10.4, below. Thus, whilst at the 'Start of Reception' the assessment was pretty much equal for both home and schooled children, by the 'End of Reception' this had dissipated, leaving the home-educated cohort with a poorer value-added score than the schoolchildren.

IMAGE 10. 3: EXAMPLE OF A READING TASK FROM THE 'START OF RECEPTION' ASSESSMENT

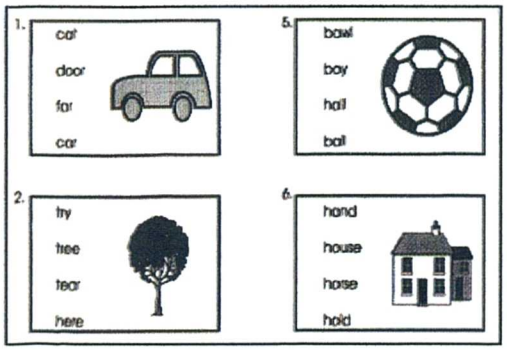


IMAGE 10. 4: EXAMPLE OF A READING TASK FROM THE 'END OF RECEPTION' ASSESSMENT



Whilst many elements of the second assessment had initially appeared to the researcher to be child friendly, during face-to-face administration it became clear that the home-educated children were reacting negatively,

when contrasted with their positive attitudes to the 'Start of Reception' assessment. Schoolchildren had, by the time they took the 'End of Reception' assessment been trained into the style used in the 'End of Reception' tasks, whereas many of the home-educated cohort with their less identifiable learning experiences, floundered at the formal test presentation. Thus, to evaluate the home-educated children's learning, the interview field-notes and 'passive observation' were crucial accessories to the Baseline assessment. It was also the case that test reliability[4], validity[5] and predictive validity at such an early age was debatable, equally for the home educated as for the schoolchildren.

10.2.2 First Compulsory Education Year[6] in the Home-Education Context

The home-educated children demonstrated a slightly greater increase in points over the reception 'year' than had the children from Tymms et al. (1997), that is, 45.32 as opposed to 42. This higher score was curious in the light of the home-educated children's relatively poor value-added scores (for reading, over 50% of the children were in the bottom 10% band). Value-added progress, however, related to the progress made between children's 'Start' and 'End of Reception' scores, whilst the 'points' difference (see Section 6.2, Table 6.2) referred to the contrast between the oldest (n=8) and youngest (n=4) children's scores at the 'Start of Reception', and their progress from 'Start' to 'End of Reception'.

Tymms et al. had attributed what they termed, the 'massive difference' in points, to the first year at school. However, the first measure was between the oldest and youngest of a cohort of new-schoolers whilst the second measure was the score difference between the 'Start' and 'End of Reception' - that is, new and not-so-new schoolers. Therefore, it should be born in mind whilst considering Tymms et al's claim of a 'leap', that the 'comparative' measures used were very different. For a more accurate comparison there needed to be a measure of differences between school minus one year and 'Start of Reception', and between 'Start' and 'End of Reception'. Tymms et al's school based comparative measure approach does not account for the home-educated cohort's point gain. After all, the home-educated children's progress could not be attributed to school. During the 'Reception' year, many of the home-educating parents, as the commentaries illustrate, would not have claimed to have 'taught' their children at all, allowing the children instead to learn at their own pace with parents simply responding to their children's lead (i.e. answering questions as they arose), rather than adopting any parent initiated learning sessions. Nevertheless, it was conceivable that parents, despite protestations to the contrary, were actually observing national, compulsory schooling norms. However, in view of the findings, not just from this element of the research but from the research overall, this explanation is highly unlikely; the interviews and observations generally showed children learning in relaxed atmospheres that bore little resemblance to school norms.

In Chapter 3, it was suggested that schoolchildren's 'Start of Reception' scores were, perhaps, artificially low, owing to the upset, reported by Riley (1996), that some children experience when starting school. Assuming that the point 'leap' between 'Start' and 'End of reception' made by the home-educated children (45.32 points as opposed to 42 points for the schoolchildren, see Table 6.2) was the result of their having scored lower at the 'Start of Reception' than they might potentially have managed (in spite of their excellent scores), it was perhaps possible, that the children at school nationally and in this home-educated sample were disturbed by the 'Start of Reception' assessment (as opposed to any significant change in their lives) and, thus, produced 'low' scores (lower than potentially they might have been). These 'low' scores would then contrast with the higher 'End of Reception' scores to produce an apparent 'leap'. Observation of the home-educated children suggests this was unlikely, however, since the children generally enjoyed the 'Start of Reception' assessment.

A more reasonable explanation might be that the 'Start of Reception' was biased against the schoolchildren who, owing to (if such a concept exists) the 'waiting to start school' philosophy, were less prepared than their home-educated counterparts for any assessment of their knowledge, whilst the 'End of Reception' instrument was biased against the home-educated children who did not have the 'benefit' of being trained in more formal test instruments. This would account for the home-educated children's good initial scores, poorer final scores and poor value-added scores and also for the schoolchildren's depressed 'Start' scores and good value-added. In

terms of the 'leap', it could be that the measures used were, in so far as the schoolchildren were concerned, too different to be useful and in respect of the home-educated children were the result of exposure to the instrument itself regardless of age difference and progress; at the start all the children were unfamiliar with the test instrument and by the end they were all more familiar, irrespective of being home or school educated.

Another possible explanation attributes the difference within the home-educated cohort's scores, to the test instrument. The contrast between the 'Start' and 'End of Reception' assessment design, from the viewpoint of the home-educated children, was substantial (see the differences between Images 10.1 and 10.2, and 10.3 and 10.4); the reactions of participants at the times of testing made this apparent. The difference in children's scores at the 'Start of Reception' was effectively measured on one instrument but the latter difference was evaluated using data from two different measures, those of the 'Start' and 'End of Reception' and for many just one very different measure ('End'). Thus, the difference in instruments may have accounted both for the poor value-added performance and also for the apparent 'leap' over the 'year', of the children involved with this research. As explained earlier in the 'Results' section, the difference between assessment instruments may not have been so apparent to schoolchildren who would, during their initial year have been accustomed to the style used in the 'End of Reception' instrument, thereby making it possible that their improvement was, indeed, a response to school, either positively (Tymms et al. 1997) or otherwise (Riley 1996).

10.2.3 Predictive Value of Assessments with Home-Educated Children

From the data it appeared that some predictions could be made about the home-educated children's progress. Their 'Start Total' correlated well with their 'End Maths' and 'End Reading' scores[7]. As the children commonly spent their time with either one parent or the other, parental influence appears to have been the cause of the children's exceptionally high 'Start of Reception' scores. In the same way that Pederson et al. (1978) had found that the effect on children of a good teacher was enduring, so the home-educated children's continued high scores may have been the result of the strong bond with their parents: the academic results discussed in Sections 10.3 and 10.4 (Literacy and Maths) indicate that the correlation between attainment and parental attention may continue, at least until 11 years of age. Tymms et al. (1997) concluded that the extent of schoolchildren's progression related to their prior attainment and this certainly appeared to be the case with the sample at hand also. Just as Tizard et al. (1988) found that teachers responded better to children whose company they most enjoyed, it would seem that the parents were those who had the most invested in their children's development; this pattern created the cycle of positive attribution, described by Georgiou (1999). Tizard and Hughes (1984) found that parents had the advantage of understanding the context of their children's lives, a finding strongly supported by the home-education 'Reception Year' data. With regard to Rich Harris' (1995) belief that peer groups accounted for the greatest impact on development, this may have

been born out by the present findings, whereby parents and other family members, in effect, tended to replace the 'peer' group influence.

10.2.4 VALUE-ADDED IN THE CONTEXT OF HOME-EDUCATION

The home-educated children's value-added scores did not reflect their high 'Start' and 'End of Reception' scores and overall, their value-added scores were fairly poor. One possible reason for this may be that the home-educated four-year-olds may have been accumulating knowledge on a gentle incline since birth with no foreseen alteration to that pattern of learning.

10.2.5 AFFLUENCE

All the children scored good marks, whatever their background and family structure. However, contrary to the findings of Tymms et al. (1997) the home-educated children from the lower socio-economic groups scored significantly higher than those with professional parents on the Registrar General's classification (Rose and O'Reilly 1998). The most obvious reason for their doing well, and one that is supported by evidence from other sources, is that home-educated children are, at least amongst their own ranks, free from the stigma of being poor, simply because they are not learning in an environment where affluence and labelling are an issue. Goldthorpe (1996) provided a scenario of how social class in school affects children's chances and this was born out by inference in the work of Galloway (1985) and by the writings of Tizard and Hughes (1984, pp256-257). Tizard and Hughes (1984, pp252-253) described the 'working-class

mothers' as 'just as concerned' for their children as 'middle-class mothers'; they further indicated that mothers from the lower socio-economic classes were more likely to adopt 'traditional approaches' to maths and reading. The difference in approaches to learning adopted by the lower socio-economic home-educating parents and those more affluent parents, appeared to mirror that described by Tizard and Hughes and this may well have accounted for the high performance from the children of non-professional families in these school style tests. Children from religious families also tended to come from non-professional families and although such families were not necessarily strict with their children, their beliefs about duty and self-discipline are likely to have had an impact on the children. The children from families at higher socio-economic levels may have been learning under more liberal values and this method, as the results illustrated, was nevertheless a recipe for success. The key to performance irrespective of background was, it seemed, the availability of parent[s] to spend time with their children, since at least one parent in each family was continually present throughout this period of their child's life.

10.2.6 School Starting Age and Parental Involvement, in the Context of the Home-Educated Children's Results

As the work of Aubrey, Tancig, Magajna and Kavkler (2000) and Aubrey and Godfrey (1999) has found, starting school at a later age may well have no detrimental effect upon learning skills. The results from the present study suggested that a delayed school start date may have very positive effects. This does not detract from the suggestion that school makes a difference

(Riley 1996), but questions whether such difference is academically and socially beneficial in the shorter term, as evidenced by the home-education findings from the PIPS Baseline research, and in the longer term, as indicated from the findings described in the other chapters.

The deliberations expressed by the PIPS Project (1996) over the usefulness of parental involvement and the remark made by Coulson (Appleyard 1998) that baseline assessment will assist parents, both give the impression that parents are somehow incapable of supporting their children's learning without external assistance. This attitude was summed up in the final lines of Tizard and Hughes' (1984, p 267) work:

> 'Indeed, in our opinion, it is time to shift the emphasis away from what parents should learn from professionals, and towards what professionals can learn from studying parents and children at home.'
>
> Tizard and Hughes (1984, p 267)

This statement by Tizard and Hughes echoed the comments from the home-educating families involved with the research. The findings lent support to the idea that parental input was not just a useful support tool, but that indeed, it could substitute for professional assistance.

10.3 LITERACY

The home educated children's NLP assessments for Years 1, 3 and 5 produced mean scores for each year group in excess of one standard deviation (SD) above the national mean[8]. The literacy mean for the PIPS Year 2 assessment cohort (n=17) was also more than one SD higher than the norm[9]. Thus, the majority of the home-educated children gained scores that were at least one SD over the norm.

The differences between mean scores across all the reading tests were interesting, with the four and six-year-olds performing at a higher level for their age than the five, seven, eight and ten-year-olds. The perception gained by this researcher, through the home visits, assessment administration and data analysis, was that the two former age groups enjoyed their assessments far more than those in the latter age groups. The five-year-olds were disappointed that the PIPS 'End of Reception' assessment did not resemble the 'Start of Reception' one in terms of structure. It also was apparent that the NLP Year 1 (six-year-olds) test differed in structure from those for Years 3 and 5 (eight and ten-year olds respectively). Moreover, the differences between the PIPS 'Start of Reception' and the NLP Year 1 scores were not statistically significant, contrasting with the significant pair-wise comparisons between the PIPS 'Start' and 'End' of reception, and between the 'PIPS End of Reception' and NLP Year 1 groups.

The gender findings added fuel to the debate over differences in gender performance, namely, within the NLP assessments the difference was in favour of the girls (Section 7.1.3). This advantage in the girls' favour supported findings from Sainsbury's (1998) 'National Literacy Project' research. The PIPS Year 2 test however, revealed that the higher means in each of the four domains observed, belonged to the males (Section 7.2.2). Thus, girls attained the highest scores on the NLP assessments and the boys performed better on the PIPS Year 2 assessment. A possible explanation for this came from one father who pointed out that the PIPS Year 2 test was biased in the favour of boys, with most of the names used in the assessment being masculine. This emphasis on masculinity was absent from the NLP tests where a gender balance was evident (Section 7.1.3).

Whether the gender bias in the PIPS Year 2 (Section 7.4.4) and or the existence of a maths component spurred the boys on to greater heights is unclear, but the PIPS Year 2 test did, perhaps surprisingly, produce a homogeneity between maths and reading score components for all participants. Unlike school, home-education does not make for a gender biased environment; there is no gender peer pressure for example and in many families both parents share roles and responsibilities. It seems that within the UK at least, both parents play a significant role in their children's learning leading perhaps to a better understanding by their children of gender balance.

The value-added scores produced by the PIPS Year 2 Literature data were, in the absence of prior assessment, 'concurrent', contrasting contextual information with academic performance. The home-educated participants showed a more central tendency than expected from a normally distributed sample but nevertheless, performed in value-added terms, 'as expected'. This conflicted somewhat with the PIPS 'Start' and 'End of Reception' findings, discussed in Chapter 6, namely that despite the high percentages of home-educated four-year-olds achieving above average scores at the 'Start of Reception', their performance in terms of valued-added progress during the year, was rather poor: for Maths, they had maintained the expected learning incline over the ten month 'school year', whilst in English, only 27% of the group managed average, or above average, progress. The impact of these low value-added scores was mitigated by the finding that at the 'End of Reception' 21% of home-educated children still scored two standard deviations above the norm, compared with only 2-3% of children nationally. It had appeared from the evidence that there might, however, come a time when the home-educated children, with their lower value-added scores and more gentle incline, might be overtaken by the more aggressive upward slant of the schoolchildren's value-added performance. However, Tymms (1998) has reported evidence from various sources, that schoolchildren's performance actually slows, or even regresses, during vacation periods. Coupled with the disclosure by Galton in Galton, Hargreaves, Comber, Pell and Wall (1999), that following transition to secondary school 40% of 11 year olds make little progress in their first year and 7% actually 'unlearn' what they previously knew, it is possible to

speculate, in view of the results, that the home-educated children's 0-11 year old value-added performance might, in fact, outweigh that of their school peers.

It is also possible to hypothesise that information acquired by home-educated children was more readily retained than that acquired didactically by their school peers, having absorbed their knowledge gradually by virtue of informal repetition, and assimilation through everyday learning. Karmiloff-Smith (1994) described the way in which children take on board information from the external world, reorganising it internally and combining it through conflict and, or agreement with previously internalised knowledge, eventually attaining mastery over the situation. She described this process as 'representational redescription' (RR).

Application of Karmiloff-Smith's model of cognitive development came to light unexpectedly during the research of Pine, Messer and Godfrey (1999) into the effects of didactic and guided teaching of a balancing task using symmetrical and asymmetrical rods with a fulcrum. Whilst the taught groups received instruction, the control group had none, being allowed to practise alone only. Results showed that before intervention all the children scored poorly on the task. Following intervention, all three groups improved significantly, the two taught groups demonstrating substantial improvement over the control group, with a significant difference appearing between the didactic and control groups. A week later, without further intervention, the didactic group had regressed in their on-task ability and the guided

participation group had remained at virtually the same level. The control group, however, had improved to a level exceeding the guided participation group, showing a rise of 1.31 points contrasted with .07 for the guided participation group and -0.43 for the didactic group. The children tested were all school attenders but the experiment, nevertheless, lends weight to Karmiloff-Smith's theory of an incubation period within her representational redescription model and thus serves to illustrate the ability of children to organise their own learning.

Galloway (1982), in a study of school absenteeism, found that the absentees in his sample outperformed their school attending counterparts in reading ability. Despite Galloway's rationalisation of this event[10] it is possible, remotely perhaps, that in the absence of tuition, the children had benefited from their informal learning environment. Prior to the present study, specific evidence-based research on the formal assessment of children's informal learning ability has not it appears, been undertaken, therefore, the evidence taken from the work of Pine, Messer and Godfrey (1999) and Galloway (1982) is important[11]. Similarly, there may be other studies that have incidentally reported on informal learning without actually debating the implications of such findings.

The literacy skills of the home-educated cohort could most adequately be described as non-conformist and evidence therefore for Kress' (1997) demand that definitions be reappraised and literacy viewed in terms of connection, continuity and coherence with other skills. This appears to

support the connectionist model submitted by Karmiloff-Smith (1994). The finding that the home-educated children had attained higher levels in their literacy assessments than their school peer group apparently supported Goodman's (1972) argument that we do not fully understand the acquisition of literacy skills and that intervention, contrary to assisting children, may in fact not be as beneficial as has been assumed (Riley 1996). Like Kress, Goodman held the global, holistic view that Karmiloff-Smith's model follows and which, to an extent, trivialises both the DfEE's (1998c) policy laden explanation of literacy skills and Beard's (1999) exposition of the importance of school. Meighan (1995) described the unplanned route to language competence followed by many home-educators, and whilst Meighan's work was based on informal qualitative intuition, the academic results of the present research, coupled with the qualitative fieldnotes, supported his view, bearing in mind that there were exceptions to the rule and that it was impossible to form judgements concerning those home-educators who did not receive and return initial questionnaires, some of whom will undoubtedly have chosen to isolate themselves from the wider community. Thomas' (1998) allusion to the 'apprenticeship' model as an active learning medium within home-educated families, also found accord within the present research, although it was impossible to know with these children, as with any children, the extent to which each influence is important; a view posited by Moseley, Merrell and Tymms (1998), commenting in the context of literacy skills.

10.4 NUMERACY

The home-educated children's maths scores between the three PIPS assessments averaged 64 points, and thus were 14 points and almost 1.5 standard deviations above the national norm. As a group, over half the children scored, on each assessment, in a band where only 16% of children nationally score. The stability across the three age groups, 4, 5 and 7 years, implied that the home-educated children were able to maintain their level at least throughout these four years. The 'Reception' children in the cohort had been tested twice, once at the 'Start' and again at the 'End' of the 'year', whereas the PIPS Year 2 group were entirely different children. This similarity and difference between the three assessment groups may serve to emphasise the point that the home-educated children were performing to a high standard generally. Had just one group been followed, it might have been possible to identify this cohort as 'exceptional'; however, where two different 'Maths' cohorts were assessed (one twice over a ten month period) and produced similar results, this strengthened the validity of the results. The adoption of three tests produced by the same team further indicated that there was some level of continuity of assessment type.

In general accordance with the data from North American studies (Rudner 1999, Ray 1998, 1994; and Richman, Hornberger and Ebeling 1992), 88.8% of the UK home-educated PIPS Year 2 group scored above the 75th percentile, 66.6% attaining a level exceeding the 90th percentile.

The value-added scores endorsed the home-educated cohort's level of attainment by showing the predicted percentage of the 'Reception' cohort to have progressed satisfactorily in Maths over the ten month period between the 'Start' and 'End of Reception', and almost three quarters of the PIPS Year 2 group to have attained this level in concurrent terms, as judged in light of their 'Context' scores.

Although the PIPS Year 2 'Context' assessment (Self-Esteem, Attitudes, Non-Verbal Ability, Picture Vocabulary and Cultural Capital - see Section 7.2 and Appendices 4.9 and 7.6 for further descriptions) had not, perhaps, been intended as an assessment in its own right, the questions relating to home background were particularly pertinent for the home-educated cohort. The finding that 'Context' scores contrasted well with both 'Reading' and 'Maths' grades (Scatterplots 7.1 and 8.1) implied that the children were, perhaps, experiencing a valid curriculum in terms of at least some of the 'broad and balanced' demands made by legislation (Educational Reform Act 1988).

There did not appear to be gender continuity amongst the Maths scores, with girls performing better at PIPS 'Start of Reception' and boys doing better by the PIPS 'End of Reception' and PIPS Year 2. Interestingly, Aubrey and Godfrey (1999), in a three cycle mathematics testing programme of 300, 5 and 6 year olds within England, found that at mid-Reception Year and mid-Year 1, boys had higher mean scores than the girls, whilst the boys' end of Reception Year grades were not so good as those of the girls. Without reference to Aubrey and Godfrey's (1999) standardised score data, however,

it was not possible to assess whether there had been a similar gender pattern of performance between assessments as those illustrated by Graph 8.1 of the present study's three cycle 'Maths' testing program. The national data is no clearer: whilst in Maths for the years 1999-2001 at Key Stage 1, girls outperformed boys, at Key Stages 2 and 3 it was the boys who tended to perform better (DfES 2001e). Whether the boys' better performance, at least for PIPS Year 2, was related to the apparent 'maleness' of that assessment instrument was unclear.

In view of the high scores generally for each home-education 'Maths' appraisal, it was, perhaps, surprising that so many of the children should have regarded mathematics with indifference (55.5%) with just over one in ten expressing unhappiness about the subject. However, as this research has found, home-educators' interpretations of various concepts, appear to differ considerably both from fellow home-educators and most certainly from those of other people generally. Quite why this is so is unclear, unless related to the absence of mass peer interaction at both parent and child levels with whom to exchange common inference and understanding. It may well be that some home-educators harbour a purposeful quest for 'distinctness' from wider society and that this dimension is, in their eyes, desirable. Hence, when a home-educated child makes known his or her opinion of mathematics, this should not be interpreted with the same understanding that one might have if the child had been attending school. This difference in perception appeared to lie at the heart of many difficulties between the home-education community and the wider society.

The subject of assistance recurred throughout the post 'Reception' age assessment assessments and discussions (see Sections 7.4 and 8.2). The 'Reception' cohort was researcher examined, whilst the NLP and PIPS Year 2 assessments were parent-administered, with several tests re-administered by the researcher (see Appendices 7.1, 7.2, 7.3). Parents were asked to make notes relating to the assessment procedures they experienced and it was clear from these notes that some assistance was provided. These instances were few and assessment scores excluded any items where help had been given. This was a far preferable method to having requested parents to withdraw altogether. A certain amount of trust needed to be given because, as this research concludes, home-educating parents are those who best know their children. Had the children been in school there would have been no question over the reliability and honesty of the teacher administrators and here too, parents needed to be treated with the same respect as would have been afforded to the children's teachers at school. Parents were aware that this was a test and therefore any assistance needed to be viewed by the researcher as having been the result of a parental decision that this was necessary with regard to the child in question. This, indeed, has formed a vital part of the research. Through attention to the procedures followed by families, it was possible to assess the situation in a more holistic manner than would have been possible with purely quantitative data, provided under strict exam standards. Through the annotation of factors such as levels of assistance deemed necessary, it was possible to see ways in which families coped with the assessments. Generally, it appeared (and as the researcher observed) that tests were

administered in a relaxed homely 'test' atmosphere where children were not heavily monitored but did nevertheless have their parents close by. It seemed that at times the parent, having viewed the assessment at an earlier date prior to administration, chose to run through some mathematical procedures that had not yet been the subject of specific learning. This level of assistance, occurring prior to administration, simply provided the children with the tools to tackle the items within the test. Where parents noted that they had assisted with such and such an item, they supported their decision by explaining that their child could not comprehend that their parent would not supply such assistance as required. This emphasised the nature of the parent-child relationship whereby the parent provides such information as is required, at the time required. The idea of waiting to have questions answered at a later date when the context was forgotten, was not, it appeared, an attractive one, as Mrs Easter's remark aptly summed up, 'What's the point of the exercise if you can't learn?'

Several parents pointed out the difference between their children meeting a problem on a page of a book and encountering it in a real life situation. It was easy to see how a child of seven years or under might identify with computations related to pocket money or to the sharing of items amongst friends, yet find it difficult to transfer these problems on the written page.

Kahney (1983 p.63-65) identified the difficulty involved with transferring information in one form to another unless provided with a hint, even where the pattern represented is identical. Whether such an inability to make

connections between similar problems is a symptom of poor mathematical literacy is unclear: the evidence from Kahney (1994 pp. 91-95) suggests that this is characteristic of novices, inferring that it is an essential part of the process towards becoming an expert, whereby declarative knowledge transforms itself into procedural knowledge[12]. In dealing with everyday mathematical issues, such as supermarket shopping, it is possible that some of the home-educated children were able to detect analogies between questions set on the assessment and those they met with in daily life; therefore, this may have assisted some children in answering mathematical concepts which, according to their parents, they had not covered. In the absence of having followed school curricula, these home-educated children were, perhaps, more dependent upon their ability to make analogies than schoolchildren; this may itself have been a skill that this class of children excelled in, although in the absence of comparative assessment on this ability such a proposition remains speculative.

In a similar vein, there were those home-educated children whose parents felt it important to initiate them into the world as young adults (Das Gupta1994) rather than as 'children' in the sense of their cognitive abilities being tangibly different from adults. Such parents described schools as creating synthetic representations to prepare children for 'real life' rather than expose them to real life itself. This concept appeared to underlie the reason why Paula's mother had introduced her daughter to the mathematical symbol 'n' rather than the use of a star, to denote a missing number (Section 8.2). It can of course be argued that children should understand school-based

conventions and yet, if a child is not to enter school, what need is there to become acquainted with such representations as are used there? The language of school and thus, school mathematics was, for some, irrelevant. The concept of sharing was also viewed by some parents as having its source in school activity and was, therefore, not necessarily such a familiar idea to the home-educated children as to those attending school. This was illustrated in one child's inability to detect an analogy between sibling sharing and the written concept. During interviews, a number of parents pointed out that adults are not generally made to share their possessions beyond the family and that it was unrealistic to expect children to do so.

Despite high scores, identification of the children's actual levels of education was masked by assessment content that could not possibly relate to the diverse areas of their different learning environments: this may well have been true of schoolchildren also. It is notable that plans to remove key exams from the school timetable are being proposed in Hong Kong (Forestier 1999): the Hong Kong Education Commission Chairman proposed:

> 'What we are hoping is to reduce the emphasis on public exams which tend to measure only one aspect of students' ability and distort the entire learning process.'
>
> Leung (1999)

The potential unsuitability of early testing has also been referred to by Aubrey and Godfrey (1999) in their international comparison of mathematical

standards amongst five and six year olds. Of particular note was that the English reception aged children's Dutch counterparts were still, owing to a later school starting age, pre-schoolers and yet performed as well as their English peers who had, prior to the assessment, experienced a period in school. Aubrey (1997) highlighted the way in which, within English schools, children's pre-school mathematical knowledge is undervalued, despite research by Tizard, Blatchford, Burke, Farquar and Plewis (1998) showing that four-year-old's pre-school knowledge was the best predictor of ability in school at seven years of age. Interestingly too, Aubrey et al. (2000) found that despite their later school starting age, by eight years of age Slovenian children were mathematically at a level with the English cohorts who by then, had been in school for four years in comparison with the Slovenians' one year. That ideas about mathematical knowledge as the domain of formal tuition persist, was evident in the work of Thomas (1998) and may, earlier, have been informed by research such as Rutter et al. (1979), which, although relating specifically to secondary age mathematics learning, promoted the view that mathematical learning was less likely to occur outside school than other subjects. Assuming that children in school are learning mathematics deemed appropriate to their age, the substantially better scores attained by the home-educated group bide well with Karmiloff-Smith's (1994) theory of 'representational redescription', whereby informal learning is beneficial for cognitive development: the work of Aubrey and Godfrey (1999) also appears to support this opinion, as do the findings of Thomas (1998). Aubrey and Godfrey (1999) found that amongst the English children to whom they administered mathematics tests at mid-reception year,

at the end of reception year and again during mid Year 1, there was a 'large difference' between the end of reception and mid Year 1 scores. This difference, although on an upward incline, reflects the pattern detected in the present research whereby significant differences were apparent, between the 'End of Reception' and 'PIPS Year 2 scores. Aubrey and Godfrey (1999) attributed their sample differences to the 'leaps and discontinuities' of mathematical learning. They further referred to the existence of an incubation period whereby maturation occurs internally during what appears from the outside, to be a period of stagnation, until the matured knowledge is externalised. This concept expressed by Aubrey and Godfrey appears to match that of Karmiloff-Smith (1994), cited in Section 10.3, and thus does not appear to be the sole domain of mathematical thinking. The existence of incubation periods also explains, perhaps, the reason why the home-educated children appeared to be continually surprising their parents with what they knew.

Generally, the home-educated children's learning and attainment appeared indicative of mathematical knowledge in the form suggested by Brown (1999) when referring to the definition of numeracy as perceived by the National Numeracy Project (Section 3.3.1). There did not appear to be the anxiety amongst the home-educators over mathematical issues that been conveyed through the work of Thomas (1998); in fact, in the under 11 age group targeted by the present research, mathematical learning appeared to be low key; and an area of learning with no especial difficulty attached.

10.5 SOCIAL AND PSYCHOLOGICAL SKILLS

10.5.1 HOME-EDUCATED CHILDREN'S SOCIAL SKILLS

The CABS questionnaire explored children's social skills in the five domains: 'Positives', 'Negatives', 'Requests', 'Conversations' and 'Feelings' (See Appendix 4.16). The home-educated children appeared far more passive than aggressive in each of the domains measured except in the domain focusing on the ability to make and receive complaints ('Negatives') where there were some very passive and very aggressive responses, indicative of some difficulties in this respect. The children were most able in terms of giving and receiving compliments, considered by Michelson et al. (1983) to be linked to good self-esteem, positive socialisation and confidence. Overall, the levels of passivity came within the same score band as those of Shyers' (1992) North American home-educated and school educated samples, who had themselves scored within the same, mostly passive, band.

The home-educated children's assertiveness score also overlapped the score band described by Michelson et al. (1979) as 'normal', although the home-educated children did tend towards the higher, less assertive extreme within that band. By scoring within the 'normal' spectrum, the children had, however, achieved Michelson et al.'s (1983) social skills criteria. His view that 'social skills' were not connected with school style socialisation was supported by the results of the present home-educated sample. In sum, the CABS data showed that the home-educated children were not in any way unusual.

The differences between the RRS and the SDQ instruments in the 'Prosocial' domain were echoed both across the groups and within the cross-scale sample. The SDQ differed from the RRS and CABS measures in that the SDQ 'diagnosed' most of the home-educated children as experiencing problems on the prosocial scale, that is, items concerning sharing, consideration for others and helping out. Moreover, the SDQ indicated that over one fifth of the sample exhibited 'peer problems'. Peer problems were considered to exist where children liked to play alone, preferred adult company, were picked upon by other children, did not have at least one good friend and were not generally liked by other children. In contrast, the RRS 'Prosocial' results showed the children to be outstandingly prosocial, a finding that cross-referenced well with the CABS data where the children had displayed 'normal' social skills. Why there should be such a difference between how these two scales perceived the home-educated children is certainly a matter for further inquiry. It seemed that whilst the SDQ (5 prosocial items) and the RRS (10 prosocial items) appeared to share five items, the wording perhaps differed enough to make a difference to the parent raters. One example would be the SDQ item 'Shares readily with other children' in contrast to the RRS 'Shares out treats with friends'. The SDQ question concerns sharing *per se* and applies only to children whilst the RRS items speaks specifically of treats and uses the non-age specific term 'friends'. In home-education terms these subtle differences in wording, as has been noted elsewhere (eg. Section 4.5.2) could substantially affect how the items would be perceived.

The RRS and CABS 'social' results agreed well with the researcher observations of home-educated children. The SDQ result therefore, may have misrepresented the sample's social side and this could, perhaps, be attributed to the SDQ/RRS item ratio of 5:10 in the 'Prosocial' domain. It was possible that the SDQ did not provide for the home-educators, who defined very different patterns of behaviour as 'normal'. If, however, the SDQ scale was the most exacting measure in this domain, then the results certainly reinforced the viewpoints expressed earlier, in Section 3.4.2 of the stereotypical home-educated child as shy, passive, lethargic and isolated (Aiex 1994; Wragg 1997; Hastings 1998). What appeared to be the case, however, taking into consideration the CABS, RRS and observation data, was that the SDQ represented a narrower vision of what social attributes are considered to be and that such a perspective reflected the prosocially desirable aspects for schoolchildren who, after all, form the majority of children in the UK and therefore, make up the 'norm' for whom the SDQ scale was designed.

The SDQ 'Peer Problems Scale' domain, where the home-educated sample also did less well than expected in terms defined by Goodman (1997), further reflected common expectations that children should prefer the company of other children, be liked by other children, have at least one good friend and prefer to play in groups. A number of home-educators, both through their initial questionnaires and during interview had described this image of peer groups as precisely the reason why they would not want their child to associate in large school-style groups with inherent peer pressure.

Michelson et al. (1983) certainly found school style socialisation to be the cause of 'maladaptive behaviour' that negatively affected both academic performance, and personal and social development.

Despite the home-educated sample differing from the standardisation sample within the 'Prosocial' and 'Peer Problems Scale' SDQ domains when analysed in accordance with Goodman's (1997) instructions (adding each participant's domain scores together), these differences were not evident when an alternative, albeit contentious, analysis was used, whereby, instead of calculating domain scores for the individual, individual item scores were summed across the sample, on each item, before being grouped by domain (see Section 9.3.3 for a detailed explanation) .

Thus, there was no consistent evidence, at least for the majority[13] of the home-educated children, that they were lonely, isolated, anxious, phobic, socially inept and academically lazy (Desforges 1999, Webb, 1999; Shearer 1999; Hastings 1998). The majority of the children were socially adept and prosocially healthy, hence, it is questionable whether the children actually had any need for socialisation beyond that with which they themselves were content. The proposition that children need socialisation on the scale offered by schooling, was not substantiated. Any expression of discontent with the level of social skills and prosocial behaviour acquired by the children through their home-based education would most probably have emerged in the course of the psychosocial investigation and if not here, then at other points in the study.

This research found that at the very extremes of the spectrum, the level of emotion expressed about socially related issues, both by critics of home-education and home-educators alike, was extreme, the one group apparently feeding the other in a continuous round of attack and defence. It was argued in Section 3.1.3 that the rush to immerse children earlier and earlier in 'education' may not relate to any developmental benefit. From the questionnaire data, the field-notes and from the psychosocial results, it may be that in terms of social confidence, there is little, if anything, to be gained by mass schooling at an early age. The results from the RRS in particular, indicate that children can actually benefit from living without mass peer socialisation such as that experienced in school.

10.5.2 Home-Educated Children's Behaviour

The results for both the RRS and the Goodman SDQ showed that the group were generally normal in terms of behavioural difficulties. The RRS highlighted behavioural difficulties with ten children (23.8%) and whilst this percentage was high, it was less than the 25% found by Rutter et al. (1975) and only marginally higher than the 20% national figure published by the Mental Health Foundation (Ellis 1998). Where difficulties did exist, the children were split fairly evenly between those with conduct and those with emotional problems. A comparison with the home-educated sample's data and that provided by Ekblad (1990) relating to previous studies, revealed that the home-educated children were more aggressive than the norm and that the girls' levels of anxiety was higher than those found in other studies. This RRS based indication that the sample were aggressive, did not conflict

with the passive CABS interpretation of their behaviour: CABS dealt exclusively with the children's social skills, whereas the RRS required that 'difficulty' items and 'Prosocial' items be analysed independently. The fact that the RRS results had confirmed the CABS data in finding the children socially adept, perhaps, validated the feature of the RRS which pinpointed where problems lay. Encouragingly too, the participant commentaries indicated the integrity with which they had completed this assessment.

The SDQ results showed the sample to be generally normal (92.7%[14]) in terms of their 'Total Difficulties' scores. Just 2.4% of the group were identified as exhibiting behavioural problems: this percentage represented the one child with Asperger's Syndrome, who was not, however, the only SEN child in the sample. Whether the RRS was over-rigorous in its 'Total Difficulties' diagnosis, or whether the SDQ was more liberal was difficult to say, just as it was impossible to ascertain whether the differences in the samples had caused the variance in outcome. Participant differences remained a possibility bearing in mind the 100% interscale agreement for the 29%[15] of each sample who provided cross-scale data. An interesting question that, in retrospect, might have resolved this issue, would have been to ask both the RRS and SDQ parents whether they considered their children to have behavioural problems *per se*.

The high percentage of children identified by the RRS as displaying behavioural difficulties might have related to the large quantity of time that the parents spent with their children, exposed as they were to the fullest

range of their behaviour, and thus more likely to see cause for criticism. Galloway (1982), finding that parents of school absentees reported more behavioural problems than parents of children in school, may, perhaps, also have met with this phenomenon.[16] Moreover, Ekblad (1990) found mothers (no data for fathers) more critical of their children than others and certainly where the norm was for 25-30% of doctor's appointments to be related to behavioural problems (Ellis 1998), it would seem that many parents are overt in expressing their concerns. The present SDQ mother and child related data also appeared to confirm this opinion, the mothers finding their children's behaviour more problematic than the children themselves did. Whether these children would have been rated as 'difficult' by a detached rater cannot be known.

Earlier research has indicated a connection between problematic behaviour and academic achievement (See Sections 3.4.2 and 3.4.3) and in the current research six of the ten children scoring above the RRS cut-off point had participated in academic testing. One, a girl with SENs, scored below average on the literacy test, another two scored above average on literacy and three were above average on both literacy and mathematics (two of those scoring above average were graded as exceptional). It was, therefore, in this research, difficult to relate behaviour ratings to academic performance. Of the two high performers, both girls, one followed a fairly academic routine and the other, an autonomous educational style (Meighan 1995; see Section 3.4.4 for a definition) that involved only a regular Kumon[17] routine for mathematics. This finding, therefore, conflicted with previous

research in this area (eg. Ekblad 1990; McMichael 1979) that described a link between behavioural problems and academic performance.

An important point to consider when faced with the results from these social and psychological assessments is that classifications of 'normal' are derived from national norms, ie. they represent the average. Since home-educators, by definition, differ from the norm, it is hardly surprising that they were found, at least in some areas, to vary from that norm. The real consideration lies in how society receives such deviation.

10.6 METHODOLOGICAL ISSUES

This thesis has depended upon data derived from questionnaires, field-notes, academic tests and psychosocial assessments. At the questionnaire planning stage access was a major issue and knowing what questions might reasonably be asked without upsetting potential respondents was impossible. With hindsight it is clear that the questionnaire could have involved more direct questions relating, for example, to religion, income etc. It would also have been possible to have included questions directed at the children, relating to their emotions and ideas about the education they were receiving. However, with the knowledge that more questions were possible, comes the understanding that time and money were limiting factors and the inclusion of some questions would have meant the exclusion of others. The questionnaire version used latterly was far more precise and it is hoped that future researchers might usefully refer to this writer's experiences.

The samples in each assessment are small (35, 33, [PIPS Reception] 17, 15, 17, [NLP] 43 [CABS] 51 [SDQ] and 42 [RRS]. It is therefore important that results are treated with some caution. Larger samples would have been preferable but bearing in mind the access problems involved, the number of participants was the largest possible at that time. Notably, the sample sizes are appropriate for the statistical tests used and the results from those tests can therefore be taken as reasonably reliable.

Discussion Endnotes

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[1] Advice given too by Pat Farenga, President of Holt Associates, USA at the 1998 Growing Without Schooling Conference in Massachusetts, attended by this researcher.
[2] Although Further Education Colleges are 16+ increasing numbers accept younger children.
[3] For 'Start of Reception' children achieving < the cut-off score, the 'End of Reception' assessment consisted of retaking the 'Start of Reception' assessment before being presented with the actual 'End of Reception' booklet.
[4] The reliability of a test is its consistency
[5] Test measures what it is intended to measure
[6] For some of the participants it was their pre-compulsory education year.
[7] However, the children's 'Start Total' scores did not correlate well with their 'End Total' scores, in contrast with the .76 correlation reported by Tymms et al. (1997). This may have occurred as a result of the standardisation process for 'Total' scores.
[8] From the 49 NLP cohort children: 43% scored > 2 SD above the norm; 41 > one SD above the norm; 12% scored within a SD and just 4% of the children produced scores < the mean.
[9] PIPS Year 2 'Literacy': 6% of the children scored > 2 SD above the norm; 70% > one SD above the norm; 12% scored within one SD and 12% of the children produced scores < mean.
[10] He believed that the difference in scores may have been attributable to a 'suggestion' that the absentee children had been placed amongst, and thus compared with, children from remedial classes where there may have been less able children.
[11] Although evidence from Fogelman (1978) does suggest that persistent absence from school is associated with lower attainments and that subsequent regular attendance leads to recovery.
[12] Declarative knowledge: following statements at a verbal level, (from books, instructions, people): Procedural knowledge: skilled performance (car driving) (Kahney (1994p.92).
[13] Between 76% and 92.7%
[14] The contrast between 92.7% found to be overall 'normal' and the 61% found to be prosocially 'abnormal' is that the 'Total Difficulties' score excluded the 'Prosocial' items, which, as highlighted above, appeared to interpret 'normal' prosocial behaviour as that displayed in large groups rather than social interaction with others per se.
[15] 12 children = about 29% of 41 (SDQ) and 42 (RRS)
[16] Galloway found that 83.3% of the primary aged children were with their parents whilst absent from school without authorisation.
[17] Kumon maths involves 10 minutes/day. Worksheets are used and work marked by an instructor. Students visit a centre twice weekly (not, however, the child mentioned above).

CHAPTER 11: CONCLUSION

This chapter concludes the thesis by commenting on the questionnaire, assessment and interview findings before closing with a brief discussion of the possibilities for further research.

From the questionnaire data came the conclusion that most home-educators would have preferred to be more involved in their local communities. Families tended not to be affluent and to need external support that often only came at a financial cost. Isolation from the wider community, the result of not having their children in school, placed some families under extreme pressure. Raising a family on the equivalent of one income was a further burden on many families. Despite these constraints, families valued the freedom to live according to their own ideals and relished the flexibility to, 'do what we want, when we want'. Their poverty was of their own choice, if not preference, and families generally believed that the 'cost' of exercising such control over their own lives far outweighed the disadvantages.

Insofar as the PIPS Reception data was concerned, the home-educated 4 and 5 year olds demonstrated high levels of ability and good social skills, apparently benefiting from an education tailored to their individual needs and from the attention given to them by their families. It is possible that the self-motivation so evident in many of the 4-5 year olds, stemmed from greater parental participation in their learning process, a more flexible curriculum and an individualised educational programme that reflected their own and

their parents' interests. Parents of the home-educated children in this age group tended to have planned for home-education from birth, or at least from very early on; thus the parents had generally given more attention to their children's early learning than they might perhaps have done, had they known that the children would soon be starting school. The parents were, thus, not awaiting the 'big day' when school began and responsibility for their children's education would be delegated to an external institution.

The Literacy assessment results suggested that the environment within which literacy skills are acquired may be of less importance than is often believed. The major impact upon attaining, not only literacy but other skills too, may be the extent to which each child is free to follow a pathway dictated by their own cognitive development. It seemed that whilst the home-educators provided a rich stimulating environment for the children, sometimes it needed the children's input to activate the parents' energy. Thus, despite the transactional motion of the learning process (Sameroff 1991) the onus was very much on the children to initiate learning in areas that interested them, unlike that seen in a school environment where the learning content and method are imposed and adult led.

That similar numbers of late-readers were found amongst home-educated and school attending samples, suggested that imposed methods have little impact and that, perhaps, there will always be an unpredictable percentage for whom the route they take is unsuitable. Without huge numbers of unschooled children from Western culture to observe, there will always be

those who argue that comparison between different types of schooling is sufficient to 'prove' the benefit of schooling. The literacy assessment results provide evidence that whilst excellent levels of skill can be acquired without formal tuition, it is inappropriate to use the same measures to assess both schooled and non-schooled groups. Results from the maths component where 100% of the children scored at or above the 50th percentile also suggested that if home-educated children are to be assessed, a more appropriate system is required that can better focus on the holistic nature of their learning.

For many of the children assessed during this research, the absence of prior experience in testing may have disadvantaged them. It was clear from comments made by families that some of the children simply misunderstood what was required of them. Instructions that would be treated as understood by schoolchildren were sometimes alien to the home-educated children and this unfamiliarity would necessarily form an important factor in any further testing of such children. So whilst the children were on the one hand advantaged by the absence of the school learning 'see-saw' effect reported by Tymms (1998) and by the informality with which they could approach the assessments safe in the knowledge of the 'within-family' inconsequence of their performance, they were at a disadvantage when faced with an assessment format. Their performance was further affected by frustration at not being able to learn during the process by having their questions answered as they arose. This latter aspect emphasises the irrelevance of testing to children whose motivation may well diminish upon the realisation,

consciously or otherwise, that there are times when the dynamic nature of their cognitive development (Karmiloff-Smith 1994) should be 'put on hold'. For the home-educated cohort, there was no right or wrong time to learn; it may well be that the most efficient way in which to gain skills and knowledge for life, would be to permit children to acquire information at their own pace, rather than force upon them external representations of learning patterns based upon contentious theory and somewhat arbitrary target setting, such as that seen in the National Literacy Strategy (Beard 1999). Testing often appears to be based upon institution led standards rather than upon the child's best interests and whilst it is clear that institutions do need to assess their own performance, it may in the long run be counterproductive to pass this burden on to the 'consumer'[1]. The testing program *per se* of the home-educated children underlined the need for a more child-centred approach to examination, if such a requirement is deemed to exist at all, whereby children could be assessed without impairment to their motivation for learning. The stress that these assessments, administered under such informal conditions, caused for some, albeit very few, families, provided perhaps, an insight into the negative effect of the testing ethos. Schoolchildren are apprenticed into the assessment environment from a very early age and so whether this negativity extends to them also and whether to all or just some, cannot be confirmed, although the evidence taken from press reports[2] certainly suggests the possibility.

Some of the parental comments served to raise the question of what was, or is, being tested by these and other assessments. Bearing in mind that the

PIPS format was, through the inclusion of non-academic elements, quite wide-ranging, the very narrow format of the assessments used both in this research and in schools generally at these age groups (i.e. Standard Assessment Tasks 'SATS'), precludes any real assessment of what children know. Here, the results served to evaluate the home-educated children's attainment on school normed comparisons, but they did not inform about what level of learning the children had attained.

Section 3.2.2 referred to the distinction between home-education's 'late reader' and problematic child with 'limited literacy skills' in school (Brooks 1997), whereby the difference was actually one of phraseology rather than a reference to any concrete variation. A similar situation was found in Section 3.3.2, whereby home-educated children's informal mathematical knowledge had been referred to by Thomas (1998) as something rather special, inferring that this was peculiar to home-education[3]. As Aubrey (1997) has shown, however, pre-schoolers generally have extensive informally acquired mathematical knowledge. The difference appears to be in the value placed upon that informal learning. By extension, a debate should follow as to whether informal knowledge is, during the early years, of more consequence than formally gained understanding. In the absence of further follow-up home-education research, the question will remain unanswered, although Aubrey and Godfrey's (1999) ongoing research may reveal whether in time, those international children with informal foundations benefit more than those taught formally from an early age.

Overall, the CABS, RRS and SDQ assessments proved useful in assessing the social and psychological state of the home-educated children in the sample. The CABS questionnaire, the use of which had caused concern bearing in mind its 'Americanistic' language and content, provided rich data, both qualitative and quantitative. The RRS was precise in highlighting children with difficulties and was appropriate, being aimed as it was at the 'school aged child' rather than the 'schoolchild'[4]. Calculated according to Goodman's procedure (1997) the SDQ results provided an interesting contrast with the CABS and RRS data. The combination of these three measures allowed the home-educated children to be assessed through a triangulation process (taking data from a variety of sources) such as that discussed by Burgess (1982) and used by Lowden (1993) in his research into home-education (See section 4.8.1). Thus the psychosocial insight into the children gleaned through this research was not the result of just one perspective, but rather, three. The results, whereby the RRS and SDQ outcomes were very different, confirmed the usefulness of using more than one measure on the children. Having been the subject of so little previous research, the UK home-educated children were very much an unknown quantity and exploring their nature through diverse means was, in the final analysis, justified. Larger samples would have been helpful but with limitations to the research by way of age restrictions, distribution, access, availability etc. the samples used were the largest available to this author at the time. It would have been possible to have combined the RRS and SDQ samples, as they were aimed at similar age groups, but the value of having

used these two instruments to evaluate the home-educated children is only too evident in view of the different outcomes from each instrument.

What the test instruments revealed is the extent to which diversity can be limited once we accept a 'norm' and regard variation from that 'norm' as abnormal. The two British measures, the RRS and the SDQ were designed according to their authors' normative decision about what behaviour is considered acceptable and so, when standardised using a large sample, the instruments become, in effect, self-fulfilling. These tests are about contemporary ideas, normed according to our culture and time. Used for intervention they might well be considered as reinforcing their own standards, highlighting those children whose behaviour differs from the norm. The use of these tests in assessing the home-educated children emphasised the need for diversity in our perception of children's behaviour. The tests, it appeared, aspired towards a passive and malleable child who needed to be part of a same-age peer group. It may be that tests' objectives were connected with what Self (1998) has described as the contemporary fetishisation[5] of childhood whereby we ignore the nature of children as young adults (Das Gupta 1994), seeing them instead as passive recipients of adult determination. The home-educated children were seen in this research to represent a group who were indeed different from the norm and whose parents, on the whole, treated their children as integral to the family infrastructure with rights and responsibilities similar, and equal to, other members of the family. This applied as much to the liberal families who believed in their children's right to a voice as to the fundamental religious

families who believed that every member of the family had a role and duty to the family. Interestingly, whilst the British scales, particularly the SDQ seemed set to minimise diversity in their psychological perspective, the North American CABS social measure promoted a far wider perspective by allowing for measurement along the passivity-assertiveness-aggression spectrum.

What these and earlier results may indicate is that the criteria for success in terms of children's development, academic achievement and emotional well being, rests in the context of a close loving environment within which the child receives individual attention and is content. Such an environment seems to nurture the instinct to learn: whether this enthusiasm continues throughout the 'school-age' years may have less to do with what happens during 6 hours (the school day) of each 24 hour period and more to do with how the child is treated for the remaining 18 hours, that is to say, the majority of the time. There may be both unfavourable school and unfavourable home environments, for both school and home-educated children. The overall evidence, however, suggests that where a family are electively home-educating, the environment is more likely to be favourable than otherwise, simply because of the commitment required of the parents and other family members. The findings here indicate that parental influence may be a far stronger determinant of personal outcome than that of any educational mechanism, whether it takes place in, or out, of school.

The families interviewed demonstrated tremendous diversity between each other that was sometimes characterised by conflict of one form or another, itself often the result of families feeling isolated from social norms. Most families however, had few misgivings about their decision to home-educate, despite a sense that many families would have preferred a mid-way option that was neither full-time school nor home-education. Interviewee families treasured the freedom and flexibility that came with home-education although for some families, there came a time when home-education limited their ambitions: this was the point at which some children transferred to school, to college or to university. It appeared that home-education often acted as a catalyst, allowing the family to progress more flexibly than if they had been 'fixed' by the daily obligation to send the children to school. Families made clear that home-education was a lifestyle choice that brought to them a closeness that could not have been hoped for from a more conventional adherence to societal norms.

It was apparent from this research that home-educated children need to be judged by different criteria to that used with school educated children. There was no sign that the children themselves had any problems interacting with their school counterparts, indeed, from the interviews it was quite clear that children together are more interested in the activity or game at hand than discussing their education day (there did not seem to be much difference between children from different schools playing together and children from school and non-school backgrounds). However, this research looked at the children through traditional methods, using national assessments and

practised psychological tests, and as the research progressed it became increasingly apparent that attempting to view these children in terms of what is normally expected, was inadequate. They were always going to deviate from the norm, whether because they excelled, showed delays or just differences. In the questionnaire we saw how the families valued the time they spent together, how every day was deemed an experience to treasure, with freedom, flexibility, closeness and time to talk, the mainstays of the home educating family. The assessments showed how the children excelled and the indications were that this was as a result of the time and attention given to the children. It was not sitting at a desk and observing lessons that motivated the children but, rather, the enthusiasm and commitment of parents and children themselves.

The conclusions drawn from the psychosocial assessments were that judgements made on home-educated children by comparing them with norms, are likely to be misleading. Home-educated children have different needs and their parents different expectations for them. A home-educated child who is dependent upon being in a group may be a difficult child whilst a school going child who prefers his own company may likewise be deemed to have a problem. However, in the appropriate context, these children appear perfectly normal. A home-educated child needs, it seems, to be able to converse with adults, needs to be self-sufficient, responsible and reliable. Such a child needs to be able to appreciate time alone and make their own amusements. Goodman (1997) however, regarded these attributes as evidence of poor adjustment. Yet to criticise these children for excelling in

the areas that are essential to them, is illogical, particularly since there is, so far as this writer has been able to determine, no research that suggests norming against the majority is the correct path to follow. The point is emphasised by the problems being experienced at the time of writing in Scotland (see Section 1.2) with the proposed draft guidance that would effectively instruct Scottish Education Authorities to judge home-educated children by school based standards. Meighan (2002) has described this as, 'judging tennis by the rules of basketball'.

The children played an important role as active members in the life of their families. The mismatch of a home-educated child with school survival skills appeared to lead to problems and vice versa. Section 5.12 dealt with the concept of the post-school transitional period, whereby children were said to need time to adapt and learn that they did not have to seek permission constantly. Home-educated children going into school, as the field-notes show, were seen as being too confident and too outspoken. This latter point was highlighted by parents' descriptions of the disadvantages of school, such as, conformity, bullying and peer pressure - all aspects of school that were alien to the home educated children and to which they appeared to have problems adapting, as Section 5.13 and accompanying questionnaire commentaries demonstrated.

Research focusing on older post compulsory [home-]education children (eg. Webb 1999) and discussions with post-education age members of families included in this research gave no suggestion of later problems in adulthood.

Indeed, the home-educated post 16 year olds believed that they fitted into society extremely well and in fact, were all the more equipped and appreciated by employers and universities for their experience.

Over the course of the research the reason why the children's academic prowess was not high on their parents' agendas became increasingly apparent. For the families there were far more significant and meaningful outcomes to home-education. These were children who were enjoying their childhood; their parents were loving the company of their children and experiences were shared. This was conveyed through the questionnaires (see for example, Chart 5.6), home-visits and interviews. Children were involved in activities that were meaningful to them. The families were living a life of their choosing, creating not just an education for their children but a congenial lifestyle for their family. This is not to say that parents did not find it hard and at times stressful to home-educate. Chart 5.7 showed how families often felt isolated and parents lacked time for themselves, and Section 5.6 reported on parents who said that home-education was more demanding and difficult than they had imagined. Nonetheless, overall, the message conveyed was that for these families home-education was not about educating children at home rather than at school: it was about a lifestyle decision.

What the research revealed was not just a difference in locus of education between home and school educated children, but rather, a far deeper distinction whereby all aspects of the family's life were affected. The way in

which the family's lives were structured had, through necessity, to be structured around the fact that there were always children close by (not always the most welcome aspect as Chart 5.7 illustrated). Nevertheless, parents visited described how this proximity led to a close family unity simply because they were together so much of the time. Siblings were together seven days a week and there was little time for experiences to be separated, as clearly they must be, by formal education. Sibling rivalry was, it seemed, not such an issue for home-educators. Home-educating families were sharing the minutiae of their lives and this meant that the difference between such families and traditional school-using families was far more significant than is generally considered.

Whilst the children did not see themselves as different and to some extent neither did their parents, society did. However, this difference was the superficial division between being 'normal' and 'odd'. The real difference, existed at a far deeper level than usually comes to the surface in day to day conversation between parents. That is to say, parents of home-educated children did not report problems mixing with parents of schoolchildren in terms of the usual chit-chat that parents share. When it came to firm friendships, however, parents were more likely to mix with adults who shared their common non-traditional values, not just about education, but concerning lifestyle generally. Perhaps, just as currently we use the term 'special needs' and do not attempt to draw comparisons, between 'them' and 'us', it would be useful not to attempt to judge home-educated children within stereotyped traditional parameters but rather see them as children (and

families) whose lifestyle simply follows a different path. Further, home-educating parents are best viewed as both parents and educators, with credit given to them for the two separate 'professional' roles.

FURTHER RESEARCH

Clearly a wider questionnaire survey would be useful, designed with the benefit of hindsight as a result of the current research. For example, it was clear from the results that more personal questions could have been asked, leaving it for the respondent to decide when a question went beyond what they would want to answer. Putting out the present survey was a considerable task however, and to repeat and widen distribution efforts would prove very difficult indeed.

As regards assessment, this research illustrated how, whilst it remains important to compare school and home-educated children, it does not follow that they should be judged by the same criteria. Further research might develop appropriate criteria for assessment. It was notable, however, that in spite of potential bias towards school children (owing to the nature of the tests used) home-educated children nevertheless did well.

In view of the apparently beneficial effects of young children remaining in the company of their families, the PIPS Baseline element of the research implicitly raised questions concerning early years childcare provision, and as such, bore out many of the findings of Tizard and Hughes (1984). Further

work, therefore needs to be undertaken to establish what would be in the best interests of young children, both academically and socially.

Working with these children over the research period it became evident that an examination of home-educated children's artistic development over time would be a useful theme for further investigation. These children, unexposed to the requirements of the National Curriculum in Art might exhibit less restrained and more imaginative flair. It would be interesting to establish whether the home-educated children's art made a downward U turn after the age of 7 years, such as that seen in schoolchildren (Davis 1997) and whether their progress followed traditional patterns such as Piaget's (Lee and Das Gupta 1995) or Lowenfeld's (1947) stages of artistic development.

Opened up by this research was the whole area of informal learning and more research into the benefits of informal learning would be both interesting and informative. The works of Thomas (1998), Rothermel (2000), Pine, Messer and Godfrey (1999), TIMMS (1995), and Aubrey and Godfrey (1999) could be followed up.

Following from the findings of Thomas (1998) that maths can be learned informally at an early age, there should perhaps, be follow-up research with the same home-educated cohort to assess the long-term implications of informal mathematics learning. Likewise with reading, research looking at the long-term effects of late reading could be accomplished through study of

home-educated children who are, according to their parents, learning to read at their own pace.

The current research found that at the heart of success in home-education was the close relationship within the families. Comparison then, needs to be made between schoolchildren from supportive, nurturing, families and those from home-educated families: such children might, after all, be similar. A further area for investigation would be the relationship between home-educated ex-absentees and school educated absentees. An evaluation of whether parents of current absentees could be converted to Local Education Authority supported home-educators would be useful.

Overall, this research raised many questions. Its usefulness lies, perhaps, in having raised so many questions about home-education, our perception thereof, and its place in contemporary society. Certainly the very concept of 'taking responsibility' and educating one's children oneself rather than accepting state provision, challenges us to consider how far we should go in accepting the 'informed wisdom' of officialdom.

Conclusion Endnotes

[1] The child as consumer (Hoyle 1998 p.11).

[2] E.g. 'ChildLine gets 800 calls a year about exam stress and 1 in 20 callers has contemplated suicide. A-level students are prominent callers.' (TES 1999): and 'a survey carried out by ChildLine a few years ago showed unequivocally that more young people in Britain worry about exams than about any other issue in their lives - a whopping 79 per cent of them.' Blane (1999)

[3] Thomas (1998) does not specifically say this, but the inference is apparent.

[4] The scale's title is, 'The Revised Rutter Scale for School Aged Children'.

[5] Defined as, 'extravagant irrational devotion' by Merriam Webster On Line 2002 http://www.m-w.com/netdict.htm

Appendices

APPENDICES: CHAPTER 4 METHODOLOGY

APPENDIX 4.1: ETHICS: QUESTIONS AND ANSWERS

Were all the participants aware that this writer was involved in research?

All participants who responded to the questionnaire were aware of the research, as were many of those home educators who attended meetings where the researcher was present. There was no intention to deceive during observations and conversations and every effort was taken to ensure families were aware of the researcher's presence and purpose.

Were the research activities open?

The research activities were open and public (Burgess 1982). All participants' questions relating to the research were answered honestly and additional information was provided on request. Descriptions of each activity were given to participants involved with that activity and where solicited, these descriptions were comprehensive and included references.

How was trust gained?

Trust was gained gradually by developing relationships that endured throughout the research. Maintaining a balance of confidence between researcher and the diverse sections of the home-education community and also between researcher, home educators as a whole and their local education authorities was difficult. Attention by the researcher to the complex relationships involved and to the need for perpetuating researcher-participant trust was paramount to the outcome of this research.

Was confidentiality offered and maintained, and how (Robson 1993)?

Assurances of confidentiality were given to all participants and were maintained throughout the study. Families were able to retain anonymity when they returned the questionnaires. The thesis protected participants by providing pseudonyms and, where scanned images were used, names were digitally altered.

In the event that this writer had become aware of clear evidence of child abuse, the offer of confidentiality would have been reviewed but fortunately this issue did not arise.

Did all participants give informed consent (Robson 1993)?

The research was objective, making it clear to participants that the results would be displayed whether favourable to home-education or not. Sclare (1997) alluded to researcher unfamiliarity with an informant's psychological state at the time of involvement with the study, and here, it was clear that the degree of informed consent

depended heavily upon the families' understanding of what was being asked of them. With respect to very young children, the researcher accepted parental informed consent as sufficient unless the child voiced an opinion to the contrary. Many parents asked their children if they wished to participate.

During the psychological testing, full explanations, unless sought, were delayed until the questionnaires had been completed. This was to avoid what Wetherell (1996) referred to as 'demand characteristics'. Although consent could not be entirely informed if participants were not privy to all relevant information, a balance was needed between the potential loss of validity and ethical concerns.

Throughout the research every effort was made to ensure that subjects were provided with enough knowledge for them to make an informed judgement in respect of their participation.

Was there any researcher bias?

The research does not contain any conscious bias, showing home-education both positively and negatively.

APPENDIX 4. 2: HOME EDUCATION QUESTIONNAIRE

The following questionnaire forms a part of my research into home-education in the UK and abroad. The purpose of this research is to present a clear picture of home education at present. Some questions for some people may need only a simple Yes or no, others more detail. Those who find questionnaires inhibiting please use another format and tell me why you home educate and what home-education means for your family. If you are unhappy with any questions, please tell me. All and any relative information will assist in building a picture of contemporary home education. All personal information received is in absolute confidence. Your assistance is greatly appreciated. Please use extra paper if you wish.

1) What, if any, home educating family support groups do you belong to?

2) How many children do you have?

3) How old is/are your child/ren ? (Please identify each child with a name or initial and give year/month of birth)

4) Who is.... At school?	How long at school? And how many schools?
At home, over school age (4)	If ever at school, for how long?
At home below school age (4)?	Likely to attend nursery or/and school?
In nursery (part-time/full-time?)	Likely to attend nursery or/and school?

5) Do any of your children have special needs? If so, please indicate how many/which children and what their needs are.

6) What does home education mean for your family and what motivated the decision to home educate?

7) What type of education did you and your partner receive? What are your feelings towards your own 'schooling' years?

8) Have you or your partner had any training in teaching skills? If so, how, if at all, has this influenced your child/ren's home education?

9) Whose lead do you follow, for learning, yours or the child/children's?

10) Do you use a set learning routine or take each day as it comes? Why? What aids/materials, if any, do you use?

11) Do you use the national curriculum? What opinion do you have of it?

12) How do you facilitate your child/ren's scientific and mathematical learning? What resources, if any, do you use?

13) What areas of learning do you cover at home that you feel your child/ren would be unlikely to study or benefit from at school?

14) How do you encourage/guide your child/ren's interests?

15) Do you use other tutors, eg. tutors/teaching clubs/ other parents?

16) If you use a computer, what role does it play in your child's education?

17) What is your view on different aged children learning together?

18) What, if any, assessment do you use? Do you encourage assessment?

19) Please describe briefly a day home educating.

20) Do you meet with other home educating families and how often?

21) What is your view on child socialisation?

22) How, if at all, did your child/ren's reading develop? At what age?

23) Do you hope that your child/ren will take formal examinations? How do you view exams?

24) If any of your children go to school, why do they do so?

25) Might your child/ren go to school in the future? What age and why?

26) What, in your view, are advantages/disadvantages of home education?

27) What, in your family's view, are advantages/disadvantages of school?

28) How do non-home educating people react to you and your children in respect of your family's decision to home educate?

29) Have the local education authority implied any stipulations about your family's home education? Have they offered assistance?

30) Is home education as you imagined and why?

31) How, if at all, would you describe your style of parenting?

32) For those of you whose children have withdrawn from school, how does having been in the system affect subsequent home education?

33) Which religious faith, if any, do you follow?

34) What is your occupation, or, what did you/your partner train to do?

35) Which county or country do you live in?

If you might be willing to speak with me about home education at a future date, please put your name and a contact address or phone number below.
Name:
Address:
e-mail:
Telephone:

Thank you *Paula Fielding-Bell*

c/o University of Durham, Leazes Road, Durham DH1 1TA
or at; **1 Hill Top Cottages, Knott Hill Lane, Delph, Lancashire OL3 5RJ**
telephone 01457 872 846: e-mail p.j.rothermel@durham.ac.uk or p.bell@btinternet.co

APPENDIX 4.3: DATA ENTRY SHEET

Data Entry Sheet Number .....

APPENDIX 4. 4: EXAMPLE OF THE LETTER SENT TO HOME-EDUCATORS THROUGH LEAS

Dear Home-educating Family

My name is Paula Rothermel and I am undertaking some research into home education as part of a study at Durham University. I have attached a questionnaire, in the hope that you will consider filling it in, together with a stamp addressed envelope so that you may return it to me.

Please answer as many questions as you can and feel free to add comments or to continue on to another page. All details given will remain confidential.

Please find attached a stamped addressed envelope in anticipation of your co-operation.

This letter is being passed to you on my behalf. I do not have your name or address.

Thank you, in anticipation, for your kind assistance.

Best wishes,

Paula Rothermel

APPENDIX 4. 5: FOLLOW UP LETTER RE: QUESTIONNAIRE IN THE 'EO' FEBRUARY 1997 NEWSLETTER

I would like to thank all those who have replied to the questionnaire that accompanied February's newsletter. I urge those, please, who have not already returned the questionnaire/and or written to me, to do so, since all replies, whatever your comments, are contributions that will go towards forming what I hope will be a comprehensive report on home education currently in the United Kingdom. I appreciate the time that families have taken/are taking to reply to the questionnaire. Future newsletters will contain a summary of the study's conclusions.

Several member's of E.O. have commented that they have not filled in the questionnaire because they did not know what information I wanted. How individuals interpret and answer the questions, *is* the information I am seeking, since it is those personal interpretations that will help to explain home education. If the questionnaire seems long then please answer it according to what you interpret the gist to be. If it seems complex then I apologise and hope that you will nevertheless attempt to answer it. If you no longer have a copy then please write and tell me about why you home educate and what home education means for you. I am keen to have replies from as varied a cross section of home educating families as possible, whether they are experienced home educators or not.

Space and time precluded an explanation of my study in last month newsletter. My research, based at Durham University, is concerned with home-based education for children aged up to 11 years, and seeks to investigate the education of those children whose contact with school is minimal, and of those who have no experience of school at all. My work seeks to extend on the studies of, Lowden (1993), Petrie, (1992), Webb (I988) and others, endeavouring to broaden the definition of home education to include those people who have not been the subject of previous research, that is to say, it will refer to all who home educate for some or all of the time, whatever their reason for doing so, concentrating particularly on children aged up to eleven years.

The study is to examine what is happening in home education, its merits, its place as an alternative to school, and the implications home education has for education generally, particularly as greater choice in education becomes accessible. I will also be looking at studies from overseas.

The relevance of the project lies in the growing importance that home education has within society, the inferences it has for schools and on the schooling system. Home education is illegal in some countries of Europe and research can assist in maintaining our right to a choice. Essentially my work looks at children's development and how they are affected by the different experiences of home education in the light of current research into children's development both at home and in school.
If you know of any home educating families who are not members of E.O. but who would be prepared to fill in the questionnaire or take part in this research, please let me know.

This research will continue with the final conclusions written up in 1998/1999.

If the postage seriously poses a problem for you, then, rather than not send in the questionnaire, please do so and ask me to return a stamp to you.

Thank you
Paula Fielding-Bell at 1 Hill Top Cottages, Knott Hill Lane, Delph, Lancashire OL3 5RJ
telephone: 01457 872 946
e-mail address: P.J.Rothermel@durham.ac.uk

APPENDIX 4. 6: LETTER INSERTED IN THE HEAS QUARTERLY BULLETIN

Dear HEAS readers

I am conducting doctoral research into home-education at the University of Durham. This involves a request to home educators that they complete a two-sided, one-page questionnaire and return it to me. The study is nation-wide and my intention is to distribute the questionnaire to as many home educators as possible in order that data can be gathered from a very broad range of home-educators. This research is independent and feedback will be given on request.

If you are home educating and have not already completed a questionnaire carrying my name and headed, 'Home-education questionnaire', please contact me in order that I can forward a questionnaire to you. Alternatively, if you would prefer not to complete a questionnaire but would still like to assist, please write to me describing your family's home-education experience. Where requested, postage will be returned.

If you have contact with home-educating families who are not associated with any support organisation and you are willing to pass to them copies of my questionnaire, please let me know how many copies I may send to you.

All information is received in confidence.

Your assistance is appreciated.

Kindest regards

Paula Fielding-Bell

1 Hill Top Cottages, Knott Hill Lane, Delph, Saddleworth, Lancashire, OL1 1LN
OR, C/O HIGHER DEGREES OFFICE, SCHOOL OF EDUCATION, UNIVERSITY OF DURHAM, LEAZES ROAD, DURHAM DH1. TELEPHONE & FAX 01457 872 946; E-MAIL P.BELL@BTINTERNET.COM

APPENDIX 4. 7: CODES FOR QUESTIONNAIRES

Q. no	Variable names	*Variables*	How the data is displayed
o	Quote	Defines comments worth quoting **STRING**	By question number. Eg. 02_04_33
0	Name	Name	0001, 0002, 0003
0	Pseud	Pseudonym	Named

0	County	County country	02 Berkshire 03 Bristol 04 Buck'shire 06 Cheshire 07 Cleavland 08 Cornwall 45 Cumbria 09 Derbyshire 10 Devon 11 Dorset 12 Durham 13 Essex 14 France	16 Gloucest'shire 18 Hampshire 19 Herefordshire 20 Hertfordshire 21 Kent 22 Lancashire 23 Lincolnshire 24 London 25 Manchester 26 Norfolk 27 Northumbria 46 Northumb'land 47 Nottingh'shire	52 Northants 28 Oxfordshire 43 Shropshire 31 Staffordshire 32 Somerset 33 Suffolk 34 Surrey 44 Sussex W. 35 Sussex 57 Sussex E. 36 Tyne & Wear 37 W. Midlands 38 Wiltshire	39 Worcester 40 Yorkshire N. 41 Yorkshire S. 42 Yorkshire W. 70 Beds 71 Cambridgshire 72 Middlesex 73 Warwickshire 74 N Ireland 75 Merseyside 76 Leicstershire 77 Jersey 78 I of Wight	**55 Scotland** 551Angus 552 Ayrshire 553. E. Lothian 554 Fife 555 Galloway 556 Argyll **56 Wales** 561 Carmarth'shire 562 Gwent 563 Pembrokeshire 564 Powys 565 West Wales **60 Overseas** **99 unknown**
1	Orgs	what organisations belong to	01 None 02 EO & Schoolhouse 03 HEAS, Christian h/s of the NE, Home Service 04 EO & HEAS 05 HEAS 06 EO	07 Home Service (HS) 08 **Local group** 09 NNN Natural Nurt. Network 10 EO + local group 11 EO, HEAS, Home Service 12 Australian organisations 13 LIFE, England	14 US organisations 20 Home Time & EO 21 HEAS & HERALD 22 EO & Home Service 23 EO, HEAS & NNN 24 EO & Ed Now 25 Other		
2	Childnos	How many children	By number 08				
3	Childage	Child ages 02 Lowest to highest **STRING**	Listed by age low to highest. Eg 03 07 23				
4	Athome	No. Of those at home **of school age**	01 02 Number of children				
4	Agehome	Age of all those at home **(under & over 16) STRING**	Eg. 05 06 08				
4	postschoo	Post school-age children (home or schooled) **(Over 18)**	Number of children 01, 02				
4	Atschool	At school	Number of children 01, 02				
4	Preschol	Pre school **(Under 5)**	Number of children 01, 02				
4	Preplans	Future intentions for pre-schoolers	01 Home ed 02 Nursery & home ed 03 Will school	04 Unsure 05 Nursery & School			
83	**Nursery**	Nursery details	0 = don't know or N/A **05990106** is 5 yr old at nursery for 18m (0106). 99 divides age from time eg. 05 – 99 – 01 06 (1yr 6 months)				
87	**Flexi**	Amount of part-time school	01 50%				
4	Waschool	Ever at school	0102 Number of children now at home who have been to school				

APPENDIX 4. 8: PIPS BASELINE ASSESSMENT AREAS

Start of Reception

Writing	Child is asked to write own name
Pictures (1, 2 &3)	Asked to point to items in a picture
Ideas about reading	Asked to point to reading related items in a picture. Asked grammatical questions about a short text, i.e. can you show me where a sentence finishes.
Rhymes	Four pictures in a line are presented and the name of each is read out. The child is then asked which of the 2nd, 3rd, and 4th pictures rhymes with the 1st.
Name letter	Child is asked to identify first letter of his/her name.
First letters	Asked to identify letters of the alphabet.
Second letters	Asked to identify letters of the alphabet.
Words	Four words are presented with a picture. The child is asked to point to the word that goes with the picture

'Start of Reception' Maths

Ideas about maths	Using pictures, the child is asked questions relating to size and quantity.
Counting	Using pictures, the child is asked to count items
Sums A	Using pictures, the child is asked to add and subtract items
First numbers	Asked to identify single numbers.
Second numbers	Asked to identify single numbers.
Two digits	Asked to identify double numbers.

'End of Reception' Reading

Writing	Repeated as above
Pictures (1,2 & 3)	Repeated as above
Ideas about reading	Repeated as above
Rhymes	Repeated as above
Name letter	Repeated as above
First letters	Repeated as above
Second letters	Repeated as above
Words	Repeated as above
Words2	Child is show words and pictures and asked to match them together
Story 1	Child is asked to read a short script accompanied by pictures.
Story 2	Child is asked to read a short script accompanied by pictures.
Story 3	Child is asked to read a short script accompanied by pictures.

'End of Reception' Maths

Ideas about maths	Repeated as above
Counting	Repeated as above
Sums A	Repeated as above
First numbers	Repeated as above
Second numbers	Repeated as above
Two digits	Repeated as above
Maths 1	Child is required to answer text based maths questions
Maths 2	Child is required to answer maths 'problems', presented either with, or without illustrations

APPENDIX 4. 9: PIPS YEAR 2 ASSESSMENT CONTENT

Maths	Questions related to the National Curriculum
Reading	Designed to test reading strategies and comprehension.
Picture vocabulary	Upon hearing a word the child selects picture that matches
Non-verbal ability	Problems of Position (POP) test[1]. Pupils join up dots in one box and find identical pattern in second box and join those. A time limit is imposed
Cultural capital	Helped to ascertain home background
Attitude and self-esteem	A questionnaire providing participants opportunity to express themselves in relation to academic pursuits.

APPENDIX 4. 10: DESCRIPTION OF PIPS 2 ASSESSMENT SECTIONS

Section Type	Area Assessed	No. of items	Explanation
'Maths Quiz'	Attainment Measure: Maths	32	Example 1: A menu was provided and children asked a number of questions relating to it, i.e. 'How much does the cheapest pizza cost?' Example 2: 'What is half of 6?' Example 3: 'How many tens are there in 44?'
'Reading Quiz' part 1	Attainment Measure: Reading	8	8 drawings each with four words underneath. Children were required to tick the word that described the picture, Example: a drawing of an aeroplane and four words written underneath: airbrush, animal, accent and aeroplane.
'Reading' Quiz' part 2	Attainment Measure: Reading	7	7 sets of drawings and instructions. Example: a drawing of a monkey, an apple, an arrow and a horse, accompanied by the following instructions: 'Put a ring round the tail of the money. Draw a cross on the horse. Colour the apple.'
Comprehension 'Harry goes to tea'	Attainment Measure: Reading	8	A story followed by multiple choice questions relating to the text, such as: 'Who is Harry's friend?' 'Harry' or 'tea' or 'a snail' or 'Dug'
Invitations	Attainment Measure: Reading	12	A page of 5 notices, displayed like a noticeboard. Multiple choice questions asked such questions as 'What is Muffin's telephone number?' '111222' : '11223' : '7715678' : '234987'?
'Dictionary'	Attainment Measure: Reading	11	Statements requiring a tick in one of 3 boxes marked, 'Yes', 'No' and 'Not Sure'. Example: A tadpole is a young frog. 'YES' 'NO' 'NOT SURE'
'Word Choice'	Attainment Measure: Reading	26	A text with spaces where the most appropriate from a choice of 3 words needed to be ticked. Example: Worms (is/are/am) strong and can move (in/on/to) the soil easily.

[1] POP was developed by David Moseley at the University of Newcastle.

APPENDIX 4. 11: EXAMPLE OF LETTER TO NLP PARTICIPANTS

RESEARCHER ADDRESS

FAMILY ADDRESS

11/11/97

Dear PARENTS FIRST NAMES

Please find enclosed the papers mentioned in my recent card to you.

Enclosed with this letter you will find, photocopies of 'Patterns In Language 1' for CHILD*, plus 'Teacher Administration Instructions'.

The guidance for completion is as follows:-
Patterns In Language

There are two 'booklets', one for the child and one for the adult.
CHILD's copy is marked at the foot of the page as 'Patterns In Language Year 1'.
The parental notes are similarly marked, as 'Year 1 Teacher Administration Instructions'
There is not a time limit for completion
A pen or pencil and ruler will be needed
Please ask CHILD not to use a rubber, but make corrections by putting a line through work to be erased.
Please ask CHILD to work independently.
Encourage CHILD to work carefully through the first part of the booklet with you and to finish as much as her can overall, allowing her reasonable time to do so.
A break should be taken after the Word Recognition and Work Choice sections and before the Spelling and Writing sections.
Once completed, please put the answer booklets in the stamped addressed envelope provided and discard the 'Teacher Administration Instructions'.

I hope these notes are easy to follow. I appreciate your co-operation very much and do want to stress that I do not expect CHILD to assist unless, she wishes to and she finds the assignment enjoyable.

The completed literacy test and questionnaire will enable this research to offer observations about home educated children in general. However, if you would like to know CHILD's 'score' then please let me know by putting a note on the back page of any set of papers due for return to me.

WITH APPRECIATION AND KIND REGARDS RESEARCHER NAME

*The child's first name was inserted here

APPENDIX 4. 12: ALTERNATIVE SOCIAL AND PSYCHOLOGICAL SCALES

The Conners Parent Rating Scale was considered appropriate for this study in terms of, age range, short completion time, well reported internal validity and scores that covered a wide range of behaviours, namely, 'Fearful-Anxious', 'Learning Difficulties', 'Antisocial', 'Restless-Disorganised', 'Obsessional', 'Conduct Disorder' 'Psychosomatic problems' and 'Impulsive-Hyperactive'. This writer was unable to obtain a copy of the scale for viewing. Enquiries, however, suggested the scale was generally used to identify 'Attention Deficit Hyperactivity Disorder' (Buros 1961), measuring change, evaluating intervention strategies and monitoring for effects of medication (NFER-Nelson 1997). These clinically-related classifications were not pertinent to the research at hand, and, combined with high cost, contributed to the non-inclusion of these scales within this research.

The Eyberg Child Behaviour Inventory, discussed in Sclare (1997), was considered because of both its format and its low cost.. However efforts to contact Dr Eyberg and seek permission to use the inventory, available as a photocopy, were unsuccessful owing to restrictions on time.

The Bristol Social Adjustment Scales were examined, but dismissed owing to their dependence on the subject child's attendance at school.

The Coopersmith Self-Esteem Inventories (Buros 1961) were another consideration since they evaluated the self in social, academic, family and personal areas of experience, used a population aged between 8 and 13 years, were short to complete and economical to use. They appeared, however to have been designed for group administration within a school context ('School Form') and the scoring focused on 'General Self', 'Social Self-Peers', 'Home-Parents', 'School-Academic', 'Total Self Score', 'Lie'. This reliance on school experience rendered the inventory incongruous with this research.

The Piers-Harris Self-Concept Test was considered because of its inclusion in the work of Shyers (1992). Shyers' (1992) work provided the antecedent to this study's use of Michelson and Wood's (1981) CABS questionnaire and therefore, might have been an appropriate partner in this study also. Additionally Stough (1992) had used the Piers-Harris Self-Concept Test in another home/school educated comparative study. Several reasons for not using it arose, firstly, both Shyers (1992) and Stough (1992) had made comparative studies, contrasting school children with home-educated children. The study at hand had no such comparable school group. Secondly, it appeared from a reading of Shyers (1992) paper that distribution and execution might have been difficult. Thirdly, cost was an issue, with the papers necessarily being imported from the United States.

APPENDIX 4. 13: CHILDREN'S ASSERTIVENESS BEHAVIOUR SCALE (CABS) QUESTIONNAIRE FOR 8 TO 10 YEAR OLDS

Answer each question by circling the letter (a, b, c, d, e,) beside each question on the answer sheet. After you have marked your answer for the question, go on to the next one. If you are completing the questionnaire using a computer, please delete four of the five letter choices on the answer sheet.

Remember to answer honestly about how you would act. There is no time limit but you should answer as quickly as possible.

1. Someone says to you, "I think you are a very nice person." You would usually:
   a. Say "No, I'm not that nice."
   b. Say "Yes, I think I am the best!"
   c. Say "Thank you."
   d. Say nothing and blush.
   e. Say "Thanks, I am really great."

2. Someone does something that you think is really great. You would usually:
   a. Act like it wasn't that great and say "That was all right."
   b. Say "That was all right, but I've seen better."
   c. Say nothing.
   d. Say "I can do better than that!"
   e. Say "That was really great!"

3. You are working on something that you like and think is very good. Someone says, "I don't like it!" You would usually:
   a. Say "You're a dummy!"
   b. Say "I think it's good."
   c. Say "You are right", although you don't really agree
   d. Say "I think this is great: besides, what do you know!"
   e. Feel hurt and say nothing.

4. You forget something you were supposed to bring and someone says, "You're so stupid! You'd forget your head if it wasn't screwed on!" You would usually:
   a. Say "I'm smarter than you any day: besides, what do you know!"
   b. Say "Yes, you're right, sometimes I do act stupid."
   c. Say "If anybody is stupid, it's you!"
   d. Say "Nobody's perfect. I'm not stupid just because I forgot something!"
   e. Say nothing or ignore it.

5. Someone you were supposed to meet arrives 30 minutes late, which makes you upset. The person says nothing about why they are late. You would usually:
   a. Say "I'm upset that you kept me waiting like this."
   b. Say "I was wondering when you'd get here."
   c. Say "This is the last time I'll wait for you!"
   d. Say nothing to the person.
   e. Say "You're an idiot! You're late!".

6. You need someone to do something for you. You would usually:
   a. Not ask for anything to be done.
   b. Say "You've got to do this for me!"
   c. Would you please so something for me?" and then explain what you wan
   d. Give a small hint that you need something done.
   e. Say "I want you to do this for me."

7. You know that someone is feeling upset. You would usually:
   a. Say "You seem upset: can I help?"
   b. Be with the person and not talk about his or her being upset.
   c. Say "What's wrong with you?"
   d. Not say anything and leave the person alone.
   e. Laugh and say "You're just a big baby!".

8. You are feeling upset and someone says, "You seem upset." You would usually:
   a. Turn your head away or say nothing.
   b. Say "It's none of your business!"
   c. Say "Yes, I am upset, thank you for asking."
   d. Say "It's nothing."
   e. Say "I'm upset, Leave me alone."

9. Someone blames you for a mistake made by another. You would usually:
   a. Say "You're crazy!"
   b. Say "That wasn't my fault: someone else made the mistake."
   c. Say "I don't think it was my fault"
   d. Say "Wasn't me, you don't know what you're taking about!"
   e. Take the blame or say nothing.

10. Someone asks you to do something, but you don't know why it has to be done. You would usually:
   a. Say "This doesn't make any sense. I don't want to do it."
   b. Do as you're asked and say nothing.
   c. Say "This is silly: I'm not going to do it!"
   d. Before doing it, say "I don't understand why you want this done.
   e. Say "If that's what you want," and then do it.

11. Someone says to you they think that something you did was terrific. You would usually:
   a. Say "Yes, I usually do better than most."
   b. Say "No, that wasn't so hot."
   c. Say "That's right, because I'm the best."
   d. Say "Thank you."
   e. Ignore it and say nothing.

12. Someone has been very nice to you. You would usually:
   a. Say "You have been really nice to me, thanks."
   b. Act like the person wasn't that nice and say "yea, thanks."
   c. Say "You have treated me all right, but I deserve even better."
   d. Ignore it and say nothing.
   e. Say "You don't treat me well enough!".

13. You are talking very loudly with a friend and someone says, "Excuse me, but you are being too noisy." You would usually:
   a. Stop talking immediately.
   b. Say "If you don't like it, get lost!" and keep on talking loudly.
   c. Say "I'm sorry, I'll talk quietly," and then talk in a quiet voice.
   d. Say "I'm sorry" and stop talking.
   e. Say "All right" and continue to talk loudly.

14. You are waiting in line and someone steps in front of you. You would usually:
   a. Make quiet comments such as, "some people have a lot of nerve," without actually saying anything directly to the person.
   b. Say "Get to the end of the line!"

c. Say nothing to the person.
d. Say in a loud voice, "Get out of this line, you creep!"
e Say "I was here first: please go to the end of the line.".

15.Someone does something to you that you don't like and it makes you angry. You would usually:
a. Shout "You're a creep, I hate you!"
b. Say, "I'm angry, I don't like what you did."
c. Act hurt about it but not say anything to the person.
d. Say, "I'm mad. I don't like you!".
e. Ignore it and not say anything to the person.

16.Someone has something that you want to use. You would usually:
a. Tell the person to give it to you.
b. Not ask to use it.
c. Take it from the person.
d. Tell the person you would like to use it and then ask to use it.
e. Make a comment about it but not ask to use it.

17.Someone asks if they can borrow something that belongs to you, but it is new and you don't want to let the person use it. You would usually:
a. Say, "No, I just got it and I don't want to lend it out: maybe some other time."
b. Say, "I really don't want to, but you can use it."
c. Say, "No, go get your own!"
d. Give it to the person even though you don't want to.
e. Say "You're crazy!"

18.Some people are talking about a hobby you really like, and you want to join in and say something. You would usually:
a. Not say anything.
b. Interrupt and immediately start telling about how good you are at this hobby.
c. Move closer to the group and enter into the conversation when you have a chance.
d. Move closer and wait for the people to notice you.
e. Interrupt an immediately start talking about how much you like the hobby.

19.You are working on a hobby and someone asks, "What are you doing?" You would usually:
a. Say "Oh, just something" or "Oh nothing."
b. Say "Don't bother me. Can't you see I'm working?"
c. Keep on working and say nothing.
d. Say "It's none of your business!"
e. Stop working and explain what you were doing.

20.You see someone trip and fall down. You would usually:
a. Laugh and say, "Why don't you watch were you are going?"
b. Say, "Are you all right? Is there anything I can do?"
c. Ask, "What happened?"
d. Say, "That's the breaks!"
e. Do nothing and ignore it.

21. You bump you head on a shelf and it hurts. Someone says, "Are you all right?" You would usually:
    a. Say "I'm fine, leave me alone."
    b. Say nothing and ignore the person.
    c. Say "Why don't you mind your own business?"
    d. Say, "No I hurt my head, thanks for asking."
    e. Say "It's nothing, I'm OK!"

22. You make a mistake and someone else is blamed for it. You would usually:
    a. Say nothing.
    b. Say "It's their mistake!"
    c. Say "I made the mistake!"
    d. Say "I don't think that person did it!"
    e. Say "That's their tough luck!"

23. You feel insulted by something someone said to you. You would usually:
    a. Walk away from the person without saying that you were upset.
    b. Tell the person not to do it again.
    c. Say nothing to the person, although you feel insulted.
    d. Insult the person back and call him or her a name.
    e. Tell the person you don't like what was said and tell the person not to do it again.

24. Someone often interrupts you when you're speaking. You would usually:
    a. Say. "Excuse me, I would like to finish what I was saying."
    b. Say. "This isn't fair: don't I get to talk?"
    c. Interrupt the other person by starting to talk again.
    d. Say nothing and let the other person continue to talk.
    e. Say. "Shut up, I was talking!"

25. Someone asks you to do something which would keep you from doing what you really want to do. You would usually:
    a. Say. "I did have other plans, but I'll do what you want."
    b. Say. "No way! Find someone else."
    c. Say, "OK, I'll do what you want."
    d. Say "Forget it, shove off!"
    e. Say, "I've already made other plans, maybe next time."

26. You see someone you would like to meet. You would usually:
    a. Yell at the person and tell them to come over to you.
    b. Walk over to the person, introduce yourself and start talking.
    c. Walk over near the person and wait for him or her to talk to you.
    d. Walk over to the person and start talking about great things you have done.
    e. Not say anything to the person.

27. Someone you have not met before stops and says "hello" to you. You would usually:
    a. Say, "What do you want?"
    b. Not say anything.
    c. Say, "Don't bother me. Get lost!"
    d. Say, "Hello," introduce yourself and ask who they are.
    e. Nod your head, say "hi," and walk away.

THANK YOU FOR YOUR ASSISTANCE.

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APPENDIX 4.13 CONTINUED: CABS SCORING KEY

Participant number
Date
Score

	A	B	C	D	E
1	-2	2	0	-1	1
2	-1	1	-2	2	0
3	2	0	-2	1	-1
4	1	-2	2	0	-1
5	0	-1	1	-2	2
6	-2	2	0	-1	1
7	0	-1	1	-2	2
8	-2	2	0	-1	1
9	2	0	-1	1	-2
10	1	-2	2	0	-1
11	1	-2	2	0	-1
12	0	-1	1	-2	2
13	-2	2	-	-1	1
14	-1	1	-2	2	0
15	2	0	-1	1	-2
16	1	-2	2	0	-1
17	0	-1	1	-2	2
18	-2	2	0	-1	1
19	-1	1	-2	2	0
20	2	0	-1	1	-2
21	1	-2	2	0	-1
22	-2	2	0	-1	1
23	-2	1	-1	2	0
24	0	-1	1	-2	2
25	-1	1	-2	2	0
26	2	0	-1	1	-2
27	1	-2	2	0	-1

1. Using the scoring key, score each response on the answer sheet.

2. Note that a high score represents unassertiveness, as each response is scored -2 for a very passive response, -1 for a partial passive response. O for an assertive response, 1 for a partially aggressive response, or 2 for a very aggressive response. Therefore a negative score would denote an aggressive response.

APPENDIX 4.14: REVISED RUTTER PARENT SCALE FOR SCHOOL-AGE CHILDREN

Child's name: _____ Age:.....

Below are a series of descriptions of behaviour often shown by children. After each statement are three sets of initials: DNA (*Does not apply),* AS (*Applies somewhat*) and CA (*Certainly applies*). If your child definitely shows the behaviour described by the statement, place a place a ring around the initials CA (*Certainly applies*). If your child shows the behaviour described by the statement but to a lesser degree or less often, place a place a ring around the initials AS (*Applies somewhat*). If, as far as you are aware, your child does not show the behaviour, place a ring around the initials DNA (*Does not apply).*

Please complete on the basis of your child's behaviour during the past three months.

Put *one* ring against *each* statement. Thank you.

This statement ...

1.	Tries to be fair in games	DNA	AS	CA
2.	Very restless, has difficulty staying seated for long	DNA	AS	CA
3.	Considerate of other people's feelings	DNA	AS	CA
4.	Squirmy, fidgety child	DNA	AS	CA
5.	Often destroys or damages own or others' property	DNA	AS	CA
6.	Has had tears on arrival at school or has refused to go	DNA	AS	CA
	into the building in the past 12 months	DNA	AS	CA
7.	Will try to help someone who has been hurt	DNA	AS	CA
8.	Frequently fights or is extremely quarrelsome with other children	DNA	AS	CA
9.	Gives up easily	DNA	AS	CA
10.	Not much liked by other children	DNA	AS	CA
11.	Volunteers to help around the house or garden	DNA	AS	CA
12.	Often worried, worries about many things	DNA	AS	CA
13.	Tends not to finish things started, short attention span	DNA	AS	CA
14.	Spontaneously affectionate to family members	DNA	AS	CA
15.	Tends to be on own, rather solitary	DNA	AS	CA
16.	Irritable, touchy, is quick to 'fly off the handle'	DNA	AS	CA
17.	Kind to younger children	DNA	AS	CA
18.	Often appears miserable, unhappy, tearful or distressed	DNA	AS	CA
19.	Resentful or aggressive when corrected	DNA	AS	CA
20.	Blames others for things	DNA	AS	CA
21.	Comforts a child who is crying or upset	DNA	AS	CA
22.	Has a stutter or stammer	DNA	AS	CA
23.	Has other speech difficulty	DNA	AS	CA

24.	Truants from school	DNA	AS	CA
25.	Has twitches, mannerisms, or tics of the face and body	DNA	AS	CA
26.	Frequently sucks thumb or finger	DNA	AS	CA
27.	Gets on well with other children	DNA	AS	CA
28.	Has stolen things on more than 1 occasion in the past 12 months	DNA	AS	CA
29.	Cries easily	DNA	AS	CA
30.	Frequently bites nails or fingers	DNA	AS	CA
31.	Is often disobedient	DNA	AS	CA
32.	Tries to stop quarrels or fights	DNA	AS	CA
33.	Has wet or soiled self this year	DNA	AS	CA
34.	Cannot settle to anything for more than a few moments	DNA	AS	CA
35.	Forceful, determined child	DNA	AS	CA
36.	Shares out treats with friends	DNA	AS	CA
37.	Tends to be fearful or afraid of new things or new situations	DNA	AS	CA
38.	Kicks or bites other children	DNA	AS	CA
39.	Stares into space, stares blankly	DNA	AS	CA
40.	Plays imaginatively, enjoys 'pretend' games	DNA	AS	CA
41.	Fussy, or over-particular child	DNA	AS	CA
42.	Inattentive, easily distracted	DNA	AS	CA
43.	Independent, confident child	DNA	AS	CA
44.	Doesn't share toys	DNA	AS	CA
45.	Helps other children who are feeling ill	DNA	AS	CA
46.	Often tells lies	DNA	AS	CA
47.	Bullies other children	DNA	AS	CA
48.	Kind to animals	DNA	AS	CA
49.	Often complains of aches or pains	DNA	AS	CA
50.	Inconsiderate of others	DNA	AS	CA

THANK YOU FOR YOUR HELP IN THIS STUDY.

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APPENDIX 4. 15: STRENGTHS AND DIFFICULTIES QUESTIONNAIRE (OTHER 4 - 11)

For each item, please mark the box for *Not True*, *Somewhat True* or *Certainly True*. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft! Please give your answers on the basis of the child's behaviour over the last six months.

Child's Name..... Male/Female

Date of Birth.....

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings			
Restless, overactive, cannot stay still for long			
Often complains of headaches, stomach-aches or sickness			
Shares readily with other children (treats, toys, pencils etc.)			
Often has temper tantrums or hot tempers			
Rather solitary, tends to play alone			
Generally obedient, usually does what adults request			
Many worries, often seems worried			
Helpful if someone is hurt, upset or feeling ill			
Constantly fidgeting or squirming			
Has at least one good friend			
Often fights with other children or bullies them			
Often unhappy, down-hearted or tearful			
Generally liked by other children			
Easily distracted, concentration wanders			
Nervous or clingy in new situations, easily loses confidence			
Kind to younger children			
Often lies or cheats			
Picked on or bullied by other children			
Often volunteers to help others (parents, teachers, other children)			
Thinks things out before acting			
Steals from home or elsewhere			
Gets on better with adults than with other children			
Many fears, easily scared			
Sees tasks through to the end, good attention span			

Date Mother/Father/Other (please specify:)

Thank you very much for your help.

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APPENDIX 4. 16: A DETAILED DESCRIPTION OF THE 5 CABS DOMAINS

1) Positive Statements

Positive strategies centre on the ability to give and receive compliments. Michelson et al. (1983) viewed the ability to exchange compliments as a reflection of an individual's self esteem, and characterised by a 'giving and receiving' cycle of social reinforcement, leading to benefits for the child in terms of popularity, socialisation and confidence. According to Michelson et al. (1983), if we are skilled in offering compliments, when a compliment is received by us, it can be taken with modesty and appreciation.

2) Negative Statements

Children versed in complaint skills were said by Michelson et al. (1983) to be able to communicate their concerns and, therefore, play an active role in controlling their environment: complaint making, whilst demonstrating tact and self-control, reduced stress, thus contributing to a child's well being. The ability to verbalise and accept complaints in a positive manner was recognised by Michelson et al. (1983) as characteristic of a child who is objective and open minded. Michelson et al. (1983) suggested that complaints we acknowledge can be analysed to inform us about the effect we have on those around us and that by recognising what constitutes an effective response to a complaint, we can promote a better image of ourselves to others.

3) Requests/Instructions

The sub-score for 'request' related to a measure in two interconnected areas. The first area concerned the ability to formulate requests for favours from others and to respond skilfully to those entreaties made of us. Michelson et al. (1983) cited research that has found individuals who consistently comply with the requests of others to be discontented, frustrated and embittered: therefore, they conclude, request strategies involve both the ability to say, 'no' to requests from others and the capacity to respond appropriately to negative responses from others without experiencing a feeling of 'losing face'. Michelson et al. (1983) believed that refusal, based on establishing a right to say, 'no' in an informed and sympathetic manner, could lead a child to better appreciate the importance of accepting a request from another. Such a child would also understand why and how others complied with, or refused, their own requests. Michelson et al. (1983) suggested subtle discretion as paramount if the correct message were to be conveyed by a request. Clumsiness in composing the request could result either in offence being taken, or the request simply not being understood. Michelson et al. (1983) felt that, because children's survival is contingent upon those around them, they needed an efficient understanding of request making. A child able to articulate requests in a seemly manner would attract positive reactions from others. Michelson et al. (1983) argued that skill in requesting a favour concerned far more than simple etiquette; it had an integral role in the child's opportunities for successful social interaction.

The second area considered under the heading 'request', was the child's deftness in asking, 'Why?; that is to say, making a request for information. Michelson et al. (1983) said that the question, 'Why?' was fundamental to a child's emerging understanding of the world around him or her: by gathering answers to our questions, information was assimilated, the consequence of which was learning, subsequently directing future enquiry and understanding. Analytical skills developed from the ability to ask, 'Why?' benefit the child's social, emotional and educational development.

4) Conversations

Michelson et al. (1983) reported that conversations involved information exchange and therefore, a child skilled in the intricacies of conversation carried an important advantage over others not so well versed. A skilled communicator would know how to initiate a conversation, how to participate and how to continue it through to its conclusion. Michelson et al. (1983) saw this skill as an essential aid in a child acquiring information and developing socially.

In the category of questions relating to conversations, Michelson et al. (1983) included a question relating to making requests for behaviour change. Michelson et al. (1983) distinguished the ability to request a behaviour change from that of requesting a favour, by allowing that mutual exchange, or conversation, could involve requests made of others for a change in their behaviour, which would have a mutually beneficial goal. Once the behaviour has been modified, the person requesting the change could feel satisfied, and the object of the request made aware that their behaviour was inappropriate. Where a child structured such a request with tact, he or she might avoid being thought of as annoying and antagonistic.

5) Feelings/Empathic Statements

Michelson et al. (1983) believed that an ability to relate to others empathetically, empowered people to share their emotions and feelings in a subjective way, attributes associated with empathy making a person socially desirable. They thought that the maturational process involved children developing a growing awareness of the feelings and emotions being experienced by others, in turn leading a child to assimilate abstract terminology relating to the expression of feelings. Understanding other people, their point of view and how to respond to them was, in the opinion of Michelson et al. (1983), an essential aspect of becoming a social being.

APPENDIX 4. 17: CABS QUESTIONS AND THEIR DOMAINS

	Question	Area of Social Skill investigated
		Positive
1.	Someone says to you, "I think you are a very nice person." You would usually:	compliments
2.	Someone does something that you think is really great. You would usually:	compliments
11.	Someone says to you they think that something you did was terrific. You would usually:	compliments
12.	Someone has been very nice to you. You would usually:	compliments
		Negatives
3.	You are working on something that you like and think is very good. Someone says, "I don't like it!" You would usually:	complaints
4.	You forget something you were supposed to bring and someone says, "You're so stupid! You'd forget your head if it wasn't screwed on!" You would usually:	complaints
5.	Someone you were supposed to meet arrives 30 minutes late, which makes you upset. The person says nothing about why they are late. You would usually:	complaints
15.	Someone does something to you that you don't like and it makes you angry. You would usually:	complaints
23.	You feel insulted by something someone said to you. You would usually:	complaints
24.	Someone often interrupts you when you're speaking. You would usually:	complaints
		Requests
6.	You need someone to do something for you. You would usually:	Requesting favours
10.	Someone asks you to do something, but you don't know why it has to be done. You would usually:	Asking why
14.	You are waiting in line and someone steps in front of you. You would usually:	Refusal or saying no
16.	Someone has something that you want to use. You would usually:	Requesting favours/Refusal or saying no
17.	Someone asks if they can borrow something that belongs to you, but it is new and you don't want to let the person use it. You would usually:	Requesting favours/Refusal or saying no
25.	Someone asks you to do something which would keep you from doing what you really want to do. You would usually:	Requesting favours /Refusal or saying no
		Conversations
13.	You are talking very loudly with a friend and someone says, "Excuse me, but you are being too noisy." You would usually:	Requesting behaviour change
18.	Some people are talking about a hobby you really like, and you want to join in and say something. You would usually:	Conversations
19.	You are working on a hobby and someone asks, "What are you doing?" You would usually:	Conversations
26.	You see someone you would like to meet. You would usually:	Conversations
27.	Someone you have not met before stops and says "hello" to you. You would usually:	Conversations
		Feelings
7.	You know that someone is feeling upset. You would usually:	Empathy
8.	You are feeling upset and someone says, "You seem upset." You would usually:	Empathy
9.	Someone blames you for a mistake made by another. You would usually:	Empathy
20.	You see someone trip and fall down. You would usually:	Empathy
21.	You bump you head on a shelf and it hurts. Someone says, "Are you all right?" You would usually:	Empathy
22.	You make a mistake and someone else is blamed for it. You would usually:	Empathy

APPENDIX 4. 18: DIFFERENCES BETWEEN ITEMS ON THE REVISED RUTTER SCALE AND THE SDQ

SDQ	REVISED RUTTER SCALE
'PROSOCIAL SCALE'	**'PROSOCIAL'**
Considerate of other people's feelings	Considerate of other people's feelings
Shares readily with other children	Shares out treats with friends
Helpful if someone is hurt, upset of feeling ill	Will try to help someone who has been hurt
Kind to younger children	Kind to younger children
Often volunteers to help others	Volunteers to help around the house or garden
'HYPERACTIVE SCALE'	**'HYPERACTIVITY/INATTENTION'**
Restless, overactive, cannot stay still for long	Very restless, has difficulty staying seated for long
Constantly fidgeting or squirming	Squirmy, fidgety child
Easily distracted, concentration wanders	Inattentive, easily distracted
Sees tasks through to the end. good attention span	Cannot settle to anything for more than a few moments
'EMOTIONAL SYMPTOMS SCALE'	**'EMOTIONAL DIFFICULTIES'**
Nervous or clingy in new situations ...	Often worried, worries about many things
Many worries. often seems worried	Often appears miserable, unhappy, tearful or distressed
Often unhappy. downhearted or tearful	Tends to be fearful or afraid of new things or new situations
Many fears, easily scared	Often complains of aches or pains
Often complains of headaches, stomach-aches ...	
'CONDUCT PROBLEMS SCALE'	**'CONDUCT DIFFICULTIES'**
Often fights with other children or bullies them	Frequently fights or is extremely quarrelsome with other children
Steals from home, school or elsewhere	Has stolen things on more than one occasion in the past 12 months
Generally obedient, usually does what adults request	Is often disobedient
Often lies or cheats	Often tells lies
Often has temper tantrums or hot tempers	Inconsiderate of others
SDQ PEER PROBLEMS SECTION	**RUTTER TOTAL DIFFICULTIES SECTION**
Rather solitary, tends to play alone	Tends to be on own, rather solitary
Generally liked by other children	Gets on well with other children
Picked on or bullied by other children	Not much liked by other children

APPENDIX 4.18: CONTINUED

SDQ items with no Revised Rutter Scale equivalents

Thinks things out before acting	**'Hyperactive Scale'**
Has at least one good friend	**SDQ Peer Problems Section**
Gets on better with adults than with other children	**SDQ Peer Problems Section**

Rutter Scale items with no SDQ equivalents

Often destroys or damages own or others' property	'Total Difficulties'
Tends not to finish things started, short attention span	'Total Difficulties'
Spontaneously affectionate to family members	'Total Difficulties'
Irritable, touchy, is quick to 'fly off the handle'	'Total Difficulties'
Resentful or aggressive when corrected	'Total Difficulties'
Has a stutter or stammer	'Total Difficulties'
Has other speech difficulty	'Total Difficulties'
Truants from school	'Total Difficulties'
Has twitches, mannerisms, or tics of the face and body	'Total Difficulties'
Frequently sucks thumb or finger	'Total Difficulties'
Frequently bites nails or fingers	'Total Difficulties'
Has wet or soiled self this year	'Total Difficulties'
Fussy, or over-particular child	'Total Difficulties'
Independent, confident child	'Total Difficulties'
Doesn't share toys	'Total Difficulties'
Forceful, determined child	'Total Difficulties'
Plays imaginatively, enjoys 'pretend' games	'Total Difficulties'
Gives up easily	'Emotional Difficulties'
Stares into space, stares blankly	'Emotional Difficulties'
Cries easily	'Emotional Difficulties'
Has had tears on arrival at school or has refused to go into the building in the past 12 months	'Emotional Difficulties'
Bullies other children	'Conduct Difficulties'
Blames others for things	'Conduct Difficulties'
Kicks or bites other children	'Conduct Difficulties'
Comforts a child who is crying or upset	'Prosocial'
Tries to stop quarrels or fights	'Prosocial'
Helps other children who are feeling ill	'Prosocial'
Kind to animals	'Prosocial'
Tries to be fair in games	'Prosocial'

APPENDIX 4. 19: LETTER TO PARTICIPANTS IN THE ASSESSMENT PROGRAMME.

[Researcher's home address and telephone number]

[Participant's address]

Dear [Name of Parent]

Please find enclosed with this letter, photocopies of 'Patterns In Language' 3 and 5. (year 3 is for [child 1], year 5 is for [child 2] and 'Teacher Administration Instructions'. Also enclosed is a copy of the questionnaire for [child 2].

The guidance for completion is as follows:-

Patterns In Language (same instructions for each of 3 and 5)

There are two 'booklets' with each test, one for the child and one for the adult.
[child 2] and [child 1]'s copies are those marked at the foot of the pages as 'Patterns In Language Year 3 (5). The parental notes are marked similarly as 'Year 3 (5) Teacher Administration Instructions'
There is no time limit for completion
A pen or pencil and ruler will be needed
Please ask [child 2] and [child 1] not to use a rubber, but make corrections by putting a line through work to be erased.
Ask [child 2] and [child 1] to work independently.
Encourage them to work carefully through the first part of the booklet with you and to finish as much as they can overall, allowing them reasonable time to do so.
A break should be taken after the Word Recognition and Work Choice sections and before the Spelling and Writing sections.
Once completed, please put the answer booklets in the stamped envelope provided and discard the teacher instructions.

Children's Assertiveness Based Scale (CABS)

The instructions are at the head of the first page.
The questionnaire has 27 questions and cover both sides of the first page
Please use the answer sheet for responses and return both the questionnaire and the answer sheet to me, unless you prefer to retain the questionnaire for you own interest.

I hope these notes are easy to follow. I appreciate your co-operation very much and do want to stress that I do not expect [child 2] and [child 1] to assist unless they want to.

The completed literacy test and questionnaire will enable this research to provide observations about home educated children in general. However, if you would like to know your children's 'score' then please let me know by putting a note on the back page of any set of papers due for return to me.

With appreciation and kindest regards

[Researcher's name]

APPENDICES: CHAPTER 5
INITIAL QUESTIONNAIRE

APPENDIX 5. 1:CHILDREN WITH SPECIAL NEEDS BY CONDITION ((N=417)

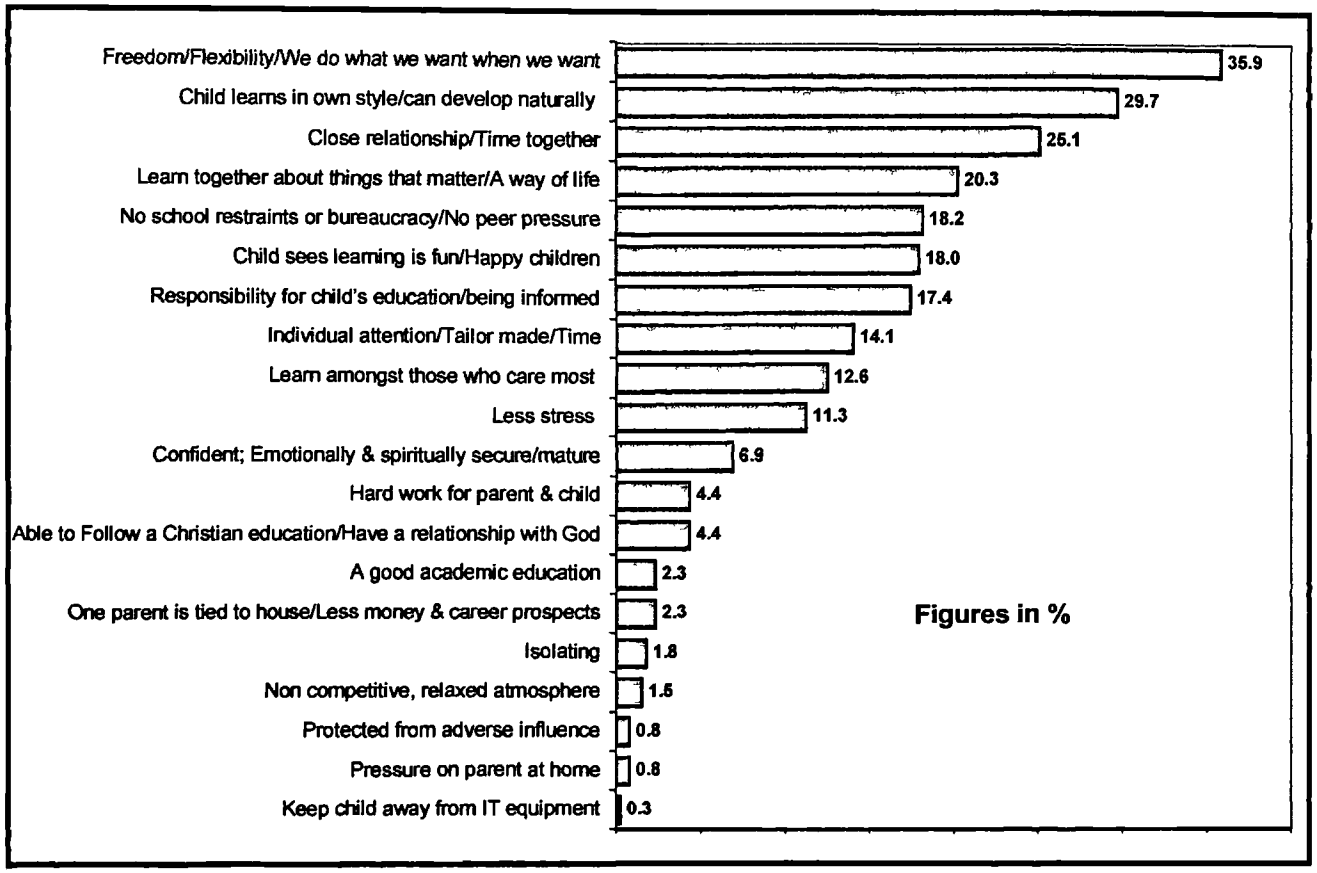
CONDITION	%[1] CITED
None	77.46
Dyslexia	6.24
Gifted	3.84
Yes, unspecified	2.88
Downs/Turners/Tourettes Syndrome/ Brain Damage/ Leukaemia[2]	1.68
Slight difficulties	1.20
Dyspraxic	.96
ADD	.96
Autism/Asbergers	.96
School Phobic	.72
ME	.72
EBD/Behaviour problems	.72
Seizures & learning difficulties	.48
Hyperactive	.48
Hearing impaired/Deaf	.48
Blind/Hearing/Language problem	.24

[1] May not total 100 where a child has more than one condition.
[2] These three different syndromes have been grouped in order to maintain the confidentiality of families whose children have distinguishing conditions.

APPENDIX 5. 2: PARENT'S OCCUPATIONS (N=394)

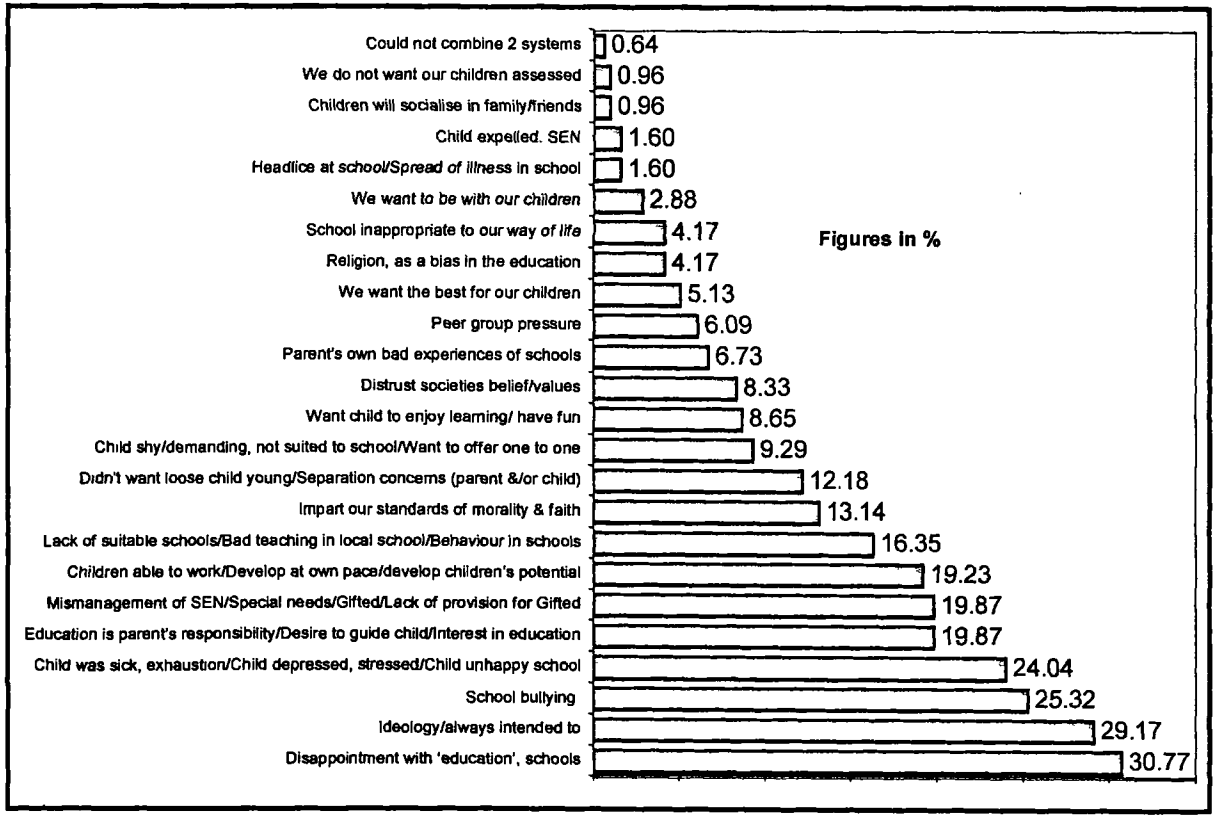
Occupations	% of parents		Occupations	% of parents
Actor	.51		Meter Reader	.25
Acupuncturist	.25		Middle management	1.78
Administration/Secretary /Librarian	5.08		Miner	.25
Astronomer	.25		Model	.25
Bank official	.25		Mother at home	10.91
Beauty therapist	.51		museum curator	.25
Beekeeper	.25		Musician	2.03
Biochemist	.76		Nurse RSN	.76
Broadcast meteorologist	.25		Nursery school. teacher	.25
Builder	1.27		Optometrist	.25
Careworker	1.02		Osteopath	.25
Chartered Accountant	1.27		Own shop/ business	10.15
Chef	1.02		Painter, decorator	.76
Childminder /NNEB (nursery nurse)	1.02		Photographer	.25
Cleaner /Store man	.51		Plumber/Timberframer/carpenter	1.27
Comedian	.25		postman	.25
Computer Programmer	2.54		Preacher, pastor	2.03
Counsellor	1.52		Priestess	.25
Dad at home	.76		Psychologist	.25
Dentist / Doctor /Consultant (medical)	1.02		Pub workrer	.25
Doctor of Life Science	.25		Quarry Manager	.25
Environmental campaigner	.25		Radio Research	.25
Environmental officer/ Countryside Warden	1.52		Reflexologist	.51
Farmer	1.27		Researcher /Education Researcher	.76
Filmmaker	.51		Scientist	1.02
fire-fighter	.25		Sculptor /Artist/illustrator	5.33
Furniture Restorer /Antiques/Upholstery	.76		Social Worker	1.78
Gardener /green keeper /caretaker	1.27		Software Engineer	.51
Graduate Engineer	1.78		Solicitor /Lawyer	.76
Hotel Management	.76		Spiritual Practitioner	.76
instrument maker/repair	.51		Stockbroker	.25
Labourer	.51		Student	1.27
Lecturer	2.79		Taxi Driver	.51
Linguist	.51		Teacher	10.66
Lorry driver	1.27		Technician	.25
Machine Operator/Assemble/Factory worker/ sewing machinist	1.02		Trading St. Officer	.25
mechanic /Maintenance engineer	2.03		Travel agent	.25
Medical assistant	1.02		Valuer	.25
Medical Herbalist/ Herbalist	.51		Voluntary aid worker	.76
			Writer	1.78

APPENDIX 5. 3: PARENT'S DESCRIPTIONS OF WHAT HOME-EDUCATION MEANT TO THEM (N=390)



Participants could give more than one answer.

APPENDIX 5. 4: PARENT'S DESCRIPTIONS OF WHAT HAD MOTIVATED THEM TO HOME-EDUCATE[3] (N=412)



Participants could give more than one answer.

[3] The term, 'could not combine two systems' relates to those families previously with *children* both in and out of the school system.

APPENDIX 5. 5: REASONS WHY HOME-EDUCATION WAS OR WAS NOT AS EXPECTED

Reason Given	% (n=262)
We had not imagined that she/he would be so happy. It's more fun and better than we expected. It's more interesting that we expected. We are all learning.	34.74
Home-education is very demanding, more exhausting, harder that we expected. We thought we would be better organised	26.72
Its easier, less stressful and more relaxed than we thought.	14.89
It's hard, but better than school	9.16
It's just a continuation of before	6.87
Satisfying & stimulating, hectic but rewarding	5.73
There's more freedom that we had imagined	5.34
Just as we expected because we knew what we were doing/ we had researched it	4.96
The children didn't turn out as expected	3.82
Home-education is not as instantly rewarding as expected	3.05
I am better at it that I thought	2.67
We had not realised that home-education would be so restricting on a low income	1.91
We have become more sensitive to children	1.91
Home-education is lonelier, for the parent, that I'd thought.	1.91
There is never enough time	1.53
People are more supportive than we expected	.76
Out child refused to co-operate as he/she got older The child rebels with home-education	.76
It's more radical than we expected	.76
He/She is more advanced, through home-education, than we expected	.38

Participants could give more than one answer.

APPENDIX 5. 6: PARENTAL ATTITUDES TOWARDS MIXED AGE LEARNING (N=886)

ATTITUDE	% CITED
Fine, good idea, great. Essential, excellent. Beneficial to older & younger	65.86
Needs organisation co-operation	8.60
Challenging	8.33
Depends on area of learning	6.72
Helpful	4.84
Hard with a toddler	3.76
Good with adult support	3.49
Good when small groups	3.23
Good if matched by ability	2.15
Good, child sees different perspectives	1.88
Good if each child goes at own pace	1.34
Good within family/ friends	1.08
Better for younger than older	1.08
More difficult with larger age gaps	1.08
Not beneficial /does not work	1.08
Good for informal learning	.54
Abilities vary, but sometimes need to mix them	.27
May be limiting with SEN child	.27

Participants could give more than one answer.

APPENDIX 5. 7: RESOURCES CITED BY PARENTS FOR THEIR CHILDREN'S MATHS AND SCIENCE LEARNING

MATHS (N=370)

Resource	%
Standard text books, manipulatives	39.73
Relate to life, concrete applications	32.97
Books in general	18.38
Games, puzzles, make it fun	12.97
Use whatever around the house	12.97
Counting, sums & tables	11.08
Household items	10.00
Television	9.19
Tutors	9.19
Curriculum/open learning	4.32
Kumon (a structured maths programme)	3.51
Parents competent	2.70
Videos	2.43
Parent/s mathematicians	2.16
Museums	1.89
Computer	1.62
Calculator	1.08
Child too young for specialist equipment	.54

SCIENCE (N=357)

Resource	%
Relate to concrete life applications	34.73
Books in general	29.97
Do experiments, kitchen based	27.17
Work/text books/manipulatives	25.49
Science kits/components	17.93
Television	14.85
Use whatever around the house	13.73
Computer	13.17
Museums	12.04
Talking	9.80
Games, puzzles, make it fun	7.28
Tutors	3.64
Parents competent	3.64
Curriculum/open learning	3.64
Videos	2.80
Parent/s scientists	2.52
Stuck for standard equipment	2.24
Child too young for spec equip	1.12

Participants could give more than one answer.

APPENDIX 5. 8:THE ROLE OF THE COMPUTER (N=147)

Role Described	%
Rehearse skills/ Resource for all skills/ Language skills	28.57
Stimulation with educational games	22.45
Minimal	21.77
Research	20.41
Child can present work well	13.61
Offers relaxation with 'games'	10.20
Maths	5.44
Good because it gives the child control	4.76
If we could afford one, it would play major role	3.40
Greater as child gets older	2.72
Programming	2.72
With speech/SEN facility	1.36

Participants could give more than one answer.

APPENDIX 5. 9: PARENTS' VIEWS ON HOME-EDUCATED CHILDREN'S SOCIALISATION (N=411)

Description	Cited by % of sample
Mass/school socialisation is often negative.	38.93
Home-educated children do not miss out	21.65
Child can miss out if the parent makes no effort / You have to search out opportunities	18.98
Socialisation with friends and family is beneficial	12.65
Home-education = positive socialisation	9.73
Home-educated children are not limited to same age range	8.27
Home-educated children miss out on playtime and breaks / They do miss out	5.11
There is too much emphasis and concern about this	5.11
Children are naturally social	4.87
Our child would like more friends	4.87
Children like being part of a group and must feel some benefit from such, although it is better if this out of school	3.65
Socialisation should not be forced	3.16
Minimal socialisation is possibly beneficial when young	1.46
Socialisation = social engineering	.49
Some children need lively peer groups more than others	.49
Socialisation needs to be taught/children need to mix	.24
Home-educated children are generally good at communication skills	.24

Participants could give more than one answer.

APPENDIX 5. 10 FAMILIES' DESCRIPTIONS OF AREAS THAT WERE COVERED AT HOME THAT WOULD NOT BE PART OF THE SCHOOL CURRICULUM (N=381)

Descriptions	Citations by %
Interpersonal skills / Communications/Social skills Discussion/talk/debate	29.92
Day to day living Learning, continuous integrated process/Life skills	25.72
How to care about people Social/cultural tolerance Moral/social awareness/ Responsibility	25.46
Music, violin, piano, singing/Arts/ Creative skills/photography/Composition of music	17.59
Self esteem/ Motivation/ Independence	14.70
Animals- about-involvement Nature, farming agriculture Growing, conservation	14.44
Building & decorating Practical skills - cookery/ DIY	14.17
Languages	12.86
All/any subjects in more depth Higher level of subject	12.60
Cater to individual talent, flair Don't pursue areas little interest Pursue own interests Enjoyment of learning	11.55
Creating own environment Learning about environment Being outside, walking/ Outings	11.29
Religion, the bible	9.97
Physical education/ Horse riding	6.82
Computer, IT skills, typing	6.04
Creative writing/ Reading	5.77
Mathematics, science	4.99
History/ Geography	3.94
Astronomy	3.94
Nothing	3.94
Areas beyond curriculum	3.41
Imagination	3.41
Spirituality	3.15
Cooking	2.89
Going on adventures/ Boating /Travel	2.62
Computer programming	1.84
Logic	1.84
Electricity/ Electronics	1.57
Sign Language	.79
Museum & galleries	.79
Involve with family business	.26
Braille	.26
Freedom	.26
Too many to list	.26

APPENDIX 5.11: HOME-EDUCATORS VIEWS OF THE ADVANTAGES (N=314) AND DISADVANTAGES (271) OF SCHOOL

Advantages of school	% of citations
Free time for parents/ Takes responsibility from parents	31.85
Resources	24.84
Social life with peers	19.43
None	19.11
Variety of teachers/ Good teachers	13.38
Team games, athletics	7.96
Being like others	6.37
Exam funding	6.05
Exposure to stimulating subjects	5.73
Good where child need structure, academic	5.41
Meet other families/ Be part of community	2.87
Being busy/ Organized, structured	2.87
Escape from bad family circumstances	2.87
Orchestra, choirs, drama	2.23
Outings	1.27
Group work	.96
Homework	.64
Helps child deal with world and problems they might face	.64
Brings out child's potential	.64

Disadvantages of school	% of citations
Conformity, Conditioning, Indoctrination Individual interests not encouraged	51.66
Bullying	27.31
Peer group pressure	20.66
Teacher/pupil ratio Too many kids and Not enough adults	16.61
Pressure, compulsion	14.76
Not under parental control	11.81
Unnatural environment	11.07
Too formal	9.59
Work uninteresting/ Dull, inefficient, passive	9.59
Social interaction	8.86
Generally failing/ Out of date, anachronistic	7.75
Uncaring	7.75
Time wasted	7.01
Parents miss so much of child life	6.64
National curriculum	5.54
Bad, alternating teachers	3.69
Hard when SEN child is not wanted	3.69
Discipline	2.58
Starts too early (years)	2.21
School run	1.85
Homework	1.11
Age grouping	.74
Exams	.74

Respondents could give more than one answer.

APPENDICES: CHAPTER 6 PIPS BASELINE

APPENDIX 6. 1:CONTRAST BETWEEN NATIONAL AND HOME-EDUCATION PIPS DATA

On the left is the national data (PIPS Project 1999) and on the right is the data from the present study. On the left, 'score' relates the number of correct answers and the % column states the percentage of children providing the correct answer. On the right, the 'valid' column describes the number of correct responses, the 'frequency' column informs on the frequency of children answering those questions correctly and the % column relates the percentage of home-educated children giving the correct answer.

Section Heading	score	(%)
Name writing	0	11.4
	1	20.7
	2	19.5
	3	20.9
	4	25.8
	5	1.7
Picture vocabulary	0-1	0.9
	2-3	0.8
	4-5	0.9
	6-7	2.1
	8-9	3.7
	10-11	8.2
	12-13	14.4
	14-15	13.9
	16-17	22.7
	18-19	19.9
	20-21	11.0
	22-23	1.6
Ideas about Reading	0	1.4
	1	2.6
	2	12.7
	3	15.6
	4	13.5
	5	21.5
	6	14.1
	7	8.4
	8	5.3
	9	3.0
	10	1.8
Rhyming	0	28.1
	1	15.6
	2	8.4
	3	6.0
	4	6.6
	5	6.0
	6	6.5
	7	6.7
	8	6.7
	9	9.4
Letter Identification	0	26.8
	1	16.2
	2-4	18.0
	5-7	9.3
	8-10	7.3
	11-13	1.1
	14-16	1.7
	17-19	2.7
	20-21	2.8
	22	1.9
	23	2.0
	24	2.4
	25+	7.8

NAME

		Frequency	Percent
Valid	1.00	2	5.7
	2.00	2	5.7
	3.00	6	17.1
	4.00	13	37.1
	5.00	12	34.3
	Total	35	100.0

PICVOCAB

		Frequency	Percent
Valid	18.00	1	2.9
	21.00	2	5.7
	22.00	3	8.6
	23.00	7	20.0
	24.00	10	28.6
	25.00	12	34.3
	Total	35	100.0

IAREAD

		Frequency	Percent
Valid	7.00	3	8.6
	8.00	5	14.3
	9.00	5	14.3
	10.00	3	8.6
	11.00	5	14.3
	12.00	14	40.0
	Total	35	100.0

RHYME

		Frequency	Percent
Valid	.00	1	2.9
	3.00	1	2.9
	5.00	1	2.9
	6.00	1	2.9
	7.00	2	5.7
	8.00	4	11.4
	9.00	25	71.4
	Total	35	100.0

LETTERID

		Frequency	Percent
Valid	1.00	1	2.9
	2.00	1	2.9
	3.00	1	2.9
	4.00	3	8.6
	6.00	1	2.9
	7.00	1	2.9
	11.00	1	2.9
	12.00	1	2.9
	13.00	1	2.9
	17.00	2	5.7
	18.00	2	5.7
	19.00	1	2.9
	20.00	1	2.9
	22.00	1	2.9
	23.00	2	5.7
	24.00	3	8.6
	25.00	2	5.7
	26.00	1	2.9
	27.00	9	25.7
	Total	35	100.0

APPENDIX 6.1 CONTINUED

Section Heading	score	(%)
Words	0	84.5
	1	2.6
	2	2.0
	3	1.1
	4	1.3
	5	1.1
	6	1.4
	7	1.2
	8	1.4
	9	1.0
	10-11	1.4
	12-13	0.6
	14+	0.3*
Ideas about Maths	0	0.7
	1	0.5
	2	2.2
	3	5.7
	4	12.0
	5	25.6
	6	34.2
	7	19.0
Counting	0	9.3
	1	11.0
	2	22.3
	3	9.5
	4	47.9
Digit Identification	0	17.7
	1	6.3
	2	5.4
	3	3.0
	4	4.1
	5	6.2
	6	6.4
	7	5.9
	8	7.7
	9	11.8
	10	16.0
	11	3.0
	12	1.5
	13	0.9
	14	0.6
	15	0.5
	16+	2.8*
Sums	0	11.5
	1	8.9
	2	13.9
	3	14.4
	4	10.6
	5	12.1
	6	13.3
	7	10.6
	8	4.7

WORDS

		Frequency	Percent
Valid	.00	6	17.1
	1.00	2	5.7
	2.00	1	2.9
	4.00	4	11.4
	5.00	5	14.3
	6.00	5	14.3
	7.00	5	14.3
	8.00	7	20.0
	Total	35	100.0

IOM

		Frequency	Percent
Valid	5.00	1	2.9
	6.00	4	11.4
	7.00	30	85.7
	Total	35	100.0

COUNT

		Frequency	Percent
Valid	2.00	1	2.9
	3.00	7	20.0
	4.00	27	77.1
	Total	35	100.0

DIGITID

		Frequency	Percent
Valid	.00	2	5.7
	2.00	3	8.6
	3.00	1	2.9
	4.00	3	8.6
	5.00	1	2.9
	6.00	1	2.9
	10.00	9	25.7
	11.00	1	2.9
	12.00	1	2.9
	13.00	1	2.9
	15.00	12	34.3
	Total	35	100.0

SUMS

		Frequency	Percent
Valid	3.00	1	2.9
	4.00	1	2.9
	5.00	1	2.9
	6.00	2	5.7
	7.00	2	5.7
	8.00	28	80.0
	Total	35	100.0

APPENDIX 6. 2: CORRELATIONS BETWEEN ASSESSMENT SCORES. TYMMS ET AL.'S (1997) CORRELATIONS APPEAR IN BRACKETS

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

	End Maths	Start Reading	End Reading	Start Total	End Total
Start Maths	.568** (.67)	.557**	.412* (.62)	.749**	**.204** (.68)
Sig. (2-tailed)	.001	.001	.017	.000	.255
N	33	35	33	35	33
End Maths		.513** (.56)	.525**	.561** (.67)	.376*
Sig. (2-tailed)		.002	.002	.001	.031
N		33	33	33	33
Start Reading			.570** (.72)	.949**	**.277** (.71)
Sig. (2-tailed)			.001	.000	.119
N			33	35	33
End Reading				.567** (.72)	.778**
Sig. (2-tailed)				.001	.000
N				33	33
Start Total					**.279** (.76)
Sig. (2-tailed)					.116
N					33

Pearson Correlation using standardised scores

APPENDICES: CHAPTER 7
LITERACY

APPENDIX 7. 1: YEAR 1 COMPLETE SCORES TABLE

Scores of National Literacy Project Year 1 (version B) Children and Ages at 9/97 with, in brackets where appropriate, the highest measured score for each task. The maximum raw score possible for each task is given in brackets within the heading columns.													
Name & Sex (number)	**Age**	**Mnth**	**Word Rec 1 (10)**	**Word Rec 2 (10)**	**Word Rec 3 (10)**	**Word Rec 4 (10)**	**Letter Rec (26)**	**Total Word Recognition (40)**	**Spell (30)**	**Writing Task (@ 25)**	**Total Raw Score**	**Standardise Score**	**Score Range**
Including Writing													
f	6.1	73	10	10	10	10	26	40 (>27)	30 (>22)	17 (>14)	113	>130	Data unavailable
f	5.6	66	10	10	7	5	26	32 (>27)	24 (>22)	14	96	>130	Data unavailable
f	5.5	65	10	9	9	7	26	35 (>27)	24 (>22)	16 (>14)	101	>130	Data unavailable
m	5.8	68	10	10	10	9	26	39 (>27)	30 (>22)	19 (>14)	114	>130	Data unavailable
f	5.8	68	9	8	5	4	26	26	22	12	86	>130	Data unavailable
m	5.11	71	10	9	10	6	26	35 (>27)	5	0	66	124	115 - >130
f	6	72	8	4	3	4	26	19	12	12	69	126	117 - >130
f	5.8	68	7	7	7	3	26	24	0	17 (>14)	67	124	115 - >130
f	6	72	10	10	10	10	26	40 (>27)	30 (>22)	23 (>14)	119	>130	Data unavailable
f	6	72	10	10	7	3	26	30 (>27)	12	18 (>14)	86	>130	Data unavailable
m	5	60	10	8	9	7	26	34 (>27)	19	16 (>14)	95	>130	Data unavailable
f	5.9	69	7	6	4	5	26	22	20	21 (>14)	89	>130	Data unavailable
m	6	72	9	10	7	7	26	33 (>27)	19	17(>14)	95	>130	Data unavailable
m	5.10	70	10	10	9	0	26	29 (>27)	19	13	87	>130	Data unavailable
f	5.1	61	10	10	10	10	26	40 (>27)	13	21 (>14)	100	>130	Data unavailable
m	5.10	70	10	8	7	0	26	25	-	-	51	111	102-120
m	5..3	63	10	10	10	10	26	40 (>27)	5	-	71	128	119->130
Tested by parents unless marked ®.													
Total N= 17													
Double tested (*researcher supervisor/ +parent supervisor)													
17m	5..3	63	10	10	10	10	26	40 (>27)	5	-	71	>130	Data unavailable
13m	6	72	9	10	7	7	26	33	19	17	95	>130	Data unavailable

APPENDIX 7. 2: YEAR 3 COMPLETE SCORES TABLE

Scores of National Literacy Project Year 3 Children and Ages at 9/97 with, in brackets where appropriate, the highest measured score for each task. The maximum raw score possible for each task is given in brackets within the heading columns.										
Name & Sex (number)	**Age**	**Month**	**Word Choice (22)**	**Respond To Text (15)**	**Spelling (36)**	**Vocabulary (30)**	**Writing (@30)**	**Total Raw Score**	**Standardised Score**	**Score Range**
Including Writing										
m	7.6	90	21	14 (>13)	12	27	30 (>29)	104	118	109 - 127
f	7.4	88	20	15 (>13)	23	30 (>28)	23	111	124	115 - >130
m	6.8	80 *(82)	19	14 (>13)	24	26	25	108	>125	Data unavailable
f	6.11	83	22 (>21)	15 (>13)	36	30 (>28)	24	127	>130	Data unavailable
f	7.11	95	21	14 (>13)	32	29 (>28)	26	122	128	119-130
m	7.10	94	19	13	28	30 (>28)	9	99	114	105-123
f	8.2	98	22 (>21)	14 (>13)	15	26	21	98	112	103 - 121
f	7.7	91	21	14 (>13)	25	29 (>28)	22	111	123	114 ->130
m	7.5	89	19	10	32	22	33 (>29)	116	127	118 - >130
f	6.10	82	22 (>21)	14 (>13)	36	28	17	117	>130	Data unavailable
m	8.2	98	22 (>21)	13	14	29 (>28)	29 (>29)	107	117	108 - 126
f	7.4	88	22 (>21)	15 (>13)	36	30 (>28)	24	127	>130	Data unavailable
m	7.4	88	20	11	10	25	11	77	104	95 - 113
f	6.1	73* (82)	20	14 (>13)	30	30 (>28)	0	96	117	108-126
m	7.4	88	22 (>21)	7	17	30 (>28)	0	76	103	94-112
Total N = 15										
Double tested (*researcher supervisor/ +parent supervisor)										
11m	8.2	98	22 (>21)	13	14	29 (>28)	29 (>28)	107	117	108 - 126

In the age in months column ages given in brackets represent the minimum measured age, thus, participant three was two months under age and was therefore marked as if he had been two months older at the time of the test.

APPENDIX 7. 3: YEAR 5 COMPLETE SCORES TABLE

Scores of National Literacy Project Year 5 Children and Ages at 9/97 with, in brackets where appropriate, the highest measured score for each task. The maximum raw score possible for each task is given in brackets within the heading columns.										
Name & Sex (number)	**Age**	**Month**	**Word Choice (30)**	**Respond To Text (18)**	**Spelling (38)**	**Vocabulary (30)**	**Writing (@50)**	**Total Raw Score**	**Standardised Score**	**Score Range**
Including Writing										
f	8.8	104* (106)	30	18 (>17)	38 (>37)	30 (>28)	38	154	>130	Data unavailable
f	9.2	110	30	12	28	28	33	131	121	112 - 130
f	8.11	107	30	17	36	27	39	149	>130	Data unavailable
m	9.5	113	28	12	28	28	28	124	108	99 - 117
f	9.11	119	29	16	33	30 (>28)	30	138	117	108 - 126
m	10.2	122	29	13	17	29 (>28)	20	108	99	90 - 108
f	9.7	115	30	16	38 (>37)	30 (>28)	23	137	124	115 - >130
f	9.9	117	30	12	38 (>37)	30 (>28)	36	146	>130	Data unavailable
f	9.2	110	30	16	37	29 (>28)	33	145	>130	Data unavailable
f	10	120	29	4	13	28	33	107	99	90 – 108
m	9.6	114	29	12	31	28	43 (>40)	143	124	- >130
f	6.10	82* (106)	27	16	34	26	40	143	>130	Data unavailable
m	9.4	112	29	17	36	29 (>28)	31	142	129	120 - >130
m	9.4	112	30	16	30	28	39	143	130	121 - >130
f	9.10	118	30	15	23	27	43 (>40)	138	124	115 - >130
m	9.1	109	30	15	37	30 (>28)	31	143	>130	Data unavailable
m	9.1	109	30	17	38 (>37)	27	26	138	126	117 - >130
Tested by parents unless marked ®.										
Total N=17										
Double tested (*researcher supervisor/ +parent supervisor)										
16m	9.1	109	30	15	37	30	30	142	129	120 - >130
17m	9.1	109	30	17	38	27	-	112	>130	117 - >130

In the age in months column ages given in brackets represent the minimum measured age, thus, participant one was two months under age and was therefore marked as if he had been two months older at the time of the test.

APPENDIX 7. 4: NATIONAL LITERACY PROJECT ASSESSMENT TASKS FOR EACH YEAR GROUP

Year	Assessment Task	No. of Items	Explanation
Year 1	Letter Recognition	26	Participants were asked to illustrate their knowledge of the alphabet.
	Word Recognition	40	Examiner read out one word for each question. The participant ticked the matching word from 5 choices. See Moseley Merrell and Tymms (1998) for a full explanation of this section.
	Spelling	10	A drawing of a classroom scene was surrounded by boxes and arrows pointing to certain aspects of the picture. Participants were required to write in each box, the subject at the end of the arrow, i.e. 'boat'.
	Writing Task	*	The same scene was used, printed without the arrows and boxes. On the opposite page participants were required to write about the scene under the heading: 'What is happening?'
Years 3 & 5	Word Choice	Year 3: 22 Year 5: 30	A text with spaces where the most appropriate from a choice of 3 words needed to be ticked. Example: (Year 5) Tallow is produced (from/of/for) animal fat. Beeswax was (too/always/also) used.
	Respond To Text	Year 3: 10 Year 5: 11	A text accompanied by questions relating to the text
	Spelling	Year 3: 18 Year 5: 19	A text was read out to participants twice. On the second reading children were required to complete the 19 gaps in their assessment booklet version of the same text.
	Vocabulary	Year 3: 30 Year 5: 30	Lines of five words, one in normal font and four in bold type. Participants were read all words in each line and asked to tick which of the four bold font words represented the class that the first word fitted into: Example: nimble; **quick, give good, mean** Answer: nimble & **quick**
Writing			Using a diagram of boxed words and phrases with arrows providing the story direction, participants were required to write in their own words, a story that used the information contained in the diagram.

APPENDIX 7. 5: Z SCORE ANALYSES FOR THE NLP ASSESSMENTS

'Spelling' would, therefore, appear to have been the task causing most difficulty. A z-score[1] calculation supported this indication, using the standardised marks[2] for 'Word Recognition', 'Spelling' and 'Writing': see table 6, below. The target mark used was 130[3] and the z score[4] was found to be: 0.735847 for Word Recognition, 0.999999 for Spelling and 0.995328 for 'Writing', thus indicating that the Year 1 high achievers found the 'Spelling' task to be the most difficult of the three, albeit only marginally more so than 'Writing'. A z-test check was also calculated using the target score 122; this figure produced an identical pattern of results. This finding was further supported by independent t-tests. This showed; a difference between 'Word Recognition' and 'Spelling' at a significance level of $p<.020$, a lesser difference between 'Word Recognition' and 'Writing' of $p<.348$, and at $p<.994$ little difference at all between Writing and 'Spelling'. It appeared that whilst the children found 'spelling' the most difficult, the difference between the 'Writing' and 'Spelling' tasks was negligible, whilst, the 'Word Recognition' task was substantially easier for them.

Table 1, below, illustrates the z-scores for the Year 1 assessments.

TABLE 1: Z SCORE ANALYSIS FOR 'PATTERNS IN LANGUAGE' YEAR 1 TASKS

Selected z-test score	Word recognition	Spelling	Writing
z scores for 130	0.735847	0.99999	0.995328
z scores for 122	0.058394	0.70912	0.703195

Table 2, below, illustrates the z-scores for the Year 3 assessments.

TABLE 2: Z SCORE ANALYSIS FOR 'PATTERNS IN LANGUAGE' YEAR 3 TASKS

Selected z-test score	Word choice	Respond to Text	Spelling	Vocabulary	Writing
z scores for 130	0.939332	0.925899	1	0.84095	1
z scores for 122	0.302788	0.267735	0.999893	0.142936	1

A z-score analysis for Year 5 is given in Table 3, below.

TABLE 3: Z SCORE ANALYSIS FOR 'PATTERNS IN LANGUAGE' YEAR 5 TASKS

Selected z-test score	Word choice	Respond to Text	Spelling	Vocabulary	Writing
Z scores for 130	0.99618	0.999995	0.999957	0.725165	0.993898
Z scores for 122	0.68043	0.986625	0.958193	0.054718	0.620659

[1] The z score is a standard score that can be used to assess similarities between different scales by converting disparate measurements into a common one (Kennedy 1983).

[2] Scores were standardised according to the charts provided in 'Patterns in Language: Interpreting and using the test results': CEM Centre (1998a)

[3] One mark needed to be selected against which comparison can be drawn. 130 was the mark chosen, with a second score, 122 selected to use as a means of checking.

[4] amount by which the target score differs from the norm. .99999 is almost one standard deviation whereas 0.735847 is considerably less than a standard deviation, suggesting that more participants were able to score 130 for Word Recognition than were able to for spelling.

APPENDIX 7. 6: PIPS YEAR 2 HOME-EDUCATED SAMPLE STANDARDISED SCORES

Gender	Context		Assessment		Individual Means
	Picture vocabulary (n=18)	POP (n=18)	Maths (n=18)	Reading (n=17)	
F	54	63	50	40	51.75
F	50	49	50	41	47.5
M	61	55	59	56	57.75
M	73	66	63	59	65.25
M	61	72	63	*	64.5
M	68	63	59	68	64.25
F	66	63	67	61	65
M	64	63	66	67	67
F	70	65	64	69	58.5
F	46	53	66	69	68
F	73	63	67	69	70
M	73	70	67	70	70.5
M	73	72	67	70	68.75
F	68	70	67	70	69.25
F	70	70	67	70	67
F	73	56	70	69	67.5
M	75	56	70	69	72.25
F	77	72	69	71	64.43
	66.38	**63.38**	**63.94**	**64**	**64.425**

APPENDIX 7. 7: GRADED MATHS AND READING SCORES AGAINST VALUE-ADDED PERFORMANCE AND ATTITUDES.

Gender	Achievement : Full (PIPS)				Attitudes	
	Maths		Reading			
	Grade	Value-added context	grade	Value-added context	maths	reading
F	C	-	D	--	☹●●	●😐●
F	C	0	C	-	●●☺	●😐●
M	B	0	C	0	●😐●	☹●●
M	B	0	B	-	●😐●	●😐●
M	B	0	*	*	●😐●	☹●●
M	B	0	A	0	●😐●	☹●●
F	A	+	B	0	●😐●	●●☺
M	A	0	A	+	●😐●	☹●●
F	A	0	A	0	●😐●	●●☺
F	A	++	A	++	●●☺	●●☺
F	A	0	A	0	☹●●	●●☺
M	A	0	A	0	●●☺	●●☺
M	A	0	A	0	●😐●	●😐●
F	A	0	A	0	●😐●	●●☺
F	A	0	A	0	●●☺	●●☺
F	A	+	A	0	●●☺	●●☺
M	A	+	A	+	●😐●	☹●●
F	A	0	A	0	●●☺	●●☺

APPENDIX 7. 8: CRITERIA TO BE MET BY THE WRITING FOR 'IN THE CLASSROOM 2'

Criteria to be met by the writing	Marks Awarded
Marks in the correct space of appropriate size (no larger than line spaces). At least 1 recognizable letter. Repeated use of 2 or 3 letters. Use of more varied letter patterns. 1 or more word breaks of at least 1 full letter space.	1 1 1 1 1 5 marks maximum
What is the longest word attempted excluding the word 'classroom'? (Only select a word at least two thirds correct).	1 mark for each letter of longest qualifying word
Writing punctuated correctly. Some punctuation e.g. capital letters or full stops.	3 1 3 marks maximum
Use of appropriate tense.	1 mark
Properly punctuated and grammatically correct sentence (excluding spelling).	1 mark
Correct use of joining device, e.g. 'and, because, so, then, or', also pronouns e.g. 'he, she, they, his, her, their, its'	1 mark/word

APPENDIX 7. 9: LETTER TO THE RESEARCHER FROM A HOME EDUCATOR (CHAPTER 7 LITERACY)

[...] I don't know how many children you have but as you know, I have three. I do not, in principle agree with testing or comparing children as I feel it then pigeon holes them and in the school system it can result in labelling, which can have a detrimental effect on a child all through their school and even, adult life (self fulfilling prophecy and all that, I'm sure you are up on all the sociology of this.)

I focus on my children developing a love of learning relevant interesting things which they will be able to use later on in life too. [...] I am confident that they are all ahead of school children of the same age, with the added bonus of more confidence, common sense, empathy and consideration for others than school kids,- and you can't even test for that.

I do not wish my children to do any more intelligence tests or assessments, I do not think

that they are relevant. I know this may be a bit of a pain for your study, and so I have let my daughter do this one. I don't agree with testing - as long as I am happy with where they are up to and that they have understood the last point before we move onto the next one then that is fine. I don't agree with blanket testing them to compare them to others -all children are different, some need more help than others, while some are happier to work alone. You may be interested to know that I have spent the best part of 6 months, after taking my son out of school, trying to build his confidence up in trying out ideas, not being afraid to make mistakes before he gets it right. I have TIME for them and their individual needs, which teachers do not have,-maybe that's why they feel they need to test the children all the time, to make their job easier.

I hope you're not offended [...] Maybe your research should be on how constant testing and comparing is damaging to a child's esteem, their mental/physical health and how it shapes their adult life. This could perhaps give suggestions for how we can change it and raise confident, happy children who ENJOY learning, and these will be the intelligent, caring, valuable members of society of tomorrow. I let my daughter do your test as I felt obliged to do so, I didn't want to mess up your research. Maybe for you to get a better idea of how home educated children fare compared to school children, you would be best asking ones who have reached adulthood and are now out there in society, actually getting on with it. We all wish you well in your study, but would rather you did not visit [..].

APPENDICES: CHAPTER 9
SOCIAL AND PSYCHOLOGICAL DATA

APPENDIX 9.1: CABS - POSSIBLE RANGE VALUES AND ACTUAL SCORE RANGES ON EACH OF THE 5 SUB-CATEGORIES

Domain	Possible Range according to maximum and minimum possible scores	Actual Range of the Home-educated children
Positives	+8 to -8	1 to -5
Negatives	+12 to -12	10 to -9
Requests	+12 to -12	5 to -7
Feelings	+12 to -12	2 to -6
Conversations	+10 to -10	4 to -6

APPENDIX 9.2: KEY TO THE REVISED RUTTER SCALE QUESTION NUMBERS THAT CORRESPOND WITH THE DIFFICULTIES IDENTIFIED IN TABLE 9.3 (COMPARISONS BETWEEN BEHAVIOUR DIFFICULTIES RATED BY PARENTS OF CHILDREN IN THIS STUDY AND RUTTER ET AL., 1974)

Aggression	Anxiety	Enuresis	Hyperactivity	Lying	Nail-biting
5	6	33	2	20	30
8	9		4	46	
16	12		34		
19	18		42		
31	29				
38	37				
47	39				
50	49				

Phobia	Stutter	Theft	Thumbsucking	Truancy	Twitches
41	22	28	26	24	25
	23				

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